An Action Research investigation into the innovation of a creative pedagogic approach within a secondary school Building Schools for the Future project.

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Abstract

This study focuses on the opportunities presented by a Building Schools for the Future school rebuild and the associated move towards a personalised learning agenda, to facilitate innovation of learning environments which would allow a vision for enquiry learning to be realised. The study identifies that, historically, education has failed to utilise the opportunities available when developing new learning environments and so a proposal for the key features of effective educational innovation is presented.

Against a reconnaissance of pre-existing learning spaces and pedagogies, an action research approach facilitates a series of varied interventions in pursuit of this educational vision. This process of pedagogic innovation is therefore analysed against the core features of innovation, concluded from literature to be a number of change agents with personal mastery working in collaboration, to complete a strategic and reflective journey towards a shared and self-sustaining pedagogic vision. These key features of innovation are also considered against literature identifying the factors critical to creating a Community of Practice which engender such innovation. Finally, the theoretical framework of Professional Capital is considered as a necessary underpinning for creating the empowered individuals necessary for effective innovation.

This study concludes that it is only when holistic attention is paid to all these aspects that innovation in education can be fully realised; a less holistic approach results instead only in change, with removal of one or more of these factors giving only a more transient, less embedded outcome. As a result of these considered innovations, it is also demonstrated that, whilst not a completely limiting factor, the provision of appropriate spaces for learning is a significant factor in being able to realise the original vision for the personalisation of learning and in the effective realisation of the Building Schools for the Future vision.

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Chapter 1 Introduction

This study focuses on developing pedagogy to effectively utilise the potential of new, innovative learning spaces. As such it considers the extent to which the realisation of the opportunities offered by Building Schools for the Future (BSF) has been achieved within one rebuilt secondary school; where a vision for innovative enquiry learning was placed firmly at the center of the design. It then moves on to utilise a mixed methods Action Research methodology to both reflect upon, and inform, an innovation of KS3 pedagogy in order that the opportunities offered by such learning spaces can be maximized.

When Tony Blair, then Labour Prime Minister, announced the BSF programme in February 2004 (Guardian, 2004), one of the biggest opportunities for recent educational reform presented itself. As part of *"the greatest school renewal programme in British History"* (Blair, 2004), every secondary school in the country was to be rebuilt or refurbished within fifteen years to provide *"flexible, inclusive, attractive learning environments that teachers want to teach in and pupils want to learn in"* (Miliband in Smithers & Hall, 2004, paragraph 5). There was talk of transforming education for young people and communities coupled with improved life chances through the provision of facilities that enabled every young person to develop their talents and achieve their very best (DCSF, 2007).

Thus, a new space for learning was to be created driven in part to provide for the parallel educational initiative of the time, Personalised Learning. This aspired that *"every child should be educated in a way and at a pace which suits them"* (Hargreaves, 2009:11), encouraging all students, regardless of background or circumstance, to become active participants in their own educational journey. This presented significant implications for schools: the need for curriculum change, the effective integration of technology, and a school improvement agenda which had teaching and learning at its heart. It also presented an educational approach which was inconsistent with the facilities available and so the integration of Personalised Learning with BSF was crucial to facilitate a change that potentially could not occur in buildings that existed at the time (Bradley in Upitis, 1990).

It is against the background above that the study school chose to formulate a vision for their new school design that encapsulated the ethos of Personalised Learning through the creation of new and innovative spaces for learning; plaza and auditoria. The former were large central atriums designed to hold up to 90 students at one time whilst the latter were reminiscent of lecture theatres but with movable seating accommodating 90 to 240 students. Within such spaces the study school wanted to offer a student driven enquiry learning pedagogy where curriculum development was partnered with the delivery of student learning skills to ensure that students were well equipped for work in a changing economic landscape. This was envisaged as encompassing a number of attributes such as transferable learning skills to allow students to link learning and skills across curriculum areas, the ability to collaborate effectively and finally the development of empowered learners able to solve their own problems; a holistic reflection of personalisation of learning.

It was at this point of design that a change of government, and a time of austerity, caused a significant shift in the educational landscape and the cancellation of the Building Schools for the Future programme. Whilst the study school was fortunate to be able to proceed with its rebuild, a return to an achievement-driven national educational agenda meant that the design vision no longer matched the educational ethos against which the school was operating. Therefore, there was significant potential for the school build to become a 'white elephant' where traditional styles of learning were delivered ineffectively in new learning spaces.

It was at this point that I joined the school as a member of the senior team overseeing teaching and learning and charged with realising the pedagogic vision to:

> *"deliver a curriculum experience that is creative, flexible and collaborative in both its design and delivery"* within *"a learning environment that will allow all people to be active participants of their learning journey".*
>
> (Study School, 2008:1)

Literature indicated that a similar vision for open-plan learning in the 1970s had not been realised due to a reluctance to develop pedagogy resulting in a situation where

innovation was not realised (Adelman and Walker in Brogden, 2007). Therefore, if the elephant in the plaza was to be avoided, innovating pedagogy was key.

Change is not a new phenomenon in education and Gillard (2011) and Hargreaves and Shirley (2009) both present good summaries of the shifts in educational practice and policy. However, despite this level of experience, innovation in education is often acknowledged as being particularly challenging (Senge, 2012). Authors that have considered this challenge include Knoster (1991), Fullan (1993), Fidler (1996) and the aforementioned Hargreaves and Shirley (2009); however it is the work of Senge writing in 'The Fifth Discipline' (2012) which gives an ideal starting point against which an analysis of the successful attributes of innovation can be made.

It was against this consideration that a strategic journey towards a shared vision of pedagogy was devised, centered on a three cycle Action Research approach ensuring that the opportunities for reflection and redirection of innovations identified as crucial for success were included. This study is an analytical consideration of that innovation process and an assessment of its success in realizing the educational vision for the study school.

1.1 Importance of current research

The research presented here is based upon three Action Research cycles completed across just over two academic years; within which the move into the new school building occurred at the start of Intervention Cycle 3. These cycles were formulated to facilitate a considered change to pedagogy in order that enquiry learning could be realized in the plaza and auditoria central to the new school design. That the realisation of such a style of learning was severely restricted in the old building due to a lack of appropriate facilities meant that this development needed to encompass instead the innovation of its constituent parts: transferable learning, effective collaboration and empowered learners able to overcome their own learning barriers. That such a change was also

potentially at odds with the current educational ethos meant that the potential for, and consequences of, an ineffective change were significant.

Opportunities to innovate pedagogy on such a large scale and with the support of a visionary leadership are rare. That the opportunity also facilitated a consideration of the extent to which the principles of BSF could be realised was also unusual. In addition, the recent nature of the completion of many BSF builds meant that, whilst analysis of the success of inclusive design processes had had opportunity to come to fruition, the consideration of the impacts of new builds were still limited and only involved quantitative analysis.

It is hoped therefore, that this study will facilitate two features. Firstly, an analysis of innovation within education and the successes of different attributes of innovation presented against a perceived consideration of successful pedagogic change. And secondly, a consideration of the extent to which, through innovating pedagogy, the potential vision of Building Schools for the Future, in conjunction with the ethos of the personalisation of learning prevalent at the design stage, can be realized within a rebuilt secondary school.

1.2 Outline of the current work

This research study is structured as indicated below:

Chapter 2 – Literature review: This chapter analyses the literature around both learning spaces and curriculum innovation, against the agendas of Building Schools for the Future and Personalised Learning, before offering a consideration of Innovation in Education.

Chapter 3 – The study in context: This chapter places this study into the context within which it operates and provides further insight into the development of the study school design and pedagogic vision prior to the commencement of the study.

Chapter 4 – Research methodology: Here, frameworks for research within education are briefly considered before a mixed methods Action Research approach is critiqued. Methods, sampling and analysis of data are then all considered before a research plan is presented.

Chapter 5 – Baseline results: Collected at the start of the study period, a reconnaissance of pedagogy and spaces is created against which the final analysis can be compared.

Chapter 6 and 7 – Intervention Cycles 1 and 2: Both these chapters outline the innovations undertaken with respect to the aspects of pedagogy under development. They then use the end of Intervention Cycle data collection to analyse the relative success of this work and identify areas for future innovation.

Chapter 8 – Intervention Cycle 3: This chapter presents a summary of the pedagogic innovations occurring after the move into the new building. The findings of the Finalline data collection are then considered against the Baseline findings in order to consider the success of the intervention. An analysis of the repeated data collection around learning spaces if also completed so that the attributes of these may also be considered against Baseline position.

Chapter 9: Discussion. This chapter considers the Finalline data analysis against the research questions in order that a consideration of the successes of the design concept, plus the success of the pedagogic innovations, can be considered before the two are synergized to analyse the extent to which innovating pedagogy utilises the opportunities created by schools rebuilt to the BSF vision.

Chapter 10: The final chapter assesses the outcomes and the potential of the research, and also offers opportunities for further research which could build upon the findings presented herein.

Chapter 2 Literature review

2.1 A consideration of educational change

Before embarking on an analysis of current educational initiatives, it is important to examine the context and previous developments against which these initiatives are set. This literature review will initially seek to summarise previous styles of pedagogy and educational building innovation leading towards a particular focus on the twin educational changes focussed on within the study period; Personalised Learning and Building Schools for the Future. A significant emphasis will be placed on how these initiatives, whilst separate in many respects, needed to be inextricably linked if either were to be fully realised. Finally, a number of strategies to promote innovation in education will be critically examined in order to consider the opportunities to maximise the success of educational innovation.

2.1.1 The First and Second Way

Hargreaves and Shirley (2009) produce a concise summary of innovations in education prior to the ascension of the Labour Government in 1997 as a prelude to their book 'The Fourth Way'. They identify 'The First Way' of educational reform as a period of educational change driven by a belief that the state must effectively utilise the hard-won freedoms of World War II for the good of all. Coupled with economic and demographic booms, education enjoyed a position of prominence and teachers were largely left to 'get on with the job' however they saw fit. Innovation was driven by individuals with enthusiasm. However, a lack of strategic direction meant that engagement in innovation was by choice, and change was not systematic. As a consequence, the variety in teaching quality by the 1970s was broad.

The 1970s and 1980s saw recession within Britain with industrial action in the public sector (Moher, 2009) leading to a growing feeling of disquiet with the freedoms of 'overpaid' teachers and their lack of accountability. Following the change to a Conservative government in 1979, education once again underwent a significant shift in direction as 'The Second Way' of educational innovation saw market forces introduced. This development led to a raft of changes as schools strove to be better than each other (Hargreaves, 2009). Conversely, the other main drive of this period was for cohesion and standardisation in education culminating in the creation of the National Curriculum

and extensive testing (Ferlie *et al*, 1996). Whilst the scrutiny on the profession saw an increased focus on teachers' skills and training, the increase in accountability and the reduction in professional autonomy led to;

> *"A one-size fits all system of prescribed curriculum programmes and teaching-to-the-test led to professional disillusionment and made it difficult to attract and retain excellent teachers"*
>
> (Rubin, 2013: paragraph 5)

As a result, teachers were generally confused about the ethos within which they were operating, thus the consequences of the second way were that teachers 'bucked' the system and walked away in alarming numbers; the time for change was again here.

2.1.2 'Education, Education, Education'

In contrast to this period, the Labour party rose to power in 1997 on a mantra of 'Education, Education, Education' (Blair, 1996) whilst also identifying education as the Conservatives' 'biggest failure' in their extensive previous period of government. Tony Blair promised that:

> *"Education will be our number one priority,"* focusing on *"all-in schooling which identifies the distinct abilities of individual pupils and maximise(s) their progress in individual subjects."*
>
> (Labour party manifesto in Kavanagh & Dale, 2000:349)

The oft quoted 'standards not structures' (Blair, 2004) became a key phrase in the early years of Labour rule when there was a focus on a relentless raising of standards. After a second comprehensive election victory, Labour published the 2002 Education Act with 'Powers to facilitate innovation' identified as a key focus (Education Act, 2002). Hargreaves and Shirley identified this period of educational reform as 'The Third Way' (2009) where, recognising the failings of the past, 'New Labour' aimed to combine the

core values of the left: solidarity, the reduction of inequality and protection of the vulnerable, within a market driven service economy (Giddens, 2010).

Education was therefore characterised by a new openness, school to school support, greater community engagement, increased social inclusion and a combined public and private funding arrangement. There was an emphasis on rights, whilst the development of the Office for Standards in Education (OfSTED) and the increasing of national testing firmly drove home that with rights came responsibilities. Within this innovative style also came the recognition that success was dependent on a blend of top-down, bottom-up and lateral learning initiatives and therefore collaborative innovation and systemised developments had the opportunity to exist side by side.

With many of the initiatives of the first Labour term of government having delivered the systemisation of the new secondary curriculum, the focus of the second parliamentary term was shifted towards the softer aspects of educational improvement and innovation in order to keep momentum on raising standards (Johnson, 2004). It was recognised that in a schooling system fundamentally unchanged from the Fordist principled ideologies of the previous 30 years, change was needed to begin to address low student aspiration and under-investment by students in their own education (Miliband, 2004) creating a drop-out rate that was the fourth highest in the industrialised world (Leadbetter, 2005). In addition, change was also needed to re-engage teachers who had been affected by the standards agenda and had become very target focused. The result was the largely intertwined initiatives of Personalised Learning and the Building Schools for the Future (BSF) project.

2.2 Personalised Learning

The idea that all children are different and that therefore they all learn differently is not new (Cutler et al, 2007). However, the phraseology around the personalisation of

learning became more common in 2001 when the Department for Education and Skills (DfES) articulated that;

> *"every child should be educated in a way and at a pace which suits them, recognising that each is different, with different abilities, interests and needs"*
>
> (Hargreaves, 2009:11)

Coupled with the identified failings of public services as a result of the Victoria Climbie social work case[1], this concept expanded to drive the 'Every Child Matters' agenda where children were placed at the heart of service provision and was formalised by the Children Act of 2004 (Gillard, 2011). As a result, Community Police Officers, Social Workers, Educational Welfare Officers and many other professionals entrusted with the support for the whole child became a familiar sight in schools, with adults in roles supporting education reaching a ratio of 1 adult to every 11 students by 2007 (Couglan, 2007).

Building on the Every Child Matters agenda, Tony Blair first referenced the concept of Personalised Learning at the Labour party conference in 2003. This idea was clarified further by David Miliband, then Minister of State, when he described Personalised Learning as

[1] Victoria Climbie was an 8 year old who was tortured and murdered by her guardians in London in 2000. A number of authorities were aware of this abuse prior to her death yet appropriate action was not taken. As a result, a serious case review was held culminating in the Children Act 2004 and the 'Every Child Matters' initiative.

> *"an education system where assessment, curriculum, teaching style, and out of hours provision are all designed to discover and nurture the unique talents of every single pupil.....the most effective teaching depends on really knowing the needs, strengths and weaknesses of individual pupils"*
>
> (Miliband, 2003 in Johnson, 2004:2).

It was also Miliband who formally linked personalisation to policy in 2004, launching it as a key facet of educational change.

Personalised Learning was envisaged to work alongside three other main improvement strands encapsulated in the 'Every Child Matters' agenda; national testing, school inspections and more effective use of data to promote accountability (Miliband, 2004). Based very much on the work of Leadbetter, at the time an advisor to the DfES's Innovation Unit on future strategies, Personalised Learning promoted the provision of *"an education to every child, which is tailored to their unique learning styles, motivations and needs."* (Miliband, 2004:1). It is worth noting, however, that much of the theory around 'learning styles' was subsequently discredited following work by authors such as Kratzig & Arbuthnott (2006) and Dweck (2006).

Unlike many 'new' concepts in education which arrive neatly packed in glossy brochures and were implemented through a well worked series of training sessions, Personalised Learning arrived as more of a vision disseminated by osmosis. Defined by the DfES in 2004 this was, unusually, an initiative conceptualised entirely by ministers without input from academics or practitioners (Johnson, 2004) and striving to tailor:

> *"education to individual needs, interests and aptitudes so as to fulfil every young person's potential"*
>
> (Hargreaves, 2009:11),

As a result of this less rigorous and largely lay introduction, Personalised Learning was a fluid concept and by 2006, the DfES definition had already changed so as;

> *"to ensure that every pupil achieves and reaches the highest standards possible, notwithstanding their background or circumstance, and right across the spectrum of achievement"*
>
> (Hargreaves, 2009:13).

Seen to be a concept as powerful as privatisation (Leadbetter 2003 in Campbell & Groundwater-Smith, 2007), Personalised Learning was envisaged to rewrite an educational script that hadn't changed in the last 30 years (Leadbetter, 2004); turning users of education into 'consumers' through allowing students to actively engage in setting their own targets, develop their own learning goals and choose where, when and how to learn throughout their schooling. Through the development of their self-enhancement, self-regulation and self-developing skills, students would become active participants in their own education and less dependent on teachers, though Miliband (2006) articulated that it was not what was taught but how it was taught that was the key aspect of Personalised Learning. Miliband was also careful to exemplify that Personalised Learning was not about 'abandoning' the National Curriculum nor about granting students a licence to 'coast' in his writing on Personalised Learning in 2006. This therefore put the need for high quality teaching central to his exemplification as he also acknowledged that the freedom to choose was worthless without the power to make the right choices.

2.2.1 The key attributes of Personalised Learning

Within their vision for education, Leadbetter (2005), and subsequently Miliband, began to identify some of the key attributes of personalisation, albeit from slightly different perspectives. Leadbetter (2005) painted a more theoretical approach which required deploying increasing resources, more flexibly driven by involvement of all stakeholders. Miliband, conversely, based his key attributes more on how Personalised Learning might appear in schools. This eclectic selection of pedagogies included, critically to this study, a wider teacher repertoire and more varied styles of learning; he also perceived that this would necessitate a radical rethink in school organisation (Miliband, 2004).

As a result Personalised Learning was at the forefront of strategic planning for schools culminating in the 2008 publication 'Personalised Learning – a practical guide' (DCSF, 2008). This position of prominence was further reinforced by investment with over £1billion committed in the three years preceding 2008 to support the development of Personalised Learning.

With such investment and prominence within policy it was inevitable that other educationalists were contributing to the debate around the concept and delivery of Personalised Learning. Some of the key work within this area comes from Hargreaves (2009), who reflected on the development of Personalised Learning at both an institutional and classroom level during his work for the Specialist Schools and Academies Trust. Hargreaves recognised that the implementation of such a radical innovation would require reinforcement of current practices, modification of other strategies and, finally, the creation of new and different ways of doing things (2009). From this work, Hargreaves identified nine gateways to Personalised Learning, whilst advocating that any single attribute could provide a route into student engagement within a holistic change agenda (Figure 2.1).

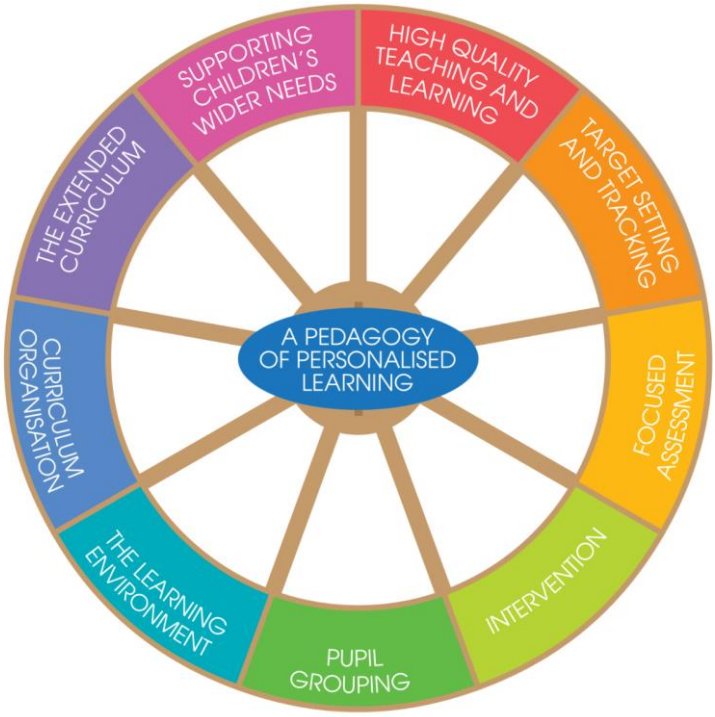


Figure 2.1 The key features of Personalised Learning (DCFS, 2008)

Three of these nine key features were developed from Miliband's five key strategies for delivery; curriculum choice, use of data and school organisation, whilst Leadbetter's assertion of the importance of student voice in co-production was also recognised. To these Hargreaves (2009) added:

- Learning to learn – If students were to take control of their learning then they needed to develop transferable skills which would allow them to learn with more autonomy

- New technology – The increase in technology in schools provides the potential to promote student-controlled learning, increasing both student empowerment and flexibility in order to facilitate different paces and styles of learning, as well as providing personalisation of content

- Workforce development – Delivery of the Personalised Learning agenda identified that *"the active engagement of staff and other stakeholders in the schools improvement agenda is ... crucial"* (p.4). This necessitated a move away from an exclusively educational focus and the provision of a greater variety of support roles such as teaching assistants and coaches

- Advice and Guidance – Hargreaves identified that students needed advice and guidance if they were to make the best of the choices available to them, particularly those with poorer socio-economic backgrounds; a reinforcement of initial concerns over the potential inequality of Personalised Learning

- Mentoring – The work of non-teaching adults, both within and beyond schools, is seen as vital in order to personalise provision for the disengaged and the more able amongst others

As a consequence of this more practically based work it was seen that effective delivery of personalisation required three core concepts: curriculum change, effective use of technology and, most crucially to this study, a *"school improvement agenda which has teaching and learning at its heart"* (DCSF, 2008:6).

Delivery of Personalised Learning was, however, always going to present challenges on a range of scales. At a conceptual level, Johnson (2004) questioned whether society was ready to move away from an education system where learning involved the generation of one-dimensional knowledge through a container 'classroom' approach presided over by a teacher 'expert'. However, it is Fielding who perhaps presents one of the most damning analyses of the concept of Personalised Learning when he stated that personalisation was *"ahistoric, superficial, insular, technicist, conservative, individualistic, episodic, calibrated and dishonestly vacant"* (Fielding, 2012:76)

Gathered within this statement were a range of concerns. Firstly, Fielding (2010) argued that the development of Personalised Learning had not learnt from past initiatives, where attempts to broaden the educational experience had been demonstrated to have failed; whilst one of the most successful initiatives in raising attainment had been the prescriptive nature of the literacy and numeracy strategies (Campbell et al, 2007). That much of the rationale for Personalised Learning was overblown in relation to its intellectual credibility resulted in its hyperbolic label, whilst the driving of the initiative by a few individuals made it individualistic. On a more holistic basis the lack of placement of personalisation in a broader, considered educational future resulted in Fielding labelling it technicist, episodic and conservative. Conversely to the aims of Personalised Learning, Fielding argued that this pedagogy was still calibrated through the use of targets and feared an impact of reduced aspiration as a result.

Fielding articulated the term 'dishonestly vacant' to describe teacher engagement with a vague outline of learning whilst accepting that they needed to create the actual description themselves. This point was reinforced by the work of the Economic and Social Research Council (ESRC) Teaching and Learning programme which highlighted that a switch to a personalised way of teaching would be far from easy (Campbell et al, 2007). This conflict was also synonymous with the fact that Personalised Learning was a government driven initiative yet its success depended on 'bottom-up' innovation; two principles which were at odds with each other.

In addition, Personalised Learning also attracted a number of practical concerns. With prescription of the curriculum by government considered to be up to 90% for children

aged up to 14, the manoeuvrability necessary to Personalise Learning was significantly limited (Campbell et al, 2007) Another factor identified as limiting to the facilitation of personalisation was money. Johnson (2004) hypothesised that the proposed increases in funding could not adequately deliver personalisation. Furthermore, the assertion of Breunlin et al (2005) that personalisation was easier in smaller schools would mean a radical reorganisation of education that would be beyond the finances of even the most economically prosperous society. The nature of school organisation also placed numerous barriers to personalisation including the role of teachers, fixed lesson durations and limited technology (Leadbetter, 2005). In addition, the institutional and traditional container style design of most schools potentially meant that educational reform could not happen in buildings that existed at that time (Bradley, 1998 in Upitis, 2004).

Many of these more practical challenges were reflected in the findings of the DfES study into Personalised Learning (Sebba et al, 2007). Of the very few responding schools (347 of the 2838 schools contacted) there were a number of examples of Personalised Learning being well embedded and collectively delivering on the five identified aspects of this pedagogy. However, many others reported less favourable progress with limitations including initiative overload, funding, time available and a conflict with the demands of national testing. The study also highlighted a number of schools who, regardless of their stance on the concept of Personalised Learning, cited the lack of flexible space, in line with the view that;

> *"public services have traditionally fitted the individual to the service rather than vice versa"*
>
> (Hargreaves, 2005:16)

On reflection, therefore, Personalised Learning aimed to build on the acknowledged success of one-to-one learning (Campbell et al, 2007), yet without the investment of time, finances or training, nor the basis in academic rigour of other initiatives, Personalised Learning promised to deliver much without actually stating how. However, despite these concerns, the government policy saw a pursuit of Personalised Learning as core to its 'Education' mantra.

It is with these considerations in mind, particularly the constraints around appropriate spaces, that we shall turn our attention to the sister initiative of Personalised Learning; Building Schools for the Future (BSF).

2.3 Building a home for education

In the early years of the 21st century, many researchers hypothesised that the last 100 years has seen very little change in school design (Hurst, 2008), an assertion not strictly true as evidenced by Dudek's (2005) summary of architecture within education.

Much of England's formal large scale education had been driven by the 1870 Education Act with large numbers of urban schools built to facilitate compulsory education for 6 to 11 year olds. Schools were, therefore, functionally driven buildings (David & Wright, 1975) constructed with a Victorian eye for aesthetics (Figure 2.2), however, as early as 1911, educationalists were identifying that they were not meeting the needs of students. Architects failed to invest time in understanding the educational aspects of designs (Woolner, 2009) and so school buildings were constructed with very limited flexibility (Jilk, 2005) and large amounts of non-teaching spaces (Brogden, 2007).

Figure 2.2 A traditional Victorian primary school

With the post-World War II baby boom large numbers of additional school places were needed (Cottam, 2012), however, tough economic conditions meant value for money was a key concern. The result was that between 1950 and 1970 new school buildings were opened at a rate of one a day (Feilden, 2004) with design tightly controlled through a series of 'Building Bulletins' (Cordellio et al, 2012). Such rapid expansion led to the introduction of modular styles of school buildings which allowed more rapid design and realisation such as CLASP (Consortium of Local Authorities Special Programme) schools (Cottam, 2012) (Figure 2.3). These buildings had less floor space per pupil than previous builds, but a greater allocation of space to teaching (Brogden, 2007) providing an economic, functional and quick solution to the shortage of school buildings. However, they were low in building quality and suffered from a lack of co-operation between architects and educationalists (Cottam, 2012).

Figure 2.3 A CLASP modular school build

2.3.1 Opening up school design

This poor building quality was the driving force behind the Plowden report in 1967; a visionary document about transformation in primary education. The report stated that future school building projects should be *"determined by educational trends rather than by architectural fashion"* (Plowden, 1967:397) building on studies into how pedagogy fills learning spaces by architects, David and Mary Medd. They observed practices in a number of small schools and identified the importance of flexibility of groupings and spaces within successful learning. However, they also acknowledged that such pedagogies could not be translated into traditional schools due to the constraints of current designs (Brogden, 2007).

In light of this, the report describes the design of the first 'open-plan' school, Finmere Primary School, constructed around large central study areas which could be sub-divided and opened up as necessary. This was complemented by a series of surrounding smaller spaces which combined predetermined use with flexibility as well as a landscape which created opportunities for learning. Based on this model, the report went on to describe a number of ideals for open-plan schools. The most noticeable of these was that learning spaces needed to be informal but also flexible and able to combine a degree of seclusion whilst also retaining the ability to be opened up to link with other areas (Figure 2.4). Such design must, Plowden asserted, also be the result of a much better level of collaboration between education and architecture with teachers more directly involved in the design of schools. As a result of the Plowden report, the next phase of school building in England was characterised by open-plan designs and with, on average, 250 schools being built a year, 10% of schools were 'open-plan' by the late 1970s (Plowden, 1967).

> *"School building has been a fine example of how a government department can, with its partners in the local authorities, produce good results through the exercise of imagination and effort".*
>
> (Fullan, 1993:405)

As with all other innovations in education, research into the success of open-plan designs was soon underway and sought to assess whether something that worked so well in small schools in unique circumstances could be effectively translated to larger schools on a broader basis. Bennett was a key researcher in this area and produced a number of studies which suggested that the link between open-plan spaces and expansive teaching was tenuous (Bennett & Hyland, 1979) and that an *"open-plan school is no guarantee of open or informal teaching"* (1980 in Brogden, 2007:62)

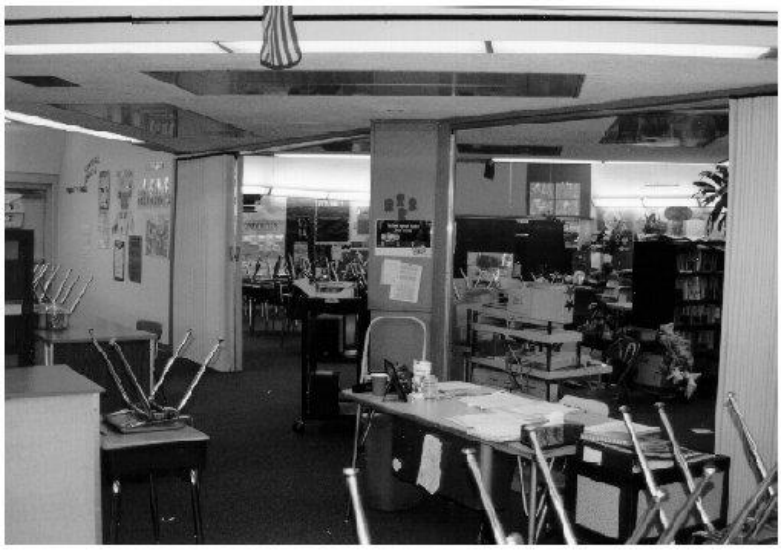


Figure 2.4 A typical open-plan primary school

The cause of this discrepancy between rhetoric and reality was neatly summed up by Adelman and Walker in their phrase 'innovation without change' (1974 in Brogden 2007:61). Building the spaces and hoping pedagogy would evolve to fill them in the right way without any accompanying training had not been successful (Prohansky & Wolfe, 1974 in Bennett & Hyland, 1979). Instead teachers had replaced walls with a range of other barriers resulting in less student and teacher interaction than before (Bennett & Hyland, 1979). Effectively many of these large learning spaces were repartitioned into more traditional classrooms, yet without the benefit of being well designed (Stewart, 2012).

2.3.2 The state of schools prior to Building Schools for the Future

Disenchantment with open-plan schools (Upitis, 2004) meant that the few school buildings constructed post 1970 reverted to being a series of 'containers' housing education (Green & Letts, 2007). Learning spaces were again designed for a specific purpose thus the environment became a barrier to flexibility (Jilk, 2005) particularly in the Arts subjects (Upitis, 2004). Added to this was the raising of the school leaving age, which necessitated the addition of 'mobile' classrooms to a number of school playgrounds (Cottam, 2012); an apparently temporary measure which, much too many teachers' frustration, is still in use today.

By 2004 there were 24,000 state schools providing a place of employment for half a million people and educating 20% of the population (Feilden, 2004). Despite this, six out of seven schools were more than 25 years old and 60% had been in use for more than forty years (Smithers & Hall, 2004). In addition, changes in technology had resulted in cluttered, over-heated classrooms (Burke & Grosvenor, 2008) and there was a growing recognition that *"making space for space in education (was) long overdue"* (Gulson & Symes, 2007:13).

The need to ensure schools were able to adapt to possible future changes involving a more diverse curriculum, new ways of learning and the impact of ICT were all key elements which needed incorporating into designs, as was the opening up of schools to facilitate effective inclusion of students with Special Education Needs. These developments were also occurring at a time when there was an increasing need to ensure that building developments were sustainable environmentally as well as educationally and socially.

Hence innovation in English secondary education had reached a critical point. Personalised Learning was a core feature of the education agenda yet could never come to fruition if flexible accommodation did not give it the space to blossom; Investment in school building was long overdue yet without a vision for pedagogic change was in danger of (British Educational Suppliers Association (BESA), 2007) repeating the failures of open plan learning spaces in prettier shells. Putting the two initiatives of Personalised

Learning and School rebuild together was to be the educational, and potentially social, legacy of the Blair administration.

2.4 Learning Spaces of the future

Before progressing further with this study, a clarification of the terminology involved in defining spaces for learning should be considered. Students, and to a large extent teachers, will talk about 'classrooms' as places in which to learn. However, the focus of this study is to examine learning in a multitude of areas that encompass both current locations for learning and locations that may be utilised in the future. 'Classroom' is therefore a term which brings too great a preconception and thus use within this study needs to be minimised.

One term commonly used in place of classroom is 'learning environment' however; much of the literature around this, summarised by Higgins et al (2005), concerns social environments and the facilitation of students feeling safe and able to interact in a Personalised Learning space. This study is more concerned with the physical environments of learning and how they in turn can be best utilised so again 'learning environments' will be avoided due to these preconceptions.

This leaves two viable alternatives 'learning places' or 'learning spaces'. De Certeau (1984) tackles the issue of space as opposed to place by explaining space as a frequented area where social interactions occur:

> *"Thus the street geometrically designed by urban planning is transformed into a space by walkers"*
>
> (Auge, 2008:64)

Thus schools are clearly spaces; they are bursting with life even when the building is closed. In addition, de Certeau identifies that the key attributes of a successful space for learning are the facilitation of social interaction and the presence of locations which are filled with life, both of which are common features of schools. As this study is concerned with the effective utilisation of physical locations for learning, the term 'learning space' is to be used. This also leaves the potential for the study to include learning which expands into less traditional and perhaps unplanned spaces.

2.4.1 Accommodating Personalised Learning within school designs; Building Bulletin 95

The emerging challenge of accommodating Personalised Learning in effective learning spaces was addressed by the publication of Building Bulletin 95 (DfES, 2002) which identified that in order to achieve the aims of the 2002 Education Act, the accommodation of teaching and learning needed significant reform. This publication hypothesised that buildings had the power to bring about change in social behaviour but also acknowledged that the existing standard of design in public buildings was poor and that many were reaching the end of their functional life.

Six key considerations for design were identified: functionality, sustainability, buildability, efficiency, aesthetics and durability and a number of institutions worked to support the design process. These included the recently established Commission for Architecture and the Built Environment (CABE) created to support the development of architecture, urban space and public design (MacMillan, 2004), and Partnership for Schools (PfS), a joint venture company set up in 2004 to deliver the BSF programme.

Despite clear criteria for design and construction, Bulletin 95 did not go so far as to create a 'blueprint' for schools of the future, though clear guidance for a 'successful' design was given. The main driving force behind all the guidance was flexibility recognising the 'increased value placed on individual needs' (DfES, 2002:18). An envisaged increase in vocational education and building use beyond the school day led to interest in technological uses such as video conferencing whilst flexible, future-proofed learning spaces allowing a range of activities to be accommodated in one space without cost or inconvenience.

Building Bulletin 95 went on to create a vision for a range of spaces with both educational and logistical purposes. In the latter category were spaces for student support, staff, hygiene facilities and children's services such as Sure Start centres which are beyond the scope of this study. This left a number of spaces with the potential to facilitate educational reform and the visions for these are outlined below:

- Group spaces continued to be seen as the key, and therefore most common learning spaces acknowledging that learning alongside others is vital. However,

that group learning might exist beyond traditional perceptions meant spaces needed to be able to accommodate discussion groups of 10-15 students through active learning groups of 30 to listening groups of 80-90 students (Partnership for Schools (PfS), 2009)

- Resources spaces included the library and ICT hubs and involved a combination of group and individual areas where quiet spaces, seen as 'critical to the success of independent working' (DfES, 2002:24), could be facilitated

- Social and movement spaces were traditionally referred to as 'non-learning' areas. Building Bulletin 95 made the significant step of identifying that flexible learning required the difference between learning and non-learning spaces to become less. Social areas such as dining rooms, redundant for large periods of time in the school day, were to be utilised for informal learning and community use to minimise wastage. In addition, movement areas were to encourage flexible learning through wider corridors and break-out spaces

- External spaces promoted multi-use and environmentally sensitive areas to increase the aspects of the curriculum that could be delivered outside the school building and reverse the trend of young people spending more time indoors

2.5 Building Schools for the Future

In February 2004, as a realisation of the combined yet interdependent agendas of Building Bulletin 95 and the Personalised Learning vision, Tony Blair announced the Building Schools for the Future (BSF) programme (Guardian, 2004). Labour's investment in school building of £45 billion over 15 years (Mahony et al, 2011) recognised that their change agenda was not possible if constrained by traditional school design. BSF was to be the vehicle by which Personalised Learning was fully integrated into reform of an education system which hasn't *"changed very much in over 150 years"* (Thomas, 2006: paragraph 2). As part of *"the greatest school renewal programme in British history"*

(Blair, 2004:n.p.) and in a commitment to investment in education not seen since Victorian times (Hurst, 2008), all 3,500 secondary schools in the country were to be rebuilt or refurbished within 15 years (CABE, 2005) providing;

> *"flexible, inclusive, attractive learning environments that teachers want to teach in and pupils want to learn in"*
>
> (Miliband in Smithers & Hall, 2004: paragraph 5)

There was talk of transforming education for young people through the provision of facilities that enabled every student to develop their talents and achieve their very best. A new approach to learning was to be created centred around the four principles of BSF; improved educational results, a wider role for schools in the community, environmental and social sustainability and better value for money (CABE, 2005). Yet this raised a question; how does school design influence pedagogy?

> *"The science of designing learning environments was [sic] currently remarkably under-developed"*
>
> (Fielden in Higgins *et al*, 2005:3).

Whilst many recognised the opportunity to shape future education through effective design, no-one was really clear what that shape was. As Jilk states;

> *"Our current approach to learning compared to what learning is possible is like the visible light in the electromagnetic spectrum – the possibilities we cannot see are immense."*
>
> (In Dudek, 2005:30);

2.5.1 Are learning spaces important in pedagogy?

In consideration of the role of learning spaces in pedagogy, let us first seek to consider what we mean by pedagogy. From its Greek translation 'to lead the child' through its dictionary definition "*the profession, science or theory of teaching"* (Oxford, 2010),

pedagogy is inextricably linked with education. Historically pedagogy had equated 'teaching' – what individual teachers did in the classroom. However, Alexander's (2008) definition broadens this to consider not just the 'how' but also more crucially the 'why' of teaching and learning. Thus pedagogy recognises that good teaching and learning are not just an accident of activity but a considered, evidence based series of strategies, adapted and refined as necessary. It is this broader definition of pedagogy that will be adopted in this study.

Influences on pedagogy are extensive and all interact when deciding what and, more within a teacher's control, how to teach. Nair (2002) argues that buildings are just one piece of this reform but that their role is key, a theory supported by Owens and Valesky (2007 in Gislason, 2010) who conclude that learning spaces are a function of four aspects: organisation, culture, student attitudes and design (Figure 2.5).

By the end of compulsory education, students have spent over 15,000 hours in school (Thorpe & Asthana, 2005) making it the second most significant location in most children's upbringing. Benito (2010:54) articulates that educational spaces *"provide the rhythms to school time"*; thus school design has a significant impact on the lives of children (Banning, 1990). Nicholson (2004) extended this further, arguing that poor school buildings create an anti-education culture, reflected by Taylor's quote from a practicing US principal that you *"can't learn in ugly"* (2009:109). For many students, therefore, investment in their school building is seen as an investment in them and their futures (Durbin & Yeshanew, 2011).

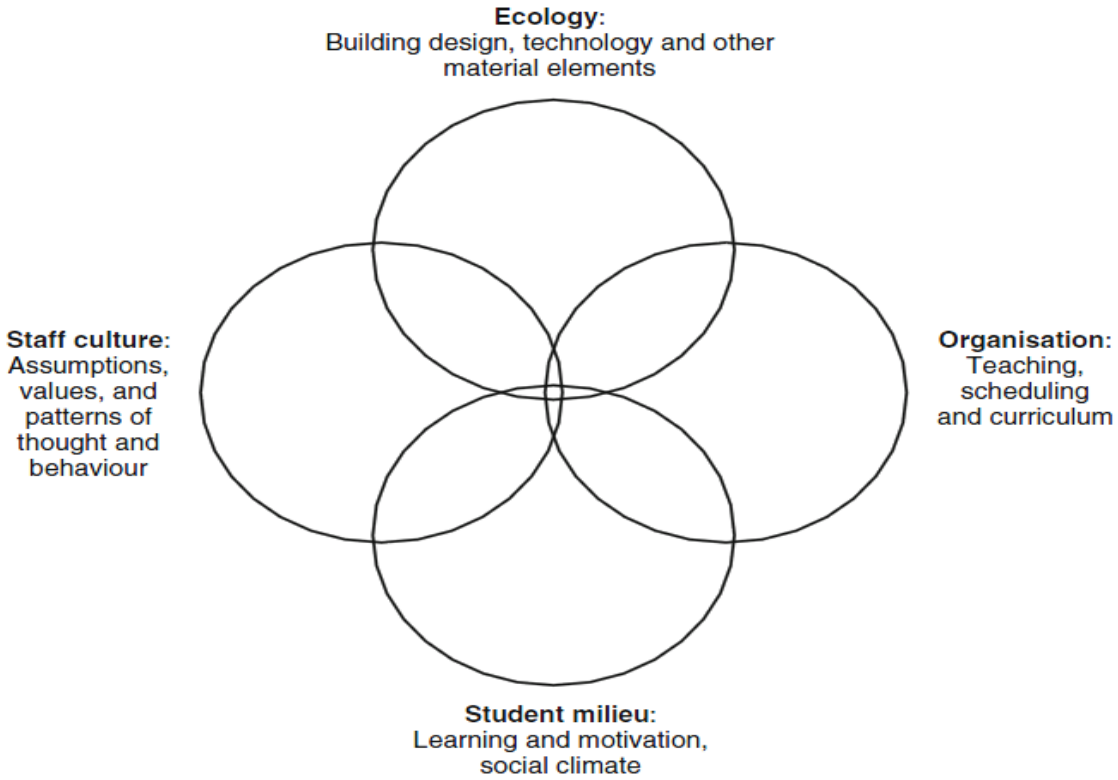


Figure 2.5 Influences on learning spaces adapted from Owens & Valesky (2007) in Gislason (2010:131).

Additional evidence is also provided by the British Council for School Environments who found that a third of teachers said that poor school design prevented them teaching effectively; 59% said they were not able to adjust their learning space to accommodate different ways of teaching and only 12% felt that school design was effective (Bragg, 2009). In addition, research in America demonstrated that of 18 pedagogies identified as commonly occurring in schools, only 3 were effectively supported in traditional learning spaces (Nair and Fielding, 2013). Numerous authors therefore, including Upitis (2004), Oblinger (2006), Taylor (2009) and Gislason (2010) conclude that there is a co-relationship between pedagogy and learning spaces, though they also accept that it is a generally poorly researched area at a secondary school level. As a result of this, learning spaces have often become entrenched (Woolner et al, 2011), therefore, the need to explore how space interacts with learning is key.

2.5.2 Effective learning spaces

There are a range of aspects which must be considered when identifying the features of an effective learning space, the first of which is a consideration of the physical environment. An effective learning space needs to be comfortable; there are strong evidential links between improved learning and the physical attributes of temperature and acoustics (Schneider, 2002), lighting (Heschong Mahone group, 1999), colour (Engelbrecht, 2003), and air quality (Earthman, 2004). Other evidence also suggests a link between better facilities and improved staff morale and retention, both of which link indirectly to student performance (Price Waterhouse Coopers, 2001). Complementing this is work by Tanner (2000) which looked at the 39 key design features identified within guidance for the building of American schools, yet found that only four features were significantly linked to students' academic achievement: circulation routes which reduced overcrowding; positive outdoor spaces (Rudd, 2008); computers for teachers and a positive, welcoming nature. Finally, new designs offered the opportunity to integrate ICT rather than 'adding it on' hence future proofing buildings for the education of the future (Hurst, 2008).

With the investment in school design that the BSF programme brought, research into learning spaces grew, both within academic circles and through the work of government departments. However, Building Bulletin 95 did not offer a blueprint for a good design so the breadth of approaches to learning spaces was as broad as the characteristics of the schools, educationalists and designers involved. Nicholson (2004) identified a number of features of appropriate secondary school design which can be summarised, and expanded upon, as follows:

- Flexibility. School design in the past had been driven by front facing didactic lessons (Dudek, 2005), however, if design was to facilitate student-centred pedagogies then it required flexibility (Churches, 2008). For example movable walls providing accommodation for different sized groups (Hinds, 2008) and different learning activities facilitated through movable furniture (Prohansky & Wolfe, 1974)

- Informal learning. The facilitation of flexible learning is partly driven by the acknowledgement that learning does not always happen in the way, or space, for which it was planned; informal learning is just as important. Previous school design had generally paid little heed to the learning potential of areas not seen as directly related to learning such as dining halls, playgrounds and corridors. The opening up of these areas as informal learning spaces facilitated a whole range of creative learning opportunities

- Fun. Nicholson (2004) says that to be successful a school design should create a place where students want *"to see and be seen" (Nicholson, 2004:60)*. In addition, Hirst (2008) highlights the opportunities created by rebuilding to make students feel safe through facilitating more passive surveillance (Wood, 2012)

- A holistic planning process. Architects' criteria for effective learning spaces are not the ideas of children and we exclude them to our detriment (Prohansky & Wolfe, 1974). To be successful, designs must embrace the ideas of teachers and students in creating a vision of learning in the future (Higgins et al, 2005).

Most importantly, however, is the opportunity that redesign offers to reassess current pedagogic priorities (Wood, 2012) and embrace the opportunity to use physical changes as a catalyst to drive new initiatives, particularly as using old pedagogies in new spaces is actually worse for students than the status quo of old pedagogies in old spaces (Nair, 2002).

Both Partnership for Schools (2009b) and CABE (2004) identified ten key design features which collectively can be summarised as:

- Identity and context: creating a school the students and community can be proud of

- Site plan: making best use of the space

- School grounds: making outdoors an asset

- Organisation: creating a clear diagram for the building

- Buildings: making form and appearance work together
- Interiors: creating excellent spaces for learning and teaching
- Resources: deploying convincing environmental strategies
- Feeling safe: creating a secure and welcoming place
- Long life, loose fit: creating a building that can adapt and evolve in the future
- Successful synthesis: making a design that works in the round.

Of these, it is the focus on "*internal spaces that are well-proportioned, fit for purpose and meet the needs of the curriculum"* (CABE, 2007:6) coupled with the need for flexibility going forward into the future that concern this study as, if active learning is to be promoted, then designers need to create large, flexible spaces (Taylor, 2009).

Subsequent guidance from the British Council for School Environments (British Centre for Science Education (BCSE), 2008) started to develop these lists into actual designs proposing the concept of 'learning studios' with the boundaries between formal and informal learning blurring through multiple classes being taught in one learning space simultaneously. In addition, the first of the case studies of completed builds appeared, however, the links between a theoretical list of desirable aspects and actual designs features were still lacking.

2.5.3 Building Schools for the Future: from theory to reality

In general, publication stopped at the theorising stage with literature around the use of learning spaces clearly in front of practice (Montgomery, 2008). Educators had a huge range of issues they needed to address: they had a small, and often decreasing, budget; they had a huge array of stakeholders to please and they had a blank canvas. Beyond this, schools were at the mercy of the designers who, as has previously been discussed, were generally unaware of the processes involved in pedagogy and often had their own agenda and aspirations to follow. The danger, therefore, was the potential of BSF to

replicate the failings of previous rebuilding programmes such as the 1960s open-plan layouts which had tried to break away from traditional designs in similar ways.

Whilst this was a genuine concern, there were two attributes of the BSF programme designed to minimise this risk. Firstly, the intertwining of BSF with the Personalised Learning agenda meant that there was recognition of the need to have a corresponding pedagogic change. And, secondly, the BSF programme was very clear about its desire to include all stakeholders in the design of new schools hoping that educationalists would influence designs so that high quality learning spaces overcame aesthetics. Despite these strategies, however, Labour's flagship BSF programme would have to work hard if it was to deliver its core purpose; the transformation of education in its broadest sense.

By 2011 £8.65 billion of the allocated funding had been spent on 310 schools (Vaughan, 2012), a huge overspend (Smithers & Hall, 2011), and the projected budget and timescale had risen to £55 billion and 18 years respectively (Mahony et al, 2011). Thus, significant questions were raised as to whether the reality of BSF had lived up to expectations though preliminary studies did identify a percentage rise in attendance (Durbin & Yeshanew, 2011) and indicated that students' perceptions of safety, pride and enjoyment in their improved schools significantly increased (European Conference for E-Learning (ECEL), 2007). However, many of the links between new builds and students' attitudes towards them were anecdotal and attainment at rebuilt schools went down on average by just under two GCSE grades (Durbin and Yeshanew, 2011); possibly as a result of schools devoting too much time to change management, or as a reflection that many of the earliest BSF schools were built in areas where the largest challenges to education were present. Others, such as the educational designer Philip Watson (2008), are more damning in their analysis recognising that the project, whilst laudable in its aims, was over-ambitious in timescale, finance and wisdom. Architects with the experience to conceptualise effective school design did not match the capacity required, Local Authorities lacked the expertise to support such an extensive commitment to designing and building, the involvement of governors, teachers and most crucially students was minimal and the opportunities to share good practice effectively were overlooked in the scramble to meet deadlines for funding.

The result was that many initial rebuilds effectively recreated the traditional (Burke & Grosvenor, 2008), an opinion supported by Watson (2008) who identified the demand for 'new' old schools as education shied away from transformational change. Positively, subjects such as Drama and Music had purpose built facilities rather than 'making-do' in the sports hall or a quickly and cheaply adapted classroom. There were data points in every room supporting a plethora of interactive ICT equipment and 'mod-cons' like air-conditioning and effective heating made the environment a more pleasant one to be in. However, the predominant pattern of corridors with rooms housing 30 students (Chartered Association of British Engineers (CABE), 2007) organised into faculties remained. If delivering a traditional curriculum in traditional ways but in far more pleasant and appropriate facilities was the aim of the project, then it could be argued that it was entirely successful (Nair, 2002).

2.6 Building Schools for the Future and Personalised Learning; a synergy of innovation?

If we accept the assertion that school buildings make a difference to learning (Banning 1990), then we must agree that there is a co-relationship between pedagogy and learning spaces as proposed by Oblinger (2006), Gislason (2010), Taylor (2009) and Upitis (2004). Therefore, that BSF should support the necessary adaptations to organisation, culture and design (Nair, 2002) is a logical conclusion. That there is also a recognition that design can be a limiting factor in effective teaching and, therefore, learning (Bragg, 2009), meant the opportunities presented by BSF to create *"internal spaces that are ... fit for purpose"* (CABE, 2007) incorporating the key features of flexibility, informal learning and fun (Nicholson, 2004) were fundamental to correcting these limitations.

So have the opportunities to challenge the boundaries of education been taken? Has BSF been the vehicle by which Personal Learning has been brought to fruition within England's school? In theory the answer to these questions should be yes. Personalised Learning necessitated students becoming active participants in their own education

through choosing where and when to learn (Hargreaves, 2012). As a consequence school buildings needed to be rethought in order that they could facilitate more varied pedagogy, integrated ICT and vary in group size. BSF offered this opportunity. It advocated group spaces of varying size, multi-use resource spaces, learning extending outside the school building and seamless integration of ICT. However, what BSF didn't offer was a blueprint for design. There was no compulsion to seize these opportunities and, despite a much better design processes, schools were still being conceptualised by educationalists often lacking the vision of potential and architects with little understanding of education.

The result was a return to what people knew and understood and, whilst there were much more pleasant environments, many rebuilds saw a modern recreation of buildings that were still unable to respond to educational reform; they just looked better (publicservice.co.uk, 2010). However, there was very little research into the impact of the BSF programme (Stewart, 2012) and, with the generation of quantitative achievement data potentially taking 5 years for KS3 and KS4 students (Table 2.1) to benefit from the full impact of a new school design, there was still some time to go before hard evidence of impact arrived.

Key Stage	Student ages	Year groups included	Stage of education
Key Stage 1 (KS1)	5-7	1, 2	Primary
Key Stage 2 (KS2)	7-11	3, 4, 5, 6	Primary
Key Stage 3 (KS3)	11-14	7, 8, 9	Secondary
Key Stage 4 (KS4)	14-16	10, 11	Secondary
Key Stage 5 (KS5)	16-19	12, 13	Tertiary

Table 2.1 Key Stage organisation within English education

As a consequence of the lack of tangible evidence of success and value for money in times of austerity, coupled with a change of government and consequently a different approach to education, the BSF programme was radically cut in 2010. Michael Gove, the incumbent Secretary of State for Education, cancelled 719 school rebuilds or refurbishments (Fulcher, 2010) leaving only those schemes already in progress or

deemed too expensive to cancel. BSF had passed leaving a significant architectural, though maybe not educational, legacy in some areas, but just a sour taste in others (Times Educational Supplement (TES), 2010).

2.7 Driving Innovation within Education

Both the initiatives of Personalised Learning and school rebuilding, whether acting in isolation or tandem, required significant change within schools, both through the physical arrangements for learning and also in the vision of pedagogy adopted. That change is the only constant in education is a commonly accepted fact by those working within the profession. Conversely to the perceived lack of change in school buildings in the last 100 years, educational practice had shifted significantly under a barrage of policy change (Gillard, 2011) aiming to produce well qualified and skilled students prepared to function within a relentlessly developing society. Hence, 'innovations' in education had been many and varied, both in purpose and success, however, with *"few institutions as immune to innovation as public education"* (Senge, 2012:44), innovation in education was not easily driven, nor embedded to produce systematic results.

Despite its origins in 14th century French, meaning a new way of doing things (Whitehead, 2008), innovation is currently defined as 'making changes in something that already exists' (Oxford, 2010), therefore, every educational change is innovation. However, innovation is also about rethinking established ideas and so we may instead define innovation as a system change replicated reliably on a larger scale and hence becoming more than just a 'fad' (Senge, 2012).

Taken in its holistic meaning, then innovation in education is about assessing current practice and, where necessary, creatively devising new approaches which are appropriate for sharing. Innovation is not about implementing large scale systems designed outside of schools and implanted into education within very narrow perimeters, such as during the Third Way (Hargreaves, 2009). Instead, it is about

working together to produce and facilitate change in tandem with the aims of the organisation; yet how do we promote innovation in schools which operate in, by default, an education system?

Writing on innovation and change in business is extensive, particularly since the late 1960s (Fidler, 1996) and several models of possible innovation exist, however, innovation in education is a much more recent focus. Several writers are emerging as leaders in this area, primarily Senge (2012), Fullan (1993), Fidler (1996) and Hargreaves and Shirley (2009) and it is to these that this study will look for guidance.

2.7.1 Models of educational innovation

If we consider the work of Senge primarily, he identifies that deep down we are all learners and all love to learn (2012). Hence he argues organisations are innately inclined to progress towards becoming a learning organisation; always looking for opportunities to create their own future. Such transitions, however, do not happen by accident and depend on five disciplines that must gradually converge to create innovation.

Starting with the individual, Senge (2012) identifies **personal mastery** as a key driver of innovation. He argues that learning organisations depend on individual learning to spark innovation and that people with high levels of personal mastery are continually learning and striving to do better by building on previous work (Gharajedaghi, 2006). In combination with this is the idea of personal **mental models** indicating that individuals see the world in very different ways due to prior experience or personal focus. Both these ideas can stimulate change individually, however, innovation of education requires such individuals to come together and build a combined vision. This allows innovators to generate a force for change that compels others to commit to a common and **shared vision** rather than aligning everyone's ideas to one shared picture (Flood, 1999). In turn, this collaboration of ideas, facilitated by effective leaders (Mahony, 1997) provides the energy and focus needed for innovation alongside the capacity for flexibility and balance between the various aspects that drive its creation. The realisation of this vision then requires **team learning** to drive the collectiveness needed

to promote learning organisations as opposed to just learning in an individualistic way (O'Neil, 1995). "*Teams are where most knowledge is created*" (Mahony, 1997:63) and only by aligning the learning objectives of the different individuals within an organisation can the collective move forward with purpose.

The final discipline, and that which Senge identifies as the *"discipline which integrates the disciplines"* (2012:12), is **systems thinking**. This aspect identifies that nothing happens in isolation and that all aspects of an organisation are interconnected through non-linear equations (Gharajedaghi, 2006). Only by accepting such linkage can practitioners allow 'Metanonia' or the meaningful insights necessary to identify the key leverage points that allow innovators to avoid developments that become the fads of transient and superficial change (Flood, 1999).

Despite this awareness of interconnection, Senge (2012) argues that from an early age we are taught to view systems in a series of snapshots in order to make them more manageable (Flood, 1999). By doing so, he identifies we are in danger of both losing the big picture and the ability to appreciate a holistic idea. Another possible barrier to innovation is a lack of awareness of both the driving forces of change and the variable pace at which it can occur. As a consequence, change is often a reactive response to short term events and external pressures, rather than a strategic responsive to realign a vision with developing influences. In addition, such innovations are often shaped by individuals overly concerned with their own personal position and maintaining a facade of knowledge, thus within schools excluding teachers who feel oppressed by the constraints within which they are obliged to operate (O'Neill, 1995).

Whilst the work of Senge discussed above focussed on the key attributes of innovation as being internalised within an organisation; others working at the time looked instead for the key elements involved in leading successful innovation. One of the clearest representations of these ideas comes from Knoster (1991) which identifies 6 key aspects which must be present if innovation is to be successful (Figure 2.6).

Vision +	**Consensus +**	**Skills +**	**Incentives +**	**Resources +**	**Action Plan +**	**= CHANGE**
	Consensus +	Skills +	Incentives +	Resources +	Action Plan +	**= Confusion**
Vision +		Skills +	Incentives +	Resources +	Action Plan +	**= Sabotage**
Vision +	Consensus +		Incentives +	Resources +	Action Plan +	**= Anxiety**
Vision +	Consensus +	Skills +		Resources +	Action Plan +	**+ Resistance**
Vision +	Consensus +	Skills +	Incentives +		Action Plan +	**= Frustration**
Vision +	Consensus +	Skills +	Incentives +	Resources +		**= Treadmill**

Figure 2.6 Knoster's management of successful change (1991)

Whilst many of these features can be seen to parallel Senge's 2012 components of successful innovation, such as the need for appropriate skills linking to the concept of mastery, Knoster (1991) places a somewhat more clinical slant on innovation with his reference to consensus as opposed to sharing and action plans as opposed to systems thinking. His interpretation of the implications of missing one of these key innovation aspects out is also very clearly expressed but also reinforces the fact that, as outlined in Senge's work, innovation is both holistic and complex in nature.

These early works on the theory of innovation have been interpreted in a number of ways (Ortenblad, 2007). Within education, Fullan (1993) looked to build on these business based ideals within an educational context and argued that, as education is both fundamentally conservative in its ideals and systems driven, it lacks an openness to change. In addition he identified that education is a complex and non-linear system and therefore not fully suited to the drive of the singular top down innovations of the recent past. Instead he sought to examine the purposes of change in education as well as thinking about the main aspects for promoting change.

Fullan (1993) sees innovation in education as a moral purpose and places teachers as **'change agents'** at the heart of this process, entering the profession because they want

to make a difference. As such he sees them as key 'change-agents' and exemplifies that, to be successful, they must have four key attributes working in conjunction with each other. Firstly they must create a **personal vision** through relentless questioning and inquiry which should be used to drive institutional change; **behaving** within their vision and thus realising a level of **mastery**. Only by working with the ideas and living with a continual learning habit can innovation be embedded and become a **self-sustaining** process. Finally, he argued that without **collaboration** we cannot learn enough to effectively instigate large scale change. These areas closely mirror those identified by Senge (2012), and Fullan (1993) also references Senge's systems thinking in his assertion that for innovation to be successful it cannot happen in isolation but as part of the wider interconnected system.

Once established as effective agents of change, Fullan (1993) goes on to attempt to deconstruct the complex process of change through the identification of a number of key principles. Firstly; you can't mandate change. Drawing heavily from Senge's writing on the non-linear aspects of innovation, Fullan hypothesises that the more complex change is, the less you can make it happen. Change is dynamic and requires skill, behaviour and belief to make it happen. It also requires picking the right change at the right time, hence change is an undefined journey, not a blueprint, with the resulting change perhaps not the change envisaged. Thus problems are positive; they drive creative solutions as a result of the discourse they generate.

With such a nebulous origin, the creation of an early vision and strategic plan for innovation can be blinding to other avenues of opportunity so Fullan (1993) advocates that successful innovation is a living thing. In contrast to the old adage; ready, aim, fire, instead it is the creation of a 'ready' direction followed by the 'firing' of action and learning which should provide the crystallisation of the new vision and the ultimate 'aim'. To this end, both individualism and collectivism must have equal power as isolation provides resistance to innovation whilst collectivism can become 'group-thinking' where supportiveness can derail innovation. Therefore collaboration is a fine balance between creating innovative solutions whilst not over-complicating an issue. In addition, neither a centralised nor decentralised approach can consistently be adopted

as change requires both pressure from below and a response from above if it is to find a happy medium on the continuum from chaos to over-control.

In conclusion, innovation is a balance between regimentation and chaos, between the destination and the journey and between top down and bottom up ideologies with ultimate success depending upon the effective management of these conflicts. As such only

> *"Individual, skilled change agents pushing for change around them, intersecting with other like-minded individuals and groups to form the critical mass necessary to bring about continuous improvement."*
>
> (Fullan, 1993:40)

Fidler (1996) looked to ground this theoretical discussion into practice by considering the nature of planning for innovation. This acknowledged that numerous strategies for change have been worth as education responds to stakeholders' complex demands; all of which must be appeased in order to be 'successful' regardless of whether innovations are implicitly or explicitly driven. Fidler (1996) also refers to the lack of pace of change in schools which can mean that many changes are already being proven to be ineffective by the time they are fully implemented.

With these constraints in mind, and after consideration of a basic reflective model, Fidler (1996) proposes a complex feedback model for innovation where shorter term reflective cycles are a constituent component of a more visionary long term innovation. He also acknowledges the need for flexibility within educational planning (Johnson and Scholes, 1991 in Fidler, 1996), further combining strategic analysis, choice and implementation at the centre of an array of complementary processes (Figure 2.7). The success of this model is based upon its iterative nature and the constant use of both feedback and feed forward loops to inform the next steps whilst the resultant involvement of all personnel in implementing the decision allows innovation to become more holistic.

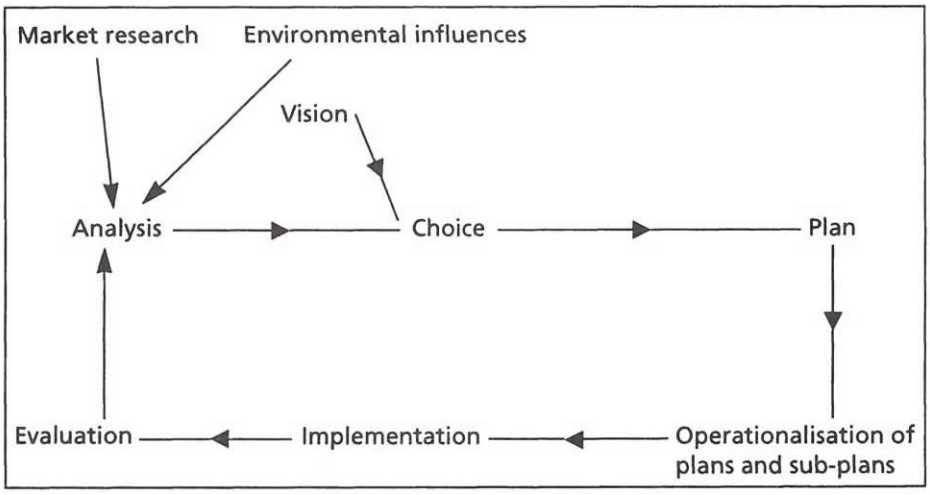


Fig 2.7 A model of educational planning (Johnson and Scholes, 1991 in Fidler, 1996:60)

Following the publication of these models, Stacey (2003) identified that many existing models of innovation involved changing linear systems in one innovation period rather than complex systems where cause and effect are not necessarily directly linked as in schools (Figure 2.8). Thus informality in innovation is very important (Stacey, 2003) and open ended discussions involving varied stakeholders tolerating differences in ideas over prolonged periods of time are the most productive way forward.

Drawing many of these findings together within a more defined educational foci, was very much advocated within Hargreaves and Shirley (2009) 'Fourth Way' of innovation. Defined as a way of 'inspiration and innovation, responsibility and sustainability' it promoted partnership amongst policy-makers, practitioners and stakeholders to build improvements from the bottom up whilst steering their direction from the top down, simultaneously providing support and pressure through lateral links which encourage teachers to learn from each other.

Fig 2.8 The complexities of educational change (Fidler, 1996:64)

Within the Fourth Way, Hargreaves and Shirley (2009) identify six pillars of partnership and purpose, a number of which are pertinent to this study;

- Inspiring and Inclusive vision. A combination of an inclusive moral purpose, coupled with the resilience to keep focused on what is best even when it is not necessarily deemed 'right', ensures that the best is pulled together into a cohesive system

- Students as partners in change. Students are usually the targets of change and rarely partners in its process. There has been a significant recent shift towards student voice and an increasing realisation that students are incredibly knowledgeable about what facilitates their learning and how these processes can be improved; a knowledge they are very willing to share
- Mindful learning and teaching. In an increasingly personalised education system, schooling needs a greater emphasis on longer term and more holistic learning if it is to deliver on the aims of learning for, through and about life. It is also about rediscovering the joy of teaching without the numerous distractions that the

excessive systems of management have created and sharing more effectively the best practice which are already in abundance in our schools.

In summary therefore, the Fourth Way looks to innovate educational reform through democracy, professionalism and trust rather than bureaucracy and market forces. However, it also acknowledges that, despite identification of these ideals and principles, the challenge created by innovation through courageously taking the path less travelled is no smaller than before.

2.7.2 Innovation into practice

If we consider the writing of these key authors, whilst acknowledging that much other literature on innovations within schools exists, we can begin to identify some key elements crucial to innovation within education (Table 2.2). Change agents who have a high level of personal mastery are the key building blocks of innovation within education, yet they must also be able to collaborate and build a shared vision for success if their work is to be productive. In combinations, such innovators must then be able to vision a strategic journey to success with ample opportunities for reflection and redirect if they are to achieve a self-sustaining change.

Facer (2011) advocates this need to take the courageous path through quoting Obama's assertion that the nation that out-educates us today will out-perform us tomorrow. In addition, Facer exemplifies the lack of recent change in education by retelling the tale of a 19th century surgeon transported to a modern operating theatre and unable to comprehend the methods of surgery as opposed to an educator undergoing the same change and being instantly at home in a modern classroom. Whilst much of her writing concerns the implementation of technological invention and its social-economic implication, it is her take on the processes of innovation that is pertinent to this study. Here, she echoes the assertions of previous authors that the future is 'an emergent and dynamic reality' in whose creation we all have a role to play. Much of the work on innovation has laboured under the assumption that education must innovate if it is to produce individuals to fit into future society. Facer turns this on its head arguing that

instead education should be future-building not future-proofing and as such is a force to be reckoned with when engaged in a reciprocal dialogue of creativity.

So how do schools innovate and work together to produce and facilitate change? Innovation is *"difficult, technically and emotionally demanding as well as complex"* (Towndrow et al, 2009:451). It requires leadership, shared decision making, reward for those determined enough to have a go and the opportunity to reflect on both the processes and the outcomes if it is to be successful (Whitehead, 2008). Summarising the key writings, we can argue that innovation requires change agents driven by pressure from both above and below. These individuals need clear ideas and must be prepared to inquire into and discuss their ideas in order to create a mastered vision which can be realised through collaboration and systems thinking. Such collaboration should also be inclusive of a range of stakeholders, primarily students and teachers, but also external stakeholders who must commit both time and financial support if visions are to become realities. Within this study, one consideration will therefore be how well the study schools development of pedagogy meets the key features of successful innovation.

Senge (2012)	Knoster (1991)	Fullan (1993)	Fidler (1996)	Hargreaves & Shirley (2009)	**Summary**
	Incentives	Change agents		Professionalism Joy of teaching	**Change agents**
Personal mastery	Skills	Personal vision			**Personal Mastery**
Team learning		Collaboration	Everyone involved	Involvement of stakeholders	**Collaboration**
Shared vision/ big picture	Consensus	Balanced top to bottom		Inspiring and inclusive vision	**Shared vision**
Systems thinking	Action Plan	Non-linear	No one ideal Feedback is key	Teaching and learning at the heart	**Reflective of feedback**
Strategic vision	Vision	Journey is key	Can't over-plan		**Strategic journey**
	Resources	Self-sustaining			**Self-sustaining**

Table 2.2 Summary of the core features of effective innovation identified via analysis of key writings.

2.8 Conclusions

This review has sought to present the educational backdrop against which this study is set in conjunction with an examination of innovation within education.

Initially, the twin initiatives of Personalised Learning and Building Schools for the Future were considered, both in isolation and collectively. From this analysis, a number of assertions have been proposed. Personalised Learning was an ambitious change which sought to promote a desire to *"discover and nurture the unique talents of every single pupil"* (Miliband, 2003 in Johnson 2004:2) through the provision of quality teaching and learning, an effective knowledge and skills curriculum, and the opportunities for pupils to find an appropriate route to success within environments to support learning and utilising appropriate technologies. Whilst policy leaders established the big idea around this initiative, realisation of the change was to be left to practitioners leading several authors such as Fielding (2012) to label the initiative 'dishonestly vacant' citing a lack of evidence from past research, an unclear position in the educational landscape of the time and a conflict between a top-down vision and a bottom-up implementation inevitably leading to conflict.

Another key barrier to the success of Personalised Learning was the inability to realise the necessary flexibility and innovation of learning spaces in buildings that were both out-of-synch with modern teaching and poor quality. It was this barrier that was to be overcome through the Building Schools for the Future programme which sought to provide functional, sustainable and aesthetically pleasing buildings which were efficient and durable. Guidance from the DfES to support this initiative also advocated environments that were flexible, informal and fun and, therefore, should ultimately support the assertion from the reviewed research that learning spaces influence pedagogy and consequently learning.

Past initiatives of this type, such as the promotion of open-plan learning in the 1960s, had, however, been largely unsuccessful largely due to a lack of supported innovation and here the final aspect of this literature review, the consideration of successful innovation in

education, becomes of significance. The consideration of a range of writing on innovation, both within and beyond education, has facilitated the identification of a number of key features of innovation which can be further used to support a research process. These include the establishing of 'change agents' who possess a level of mastery which allows them to strategically lead and drive innovation towards a shared vision. In addition the considered research identifies the importance of collaboration and reflection within this processes in order that such a journey becomes self-sustaining.

It is the synergy of these reviewed areas that will form the basis for the study through a consideration of how managed innovation of pedagogy can achieve a personalisation of learning through the effective utilisation of learning spaces.

Chapter 3 The study in context

Whilst it would be considered more traditional to include the context of the study within the introduction chapter here a different approach in taken. In order that the narrative contained within this study remains cohesive both through time and within an educational context, a detailed understanding of the national developments prior to the start of the study and the study school vision towards which the innovations strove are crucial. It is the second of these elements which is outline below.

The study is set within Leicester, an English city of 333,000 people (2011) and rapidly expanding through the addition of 47,000 (17%) people in the ten years prior to 2011 (BBC, 2012) coupled with a continuing high birth rate. In addition, 86,000 people consider English not to be their first language and almost 40% of the city's 16-74 year olds have no academic qualifications (ONS, 2012). In combination, these factors place a significant challenge on the education system within the city; exacerbated by the fact that only 27.7% of children within the city are considered to be 'school-ready' at the age of 5, very significantly below the national average of just over half (Donnelly, 2014).

Within the city the significant population change over a prolonged period has resulted in seventeen secondary schools built mainly in the 1960s and 1970s and supplemented with extensions and mobile classrooms as the need for accommodation continued to rise. As a consequence many secondary schools were considered to be poorly conceptualised, in a poor state of repair and not fit for the purpose of 21st century education.

The city's BSF programme was one of the first to be announced in 2005 with £235m allocated to rebuild or remodel every secondary school in the city (LCC, 2009). The Local Authorities 'Strategy for Change' promoted their desire to *"improve children and young people's experience of education in its widest sense"* (LCC, 2009a) and recognised that such change was not driven by buildings alone. The city hoped to use the BSF vehicle to create school environments which allowed students and teachers to feel valued and inspired in

'*bright, modern and airy environments'* (LCC, 2009a) whilst also promoting innovating teaching and learning to be effective and personalised.

The work was to be completed over fifteen years and was organised into six phases, comprising a mixture of total rebuilds, partial rebuilds and refurbishments (Table 3.1).

Phase 1	3 mainstream full rebuilds; 1 mainstream partial rebuild
Phase 2	3 mainstream full rebuilds (including the study school)
Phase 3	2 mainstream full rebuilds; 1 SEN full rebuild; 1 hospital school full rebuild
Phase 4	2 behavioural school full rebuilds
Phase 5	3 mainstream full rebuilds; 2 SEN full rebuilds
Phase 6	3 mainstream full rebuilds; 1 mainstream additional build; 1 SEN full rebuild

Table 3.1. BSF Schedule for Leicester (LCC, 2009).

After an extensive amount of delay, those schools in Phase 1 opened in Spring of 2009 with an emphasis on a largely traditional straight corridors enhanced with natural light and bright colours. Indeed, such was the quality of the buildings that one school scooped the BSF 'School of the year' and 'Grand Prix' prizes for 2009 (Leicester Mercury, 2009). However, opportunities for redesign had perhaps not been seized within phase 1 despite nearly £60million of the allocated funds having been spent and projected costs risen to £314million (Leicester Mercury, 2013). Whilst it was at this point the study city was able to keep its BSF project in the light of Gove's significant reduction of the rebuilding programme due to committed finances, it was also the point at which 40% needed to be cut from all future projects, including the phase 2 study school (Leicester Mercury, 2010).

3.1 The Study School

The study school is located in an inner city environment which features highly in the indices of multiple-deprivation for over-crowded households and the school itself appears in the list of the Government's 1000 most deprived schools (LCC, 2004). It has a largely Asian cohort and an increasing number of newly arrived students whose addition mid-year means the school has a turbulence rate of around 8%. As a result of these factors, around half the students are officially labelled as English as an Additional language (EAL) speakers, though in-school identification pragmatically places this figure much lower. There are a reasonably high percentage of SEN students in line with many other Inner City schools (Office for Standards in Education (OfSTED), 2012). Academic achievement at the study school varies between 45% and 55% for 5 A*-C GCSE grades including English and Mathematics, affected by the lower than average ability at intake and hence represents very good progress (Raise, 2013).

At the commencement of BSF, the study school comprised a 1950s building and a 1970s CLASP block, linked by a bridge, with a separate Physical Education building housing antiquated facilities and minimal ICT access. These buildings provided a range of accommodation loosely organised into faculties, though the growth of the curriculum since the school's original design meant that some associated subjects were disparate from each other. In addition, growth of the school population above its original capacity had resulted in the addition of four mobile classrooms (PfS, 2008).

Whilst the original 1950s building was generally functional, the 1970s building presented a range of challenges including inadequate heating, small sized classrooms, leaking flat roofs and even a hole in the floor of one classroom. The addition of buildings in a piecemeal fashion had resulted in very poor circulation around the building and there was also an issue with access to the site following the need to enclose all schools for safeguarding purposes (LCC, 2008). The gradual growth in the student population meant that many facilities such as toilets and dining were inadequate for the current numbers. This was further exacerbated by a significantly increased amount of support staff who needed to be housed

within the complex. The inclusive ethos of the study school also meant that children with physical disabilities were often accommodated, a provision which raised a number of significant challenges in a building constructed before equality legislation made public buildings accessible for all.

3.2 The study school BSF design

Initial planning for the rebuild occurred in 2006 driven by the desire to:

> *'provide the highest standard of education, academic and vocational, to all of our students, of every ability, to help each one to achieve their maximum potential'*
>
> (Study School, 2008:1).

It was envisioned that this would be delivered by '*building a community'* in which all stakeholders worked together in partnership to create a healthy environment for learning and personal development (Study School, 2008). As a result of initial discussions, and driven by a leadership and staff anxious to maximise the opportunities to embrace educational innovation and create a more flexible environment that would facilitate more creative learning, a number of key objectives for the transformation of education were established (Study School, 2008). Whilst including a multitude of aims, those seen as key to this study are;

- Increasing attainment, achievement and enjoyment, thus realising the learning potential of all
- Deliver a curriculum experience that is creative, flexible and collaborative in both its design and delivery and clearly applicable to the world outside school

- Provide a learning environment that will enable and inspire all people to be active participants of their learning journey

Delivery of this creative curriculum was to be driven through the creation of learners with strong cognitive learning habits who were able to take advantage of an 'anytime, anywhere' approach to learning (Study School, 2008). It was also identified that ultimately, whatever the style and content, learning had to be fun, creative, enterprising and inspiring. The development of excellence amongst teaching staff was also core with the need to offer increased opportunities to share best practice facilitated through the creation of a more open learning spaces and appropriate areas for training.

In order to meet this vision of learning, the hope was that the whole building could be recognised as a learning resource, with technological advances running through all aspects. The challenge of the design was to encourage teachers to work together through offering as much support as possible whilst also removing barriers to collaboration (Study School, 2008). In addition, the design needed to allow for learning on a range of scales from several classes working collaboratively to individual student support and everything in between (PfS, 2008).

3.2.1 The design process

In order to further refine these ideas and to ensure that all stakeholders were involved in the design of the new build, the study school held a design day in October 2006 (significantly prior to the commencement of this study). The initial session consider the logistical needs of areas, however, the second half of the day saw the random arrangement of teaching and non-teaching staff, into a series of groups, each of which was given a broad focus to consider such as communication, dining, staff spaces, the library etc. Working with images from the current building, and others from rebuilt schools elsewhere in the UK that encapsulated the

possibilities offered by rebuilds (Figure 3.1), and with an encouragement to be creative and 'think outside the box', staff were asked to conceptualise their ideal school spaces.

Figure 3.1 Examples of images used to support creative thinking about learning spaces.

From this initial consultation a list of 'non-negotiables' was devised (Study School, 2006) including the following considered to be particularly pertinent to this study:

- Learning zones containing multiple faculty groupings;
- Learning plazas and breakout spaces to promote informal learning;
- Applied learning spaces for practical courses with high quality, modern equipment;
- Good sized classrooms, warm, spacious yet cosy;
- Areas with flexible walls so spaces could be adapted for larger and smaller group learning;
- Vision panels in rooms so learning could occur more 'in the round'
- Easy ICT access, anytime, anywhere;
- Dedicated ICT teaching spaces;
- IWB and projector in each teaching space;
- Capacity to accommodate the future

3.2.2 Description of final design

From these ideas the Educational Design Brief (LCC, 2008) was created setting out the vision for the design where a range of learning spaces were facilitated clustered into four learning 'zones', three focused around educational delivery and the fourth encompassing student support facilities (Study School, 2008). Some traditional elements were retained within the design, not least in recognition that whilst cross-curricular and thematic learning are to be potentially applauded at KS3, KS4 study requires delivery to a subject focused specification in an often time constrained manner. Consequently, zones included a number of 'traditional classrooms' though these contained attributes such as flexible layouts and integrated ICT encouraging greater student collaboration. In addition, a number of subject specific learning environments were planned which would be easily recognisable to any teacher such as sports education spaces and design technology workshops, however, far more flexibility of use than would traditionally be available was included.

Of most interest to this study, however, are the less traditional areas where large open atrium spaces, termed plazas, were placed at the centre of each zone. Plazas featured extended triangular learning areas incorporating a multi-focal approach through adaptable furniture, multiple data points and 'soft' delimitations allowing expansion into adjoining areas (Figure 3.2). Each zone also had an enclosed auditorium fitted with retractable seating equipped with presentation style ICT equipment and to allow large groups of students to be engaged at any one time. Due to the inevitable constraints of funding, indoor plaza spaces and auditoria were not available to simply enhance education on an ad-hoc basis by more experimental and creative teachers. They were required to be timetabled spaces with the necessitation of use in order to accommodate the number of students at the college and deliver the curriculum.

Figure 3.2 Artists impression of a learning plaza

Thus the design was initially set by 2007, five years prior to the commencement of this study. It was an ambitious and visionary concept seizing an opportunity to potentially reshape pedagogy through the provision of the flexible, informal and fun environments envisaged within the BSF concept. However, mixing faculties up, whilst encouraging teachers and therefore students to start to link learning from one academic area to another, was not going to create the pedagogic change envisioned (Fisher, 2006). This change had to be more fundamental driven through the approach to teaching and learning; encouraging self-learning students to promote transferability of skills rather than superficial links between earthquakes in Geography and rock formation in Science for example. This change, therefore, was to be driven by the design of the learning spaces with the zones.

3.3 Effectively filling the learning spaces

As well as developing the BSF school design, considerable time was also simultaneously invested in considering the pedagogy that would be required to effectively utilise such innovative learning spaces. The vision for curriculum innovation centred on the promotion of cross-curricular learning which would hopefully facilitate the key skills desired by employers and further education providers. It envisaged creativity, flexibility and collaboration in its design and an opportunity to take advantage of decreasing curriculum prescription at a national level to deliver areas of study more personalised to the students and their backgrounds. This more creative curriculum was to be delivered through the creation of learners with strong cognitive learning habits who were able to take advantage of an 'anytime, anywhere' approach to learning (Study School, 2008).

As a consequence of this a much greater need for learning across subjects was established and, again prior to the commencement of this study, the school decided on four main developmental areas in order that students could embrace this new style of education.

- Transferable Learning. One of the key concerns from staff within the study school was the inability of students to carry skills from one subject area to another. For example, students drew graphs in mathematics or researched effectively in ICT yet ask them to complete either of the skills within a science lesson and the prior learning skills they had were rarely drawn upon. As a result it was felt that large amounts of curriculum time were lost through the repetition of skills and some form of 'learning hook' was required to help students transfer learning from subject to subject, whilst also enabling teachers to have a commonality of language to encourage them to do so

- Group work. That students learn better if they can discuss ideas is not a new concept and yet the impression of leadership within the study school was that effective group work was not being engaged with in all areas. For students to be able to enter the work place with the interpersonal skills necessary to work effectively with others was therefore another area of focus

- Empowered learning. Conversely to the promotion of the ability to work in groups, yet of equal importance, the promotion of self-learning and problem-solving amongst students was also key. In addition, some areas of didactic practice was generating a self-fulfilling prophecy where students were not able to apply learning at KS4 as they lacked the skills necessary to think 'outside the box'

- Enquiry learning. The development of enquiry learning within the study school was the ultimate aim; encompassing the above three foci into the vision of enquiry learning (Figure 3.3) filling the large plaza spaces. This aimed to counteract the fact that many teachers feel that students were losing the skills necessary to problem solve or construct their own learning and were increasingly scared to get it 'wrong'. This fact was also echoed by those in the business world who argue that students leave school with qualifications that say they can perform at a certain level but without the real world work skills that they need to apply that knowledge in order to succeed as employees. The promotion of enquiry learning where students could be taught to structure their own route from an open question to a workable answer was therefore the ultimate developmental theme that needed to be promoted. That students would also have new learning spaces within which the ability to move from ICT to active learning to large scale presentation was hoped to break down the barriers to this often seen in a traditional building.

Whilst the concurrent development of these three aspects of pedagogy would hopefully develop the skills that students required to complete enquiry learning, this was not supportive of the development of the teacher skills necessary to realise such a change. Here again, work completed prior to the commencement of this study had identified that teachers needed to be confident to operate within three main areas: collaborative planning, cross-curricular learning and team teaching if they were to be able to effect the realisation of a holistic enquiry learning vision.

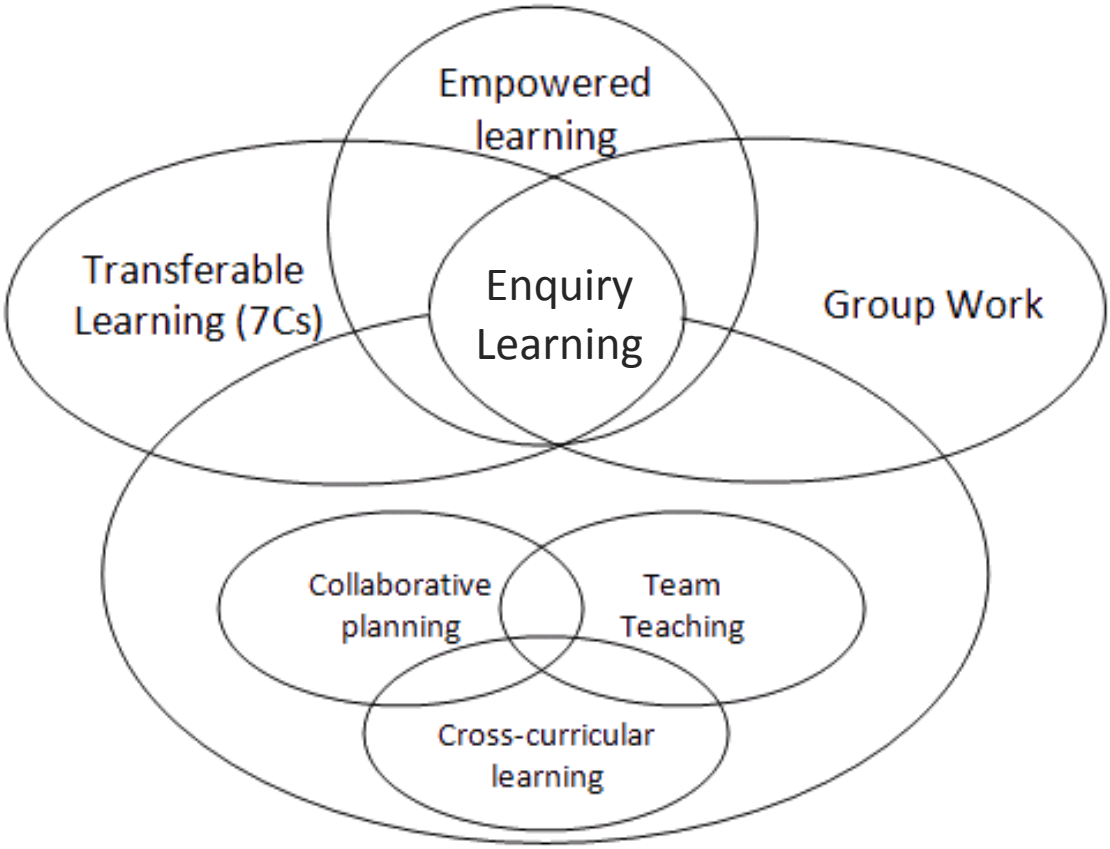


Figure 3.3 The envisaged interlinking of the four strands of development

Despite the effective finalisation of the study school design in 2009, previously referenced concerns around finance and a change in government meant that the BSF programme was significantly cut at a national level. As a result of all this, the study school rebuild stalled for a number of years. Initially conceptualised in 2006 and designed in 2009, building only started in spring 2012; a delay which caused staff enthusiasm for the project to be drained by the constant 'will it, won't it' debate, whilst staff turnover meant that only three quarters of staff involved in the design remained at the time of building. Of greatest frustration, however, was that students who were starting at the college in 2006 buoyed by talk of a 'new school' left in 2011 without a single noticeable change having occurred. Building work finally started on site in April 2012 with a completion date of October 2013.

Chapter 4 Research Methodology

4.1 Aims and Objectives of the research

This research project is set within a study school experiencing a BSF rebuild at a time of turbulence in government and, consequently, a changing educational background. This presented a unique research opportunity to investigate the synergy between building design and pedagogy whilst also examining the mechanisms by which achievement of symbiotic change can be realised; in this case the realisation of a pre-determined vision as outlined in Figure 3.3. As a consequence of these aims, the research questions under consideration in this study are:

- To what extent were the opportunities presented by BSF to facilitate effective and innovative learning spaces utilised at the study school?
- How can pedagogy be most effectively innovated?
- To what extent can changing pedagogy maximise the opportunities created through innovative learning spaces?

In order to answer these questions a consideration of research methodology is necessary in conjunction with the philosophical and ethical frameworks within which this research sits in order to retain a coherent approach.

4.2 Research in Education

> *"Education research can be viewed as the collection and analysis of information on the world of education so as to understand and explain it better"*
>
> (Opie, 2004: 3)

Much of the early research into education was driven by a need to 'prove' ideas and used largely quantitative methods to validate findings through statistical methods (Feldman, 2007). Thus, practice was viewed differently from practitioners (McNiff & Whitehead, 2002) and concerns around this disassociation are exemplified when coupled with Beck's (1979) assertion that:

> *"Social scientists cannot penetrate what lies behind social reality, they must work directly with man's definition of reality and with the rules he devises for coping with it. While the social sciences do not reveal ultimate truth they do help us to make sense of our world. What the social sciences offer is explanation, clarification and demystification of the social forms which man has created around himself."*
>
> (Beck, 1979) in Cohen *et al*, 2011:20)

As a result of these concerns, the early 20th century saw an increased appreciation that the study of human systems was greatly aided by the involvement of practitioners in order to make findings more applicable to authentic contexts (Bridges & Smith, 2006). Indeed, Dewey stated as early as 1916 that:

> *"Every teacher should have some regular and organised way in which he can participate in controlling the aims, methods and materials of the school."*
>
> (Dewey 1916 cited in Schmuck, 2006:17)

Hence universities started to work with teachers to collect data which could then be analysed to formulate theories about pedagogy and systems in schools (Anderson et al, 2007). Despite this gesture of inclusivity towards practitioners, the emphasis was still on universities leading schools and it was felt that much of the content provided by teachers was neglected and decontextualised (McKernan, 1988 in Anderson et al, 2007) with large amounts of research being unread by those delivering in the classroom (Groundwater-Smith *et al* 2013).

Another potential barrier to research in education is its complexity, in part due to the multitude of interactions within social, emotional and physical environments, but also through involvement of stakeholders from researchers to the potentially most influential, policy makers (Watkins & Mortimore, 1999). The involvement of the latter group has been a key driving force in using research to move educational practice towards a potentially better standard primarily through an analysis of outcomes. However, educational research must draw on a range of schools of thought and incorporate a breadth of methodologies if the full range of opinions, interactions and perspectives alluded to are to be incorporated.

Whilst the inclusion of a range of strategies and stakeholders can work to validate the findings of research, it can also potentially lead to conflict around findings (Pring, 2000). As such, educational research remains problematic with concerns existing around: its inability to answer specific questions with generalised assertions, its potential disassociation from classroom pedagogy, the complex range of environments in which it occurs and finally its frequent political motivation placing the desires of policy-makers above practitioners. However, careful attention to the construction of educational research and its underlying methodology can go some way to alleviating these contentions.

4.3 Frameworks for research methodologies

Within educational research a simplified perspective identifies two contrasting paradigms (Opie, 2004); an objectivist approach where the truth is independent of human knowledge and a subjectivist approach which assumes knowledge is based on opinion and there is no underlying truth. Such polarisation also allies itself with contrasting methodologies with the pursuit of objective knowledge requiring observation of largely quantitative phenomena whereas the latter places the researcher firmly within the process they are seeking to understand through more qualitative based ideas (Cohen *et al*, 2011).

Within the field of social science research, the aim is to make sense of the elusive and intangible qualities of social phenomena (Sagor, 2005). As such an objectivist approach with the potential to create artificial and over controlled findings (Cohen *et al,* 2011) lacks universal success when applied to the breadth of educational research despite a current resurgence in Randomised Control Trials (Torgerson & Torgerson, 2008). Conversely, subjectivist research methodologies such as case study and ethnography demonstrate validity instead of generalisability, with findings requiring translation to specific situations (Somekh, 2006). As a result of these contrasting approaches to research, there was recognition that educational research was potentially constrained if it took a singular approach. As Ercikan and Roth (2006) stated, the distinction between qualitative and quantitative attributes of educational research is not necessarily a good one, especially if adherence to a quantitative or qualitative stance is potentially the driving force behind choosing a research methodology rather than finding the right methodology for the situation. The most appropriate approach may instead exist on a continuum between objectivist and subjectivist views. Thus a different conceptualisation of education research was potentially needed.

4.3.1 Cresswell's 'worldviews'

Cresswell (2009) acknowledged the limitations of educational research which is constrained within a 'quantitative' or 'qualitative' approach and instead identified four paradigms of research which he termed 'worldviews', after Guba's definition of a worldview as "a basic set of beliefs that guide action" (1990 in Cresswell, 2009:6). As such, Cresswell believed that research 'worldviews' are not definitions set in stone, rather they are shaped by the discipline area of the student, the ethos of the research institution and past experiences. Cresswell's four worldviews are outlined below:

Post-positivism has grown from Positivism; largely now discredited within social research, and is based on a deterministic philosophy in which causes are most likely linked to effects,

whilst still acknowledging that there is not necessarily an abiding truth within such links. Within post-positivism, quantitative research is used in a deductive approach in order to explain the causal links in a reliable, valid and generalisable form.

Social Constructivists use largely qualitative methods to seek to explore and explain an individual's subjective understanding of experiences. They embrace the complexity of situations in order that a holistic understanding of social interaction can be generated. The hypothesis within Social Constructivism is therefore inductive rather than deductive in nature.

Participatory researchers seek to move forward the work on Social Constructivists in order to generate an action agenda for change rather than a pure observation. As such, participatory researchers recognise that an engagement with the political agenda is essential if meaningful improvement for the subject studied is to be achieved. If such research then becomes a voice for improvement, the research becomes Advocacy in nature. Participatory research is considered a collaborative approach utilising largely qualitative research methods, often jointly designed by researchers and participants, though quantitative methods can also be a feature.

Pragmatic research reverses the norm of traditional research and identifies the problem, rather than epistemological position, as the driving force behind a method. As such, it is the resultant construction of the best 'solution' that reflects the values or beliefs of the researcher (Arthur et al, 2012) and, in turn that then determines the most effective application of techniques. As a consequence of this alternative approach to constructing a methodology, pragmatic research is often seen to move away from the previous division of research into quantitative and qualitative spheres and instead combines both to best effect (Arthur et al, 2012).

Within these worldviews, this study sits largely within a pragmatic standpoint. Driven by the fact that the study commenced at a point when the broad parameters for success were already set, the methodology needed to support the innovation processes towards a

successful resolution rather than work through a process to define a solution. This study also includes elements of participatory research as, whilst it is not purely observational in nature, it sought to build on elements of observation evidence to generate an agenda for change. Finally, some aspects of post-positivism are also pragmatically incorporated through the use of quantitative data to complement and supplement the observational evidence in order that some causal links between actions and their impacts can be explored. Consequently, the combination of worldviews centred around a pragmatic standpoint would indicate that a combination of qualitative and quantitative methods had the greatest potential for success.

4.3.2 Mixed Methods Research

The combining of quantitative and qualitative ideologies within a mixed methodology is not a new approach, appearing as early as 1959 in the field of psychology (Cresswell, 2009). However, since the 1990s, mixed methods has increasingly come to prominence within the field of educational research (Biesta, 2012); so much so that mixed methods studies potentially outnumber those with a singular methodological standpoint (Bergman, 2008).

Mixed methods research is defined as:

> *"the type of research in which a researcher … combines quantitative and qualitative research approaches for the broad purposes of developing breadth and depth of understanding and corroboration"*
>
> (Johnson *et al*, 2007:123).

Through its combination of traditionally disparate paradigms, mixed methods was a pragmatic rather than principled approach which sought to generate a holistic understanding that was greater than its constituent parts (Bryman, 2008). Indeed, Bergman postulates a mixed methodological approach as providing *"the royal road to true knowledge*

as derived from empirical research" (2008:4) whilst Tashakkori and Teddlie (2008 in Bergman, 2008:101) identify mixed methods as "*the third methodological movement in the social and behavioural sciences".*

Mixed methods research can contain a plethora of variations through its existence on a continuum between the qualitative and quantitative paradigms (Newby, 2010) and necessitates including only one aspect of each methodology rather than both in balance (Bergman, 2008). Mixed methods studies potentially obtain a range of advantages over those with a singular paradigm through the opportunity to generate a complete picture of an issue which is collectively more meaningful than analysis of individual elements (Tashakkori & Teddlie, 2012). It also allows a more in depth analysis of the opinions of large numbers of people in order to investigate complex social phenomena (Cresswell, 2005).

Within mixed methodologies, there is a range of data combinations from combining a number of sources to a truly integrated interpretation of understandings gained (Biesta, 2012). One such combination, explanatory research where large scale quantitative data is interrogated through smaller scale qualitative analysis, is particularly popular in educational research as it *"seeks to explain in more detail through qualitative research the initial quantitative statistical results"* (Cresswell, 2005: 517). It is within the explanatory approach that this study sits, using small group qualitative interviews to further explore the findings from initial large scale quantitative questionnaire findings.

Inevitably, there are also issues associated with the use of a mixed methods approach, particularly if the study is to avoid becoming 'quasi-mixed' containing both quantitative and qualitative elements without a cohesive framework to effectively combine the two (Bergman, 2008). Another challenge lies within validating results where quantitative data has traditionally seen validation through construct validity between cause and effect whereas qualitative research is validated through analysis of its credibility, transparency of generation and dependability. Therefore, a mixed methods study generating findings from contrasting elements requires careful validation if the generation of 'meta-inferences' which truly integrate the findings is to be achieved (Tashakkori & Teddlie, 2008). Finally,

there is the challenge of justifying the use of mixed methods as an approach (Bryman, 2008), particularly as writing on successful mixed methods approaches is only recently becoming available (Newby, 2010).

So how do we recognise successful mixed methods research? Analysis of success must come partly from design. The effectiveness of the key elements within the study, such as questionnaires, is clearly crucial; however, of proportionally more importance is the relationship between different elements (Tashakkori & Teddlie, 2008), both within design and analysis. There is also a need for interpretative rigour through the creation of meta-inferences which are theoretically consistent with other findings and are proven to be more reliable that other possible conclusions. As a result of this, mixed methods is acknowledged to be a successful and appropriate methodology in a variety of situations, particularly those based on finding a causal link in complex areas involving behaviours, attitudes and cultures (Newby, 2010).

4.4 Research methodology for this study

The research undertaken for the completion of this thesis was carried out over a period of two years at an inner city school across the duration of a BSF rebuild. As has previously been discussed in Chapter 3, the study school aimed to seize the opportunities offered by BSF to significantly rework pedagogy at KS3 in order that the opportunities afforded by more flexible and innovate learning spaces could be maximized.

I joined the school in January 2010 as a member of the Senior Leadership Team (SLT) overseeing teaching and learning. At this time, the new build was delayed by financial negotiation creating a 'will it, won't it' attitude to the eventual success of the project. That the school was also embracing this as an opportunity to rethink the KS3 curriculum and embrace ideas around enquiry and thematic learning highlighted the potential unique

research opportunity before me. This opportunity was enhanced by the fact that these design principles had been developed as a result of the promotion of concepts such as Personalised Learning by the then governing Labour Party. When, shortly after my arrival at the study school, these were usurped by the far more traditionally based ideas of a recently elected Conservative coalition government, it was clear that without a determination to make such changes successful, the school could be left with a £21m building which was no longer fit for purpose. The challenge was therefore not insignificant and the opportunities for research immense.

With respect to this study the proposal to investigate innovation within education necessitated elements of a subjectivist viewpoint as educational innovation is rarely a predetermined process. However, that the study was also based in a large secondary school where numerous opinions must be investigated if the processes of innovation were to be thoroughly explored and documented would indicate that an objectivist approach might be more practical if the study was to remain within the realms of plausibility. It is therefore appropriate to conclude that the most successful approach to this study lies on the continuum between objectivist and subjectivist paradigms and aligns itself best with a mixed methods approach. Furthermore, the proposal seeks to explain any potential links between pedagogy and learning spaces, and so an explanatory design would be deemed appropriate with large scale quantitative data collection being further expanded and investigated through smaller scale qualitative methods.

By adopting an explanatory mixed methods approach, the study sought to combine quantitative and qualitative techniques to facilitate the inclusion of a broad range of ideas, whilst also generating the opportunity to increase the depth of inquiry. As stated above, a mixed methods approach is also often pragmatically driven, in this case due to the potential end point of the innovation already having been decided and, therefore, it was important to make the research fit the situation. In addition, the study contains aspects of participatory research as the researcher investigated their own institution. This inevitably

had impact on both the process and results of research especially as the aforementioned 'action agenda for change' is at the heart of this innovative research.

4.5 The methodology: Action Research

Having decided upon a mixed methods approach, attention must now turn to consideration of the methodology. Here the two foci contained within the study; those of space and pedagogy, require a separate consideration. Whilst the two areas can be considered collectively at the start of study, and require collective consideration at the end due to their linkage within the final research question; during the intervening time the two aspects diverge significantly. Ensuring pedagogy fully utilises the innovative learning spaces contained within the new build required intervention led primarily by the researcher. However, the learning spaces themselves were already designed and therefore fixed in nature with no opportunity to influence them.

Data on learning spaces was therefore gathered at the beginning and the end of the study, the points of Baseline and Finalline, and analysed through comparison of the quantitative and qualitative data. However, for a consideration of pedagogical change, an iterative research process which could both recognise the changes which had occurred whilst also generating support for possible directions of subsequent changes was considered to be key. Action Research, with its reflective cyclic approach, was therefore considered appropriate as shall be discussed in more detail.

4.5.1 The concept of Action Research

One of the main founders of the Action Research tradition was Kurt Lewin who, through research largely in industry, began to explore this new position and potentially reverse

some of the traditions around social research. From this work, he hypothesised that practitioners engaged in supplying data to universities for analysis would be much more engaged with this task if they had more power over the methods and processes involved (McNiff & Whitehead, 2005). As a result of this drive to facilitate a change in the research methodologies around social sciences, Lewin coined the phrase Action Research in 1934 and used it to "*give credence to the power(s) of reflective thought*" (Mills, 2011:5) before working throughout the 1940s to increase the respectability of a methodology that was largely alien to those involved in the pursuit of science at the time.

Lewin's concept of Action Research (Figure 4.1) involved the construction of a simple reflective cycle of planning, acting, observing and reflecting which could be repeated *ad infinitum* in order to facilitate change (Mills, 2011).

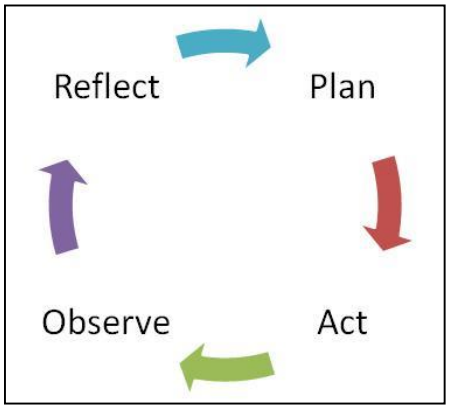


Figure 4.1 Demonstration of Lewin's simple reflective cycle of Action Research.

As a result it refocused the research process away from the tradition of creating and testing hypotheses by objective scientists into the realm of researchers who were both scientists and subjects working to solve problems and facilitate changes (Schmuck, 2006). One early discipline of this technique was Corey who applied the cycle to an investigation of school practices in America (McNiff & Whitehead, 2002). His assertion that teachers would find the results of their own research more useful and therefore more likely to provoke questions around the status quo and consequently drive change meant his initial studies were influential. However, the inability to generalise results for the benefit of other

teachers meant that the initiative faded away (Mills, 2011), as evidenced by Sanford's 1970 article *'Whatever happened to Action Research*?"; a loss confirmed by the drive to top down social engineering that characterised educational policy of the 1960s (McNiff & Whitehead, 2002).

It was the work of Stenhouse in the 1970s that returned the ideals of Action Research methodologies to the fore of educational research in the UK as he proposed that;

> *"a research tradition which is accessible to teachers and which feeds teaching must be created if education is to be significantly improved"*
>
> (Stenhouse, 1975:165 in Groundwater-Smith et al, 2013:13)

Driven by major projects such as the Schools Council Humanities Curriculum Project (Koshy, 2005) and the Ford Teaching Project (Hopkins, 2008), the use of Action Research as a methodology mushroomed. Both large teaching movements and state funded collaborative learning engaged with Action Research as a methodology supported by Stenhouse's assertions that:

> *"Good teachers are necessarily autonomous in professional judgment. They do not need to be told what to do. But they do know that ideas are not much use until they are digested to the point where they are subject to the teacher's own judgment."*
>
> (1984, in Hopkins, 2008:37)

However, there were increasing questions over its critical edge, especially for research completed by those with limited methodological knowledge, as can be the case with practitioner researchers. Consequently, as late as 1988, Action Research was struggling for legitimacy, however, the consistent use of Action Research as a methodology in many areas of the globe ensured that it popularity continued to increase.

4.5.2 A definition of Action Research

Action Research is not an easy term to define, due in no small part to its varied association with a wide range of practices (Feldman, 2007). In addition, Action Research does not have a unique set of methods or a unique form of knowledge, indeed Action Research is not something in its own right, rather it is identified as a theoretical framework within which a process of interactions can occur (MacIntyre, 2000). What is clear is that by any definition, Action Research has a series of key components which must be present; a reflective process, the application of systematic study, a practitioner researcher operating cooperatively with others in their own environment and a desire to improve a situation for the benefit of all stakeholders (Anderson et al, 2007). It also differs from other approaches to research through its reliance on contextual knowledge of the environment being studied which is not necessary to researchers working through alternative frameworks.

Mills combined the above range of features into his definition of Action Research as a:

> *"systematic inquiry conducted by stakeholders in the teaching and learning environment to gather information about how their particular school operates... with the goals of gaining insight, developing reflective practice, effecting positive change in the school environment and improving student outcomes and the lives of those involved."*
>
> (Mills, 2011:5)

As a result Action Research is the:

> *"generation of a reality that evolves from all its previous manifestations yet which is constantly unfolding new versions of itself"*
>
> (McNiff & Whitehead, 2002:56)

With a definition that is so generalized, it is unsurprising that Action Research is used to describe a multitude of practices; indeed to some ways of thinking, all competent

practitioners engage in Action Research cycles, they just don't write it down. What is clear is that Action Research is a methodology in evolution (Anderson et al, 2007) for example by Sagor (2005) who expanded the cycle to 7 constituent parts which can be repeated until a satisfactory solution is found (Figure 4.2).

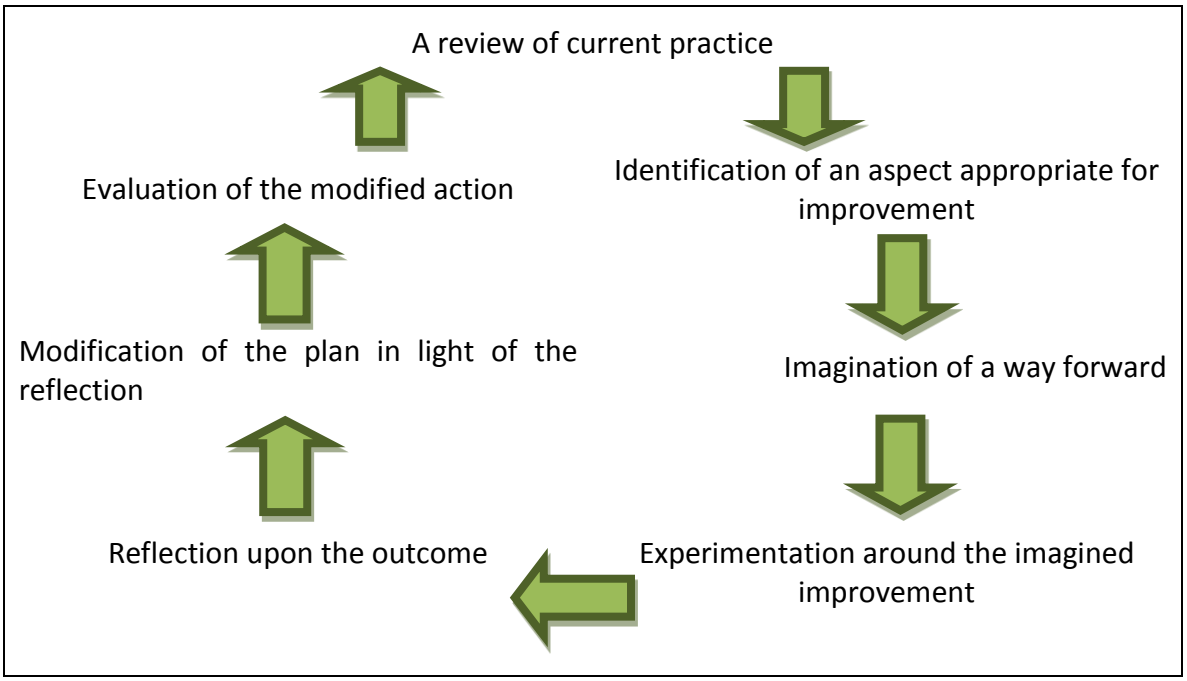


Figure 4.2 Expanded Action Research cycle after Sagor (2005).

However, Koshy (2005) also acknowledges that there is a far from rigid prescription for Action Research and that generative growth is important for the final outcomes (Figure 4.3). Since then further alterations have been proposed by a range of authors such as Cresswell's (2005) 10 steps, notable for the addition of an initial step to determine if Action Research is an appropriate methodology, and McNiff & Whitehead (2002) who asserted that the concept of 'I' should be at the centre of all Action Research due to the need for tacit insider knowledge to ensure the effective use of cycles.

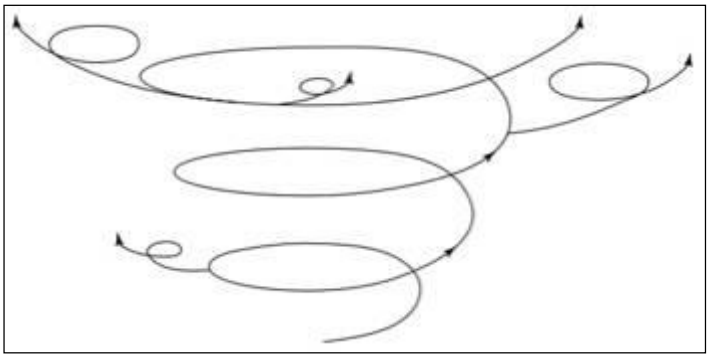


Figure 4.3 A generative, transformational, evolutionary cycle of Action Research (McNiff & Whitehead: 2002:57)

As a result of this constant refinement three broad subdivisions of Action Research exist (McNiff & Whitehead, 2002). Interpretive and critical theoretic Action Research both operate around observation and description and are collectively referred to as Responsive Action Research (Schmuck, 2006) whereas living theory or proactive Action Research exist on the most interpretivist end of the spectrum (Schmuck, 2006) in that it revolves around the idea that individuals can generate their own unique explanations for the influence of education upon learning at a range of scales. Radford (2006), however, argues that the influence of the recent political 'standards agenda' has driven many educational Action Research studies to be more reductivist in nature, seeking to link cause with effect and therefore allowing intervening actions, the impact of which can be measured and recorded, an approach termed Techno-rational. Hence we must not lose sight of the full breadth that Action Research can encompass (Figure 4.4).

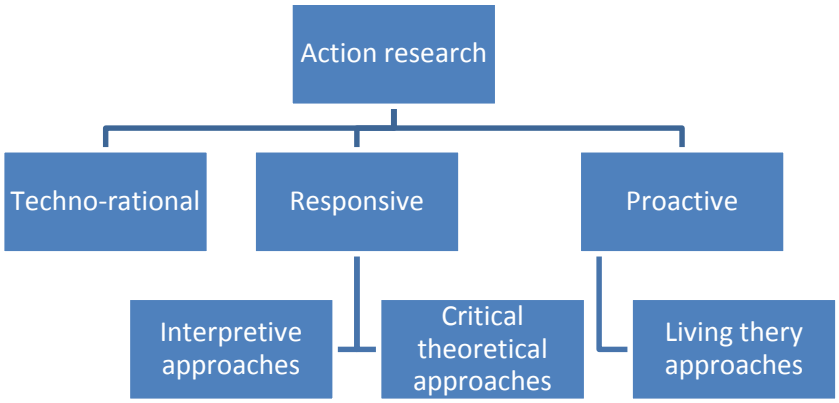


Figure 4.4 The range of Action Research approaches loosely based on McNiff & Whitehead (2002:58)

Action Research can also be categorised by the involvement of the researcher in the research project itself. Here the most common distinction is between participatory research where a number of stakeholders are involved in the research alongside the researcher, such as teachers, students or parents; or collaborative research where the study is conducted by a number of teachers working in partnership (Mills, 2011). As a result of this increasing evolution, Bridges & Smith (2006) note that within the last two decades, Action Research has become far freer in form and is very likely to continue to expand to incorporate individual situations. As a result, Action Research is often considered to be valuable in breaking new ground (Dick, 2009).

So why is Action Research viewed as such an applicable model for educational research? Partly this is the result of the limitations associated with traditional methods as has been previously discussed. In particular, the lack of reference to situational decision making, so instrumental in good teaching, or the empirical knowledge of practitioners, meant positivist studies were seen as only partially representative (Stenhouse, 1975 in Hopkins, 2008). In addition the application of research methods based almost entirely on the concept of sampling are often of limited applicability when the generation of control groups is almost impossible. Indeed, many would argue such an approach is also immoral, when the moral purpose of education is action for the benefit of all (not just those in the 'right' group) and

is so based on meaningful interaction which cannot be controlled (Hopkins, 2008). As a consequence, teachers were often sceptical of research generated in such a way and Action Research provided a potentially more realistic method by which to understand the "*intricate nets of complex interrelations that criss-cross formal positions of authority and power and carry knowledge and expertise in all directions*" and make up the workings of a school (Evers & Lakomski, 1996 in Groundwater-Smith, 2013:3).

4.5.3 Validity within Action Research

With Action Research placing such an emphasis on qualitative data gained through insider research, one of the biggest areas of concern is the validity of the findings.

> *"Researchers cannot evade the responsibility for critical examination and not justify the philosophical ideas that their enquiry incorporates"*
>
> (Bridges & Smith, 2006:131).

This presents a challenge and necessitated a change in order that findings were addressed as a *"tentative set of possibilities rather than an achieved and final understanding"* (Winter, 2002: 143). In addition, many teachers engaging in Action Research had a significant knowledge gap around research methodologies again bringing into question the validity of findings generated in such a way.

Norris (1997) identified that all Action Research has to start from an assertion of truth, however, he also identified a whole range of potential biases which can be present in this methodology. These included availability and reliability of data, the ability and affinity of the researcher to the subject, their reactivity and subsequent reaction to the results generated and the ability to recognise their valuing of preferences in the outcomes. He also recognised that with Action Research incorporating such a broad swathe of techniques and

practices, the generation of 'rules' to assure the validity of Action Research findings was not practicable.

Feldman (2007) addressed some of these concerns when he asserted that, as Action Research is both moral and politically driven work, the ability to assert validity was key and must incorporate four aspects: that organisation and evidence can be examined; that it avoids potential sources of error and discusses marginalising these possibilities; that it should be speculative, free-wheeling and inventive; and that it does not depend solely on eloquence or surface plausibility. In summary it is an accurate description of classroom research (Schuman in Hopkins, 2008).

Building on this, McNiff & Whitehead (2002) proposed a range of validations which could be applied to Action Research whilst also generating enough variety to incorporate the range of possible approaches. Outcome validity is the assessment of the solution, i.e. is the problem solved? If we know better how to solve problems in the future then this validates the processes used. This can be linked with local validity which also examines the success of the solution but on a more localised or individual case basis. However, there are further questions around both of these validities in that we need to consider from which point of view a problem is 'solved' and whether by trying to generate rigorous solutions we can in fact create more questions than answers.

Process validity conversely proposes that Action Research can be considered valid even if the problem is not solved provided a range of processes are used which allow triangulation of results. As a consequence, this incorporates feedback loops to ensure continual re-examination of the assumptions behind the initial problem. Catalytic validity is a combination of both these features and is assessed against the degree to which participants know reality so they are able to transfer its applicability as well as also being able to recount a spontaneous change in understanding.

Democratic validity and external validity can also be combined to some extent as both incorporate the opinions of external participants. In the case of democratic validity, this is

achieved through collaboration with stakeholders whereas dialogic validity uses peer review to continuously monitor the quality of results, accepting that some bias is inevitable and therefore examination of this cannot be ignored. Anderson et al (2007) added another possible aspect of validation which they termed 'generalisability' or 'external validity' whereby validity should be assessed through the transferability of findings. They proposed that this validity put obligation on the researchers to provide enough description of their methods to allow someone else to decide if the methodology was appropriate for their own studies. Through application of one or more of these approaches to validating processes, researchers could produce data that was not less rigorous but accepted as being rigorous in a different way to traditional methods (Anderson et al, 2007).

4.6 Action Research as a methodology for this study

Having established the core principles behind Action Research within education, it is important to extend that consideration to this study. As has been previously identified, this study had an established end point with respect to learning spaces already encapsulated in the design, however, the end vision of learning was broad in outline and still something of a work in progress. As such, the journey towards this pedagogy was to be an evolving one (Dick, 2009) with learning occurring along the way continuing to shape the final reality of teaching and learning through a combination of aspiration and pragmatism (Anderson *et al,* 2007). Action Research lends itself well to such an unfolding style of innovation as it presents the opportunities to reflect on progress made over shorter periods of time and adapt future plans in order that the route to the final vision can be steered back onto course if necessary. The innovation within the study school was a digression from the usual approach to the potential offered by school rebuilds. Therefore to be able to be reactive to the progress and have the ability to incorporate the learning from failures whilst not being derailed by their impacts was a core requirement.

As a consequence of the above findings, the pedagogic aspect of this study was conducted as a participatory pragmatic Action Research project where I worked alongside others within the institution to investigate, adapt and evaluate practice in a series of Intervention Cycles. However, the spatial aspects were to be considered in a comparative style at the start and end point of the study.

4.6.1 The research outline

It is, at this point, worth a return to the educational vision encompassed by the new design and driven by a leadership and staff anxious to maximise the opportunities to embrace inclusive educational innovation through the key principles of:

- *Increasing attainment, achievement and enjoyment, thus realising the learning potential of all*
- *Delivering a curriculum experience that is creative, flexible and collaborative in both its design and delivery and clearly applicable to the world outside school*
- *Providing a learning environment that will enable and inspire all people to be active participants of their learning journey*

(Study School, 2008)

The vision for curriculum innovation centred on the facilitation of enquiry learning including cross-curricular, empowered and tranferable learning which in turn would facilitate the key skills desired by employers and further education providers. It envisaged creativity, flexibility and collaboration in its design and an opportunity to take advantage of decreasing curriculum prescription at a national level to deliver areas of study more personalised to the students and their backgrounds. There was, however, also an acknowledgement that future curriculum change could be even more complex (Groundwater-Smith, 2013) and that the need to future proof the design against any such changes would need to be

incorporated (Study School, 2008a). This more creative curriculum was to be delivered through the creation of learners with strong cognitive learning habits who were able to take advantage of an 'anytime, anywhere' approach to learning (Study School, 2008).

As a consequence of this, a much greater need for learning across subjects was established and the school decided on the four main developmental areas of transferable learning, group work roles, empowered learning and enquiry learning already outlined within Chapter 3. The resultant need to develop students' skills in the four developmental themes lies at the heart of this study as is demonstrated by the framework for research (Figure 4.5) (MacIntyre, 2000).

At the start of the study an extensive Baseline data collection was undertaken to establish a 'reconnaissance' of learning spaces and pedagogy (Elliott, 1991) against which innovation could be considered. Innovation was then driven through the four key developmental themes, identified as headers for the four columns, each of which was to be subjected to a series of interventions in order to develop, refine and embed the skills necessary to exploit the learning spaces of the new school build. Not all developmental themes were initiated simultaneously, hence the lack of an Intervention Cycle 1 for the developmental theme of empowerment. Interspaced between these interventions are the end of cycle 1 and end of cycle 2 data collection points named 'Review Points'. These were designed to facilitate both reflection of hoped for progress driven by the Intervention Cycles as well as opportunities to consider future interventions, thus incorporating the feedback aspects essential to the Action Research methodology (McNiff & Whitehead, 2002). Finally, the whole study was completed through a repeat of the extensive Baseline data collection which was conducted after Intervention Cycle 3 and identified as the Finalline data collection on the diagram.

		Transferable learning (7Cs)	Group work roles	Empowered learners	Enquiry learning
	Summer Academic year 1	Baseline data collection (Chapter 5)			
Action Research Cycle 1	(Chapter 6)	Intervention cycle 1	Intervention cycle 1		Intervention cycle 1
	Autumn Academic year 2	Review Point 1 data collection (Chapter 6) Reflection Influence on next cycle			
Action Research Cycle 2	(Chapter 7)	Intervention cycle 2	Intervention cycle 2	Intervention cycle 1	Intervention cycle 2
	Summer Academic year 2	Review Point 2 data collection (Chapter 7) Reflection Influence on next cycle			
Action Research Cycle 3	October	Move to new build			
	(Chapter 8)	Intervention cycle 3	Intervention cycle 3	Intervention cycle 2	Intervention cycle 3
	Easter Academic year 3	Repeated Baseline (Finalline) data collection (Chapter 8)			

Figure 4.5 The research plan

4.7 Aims and objectives of the data collection

Within studies which look at innovation, an initial reconnaissance where the researcher "*describes as fully as possible the nature of the situation one wants to change*" (Elliott, 1991:73) can be beneficial. As this study looked to examine the development of teaching and learning into innovative learning spaces, it was necessary to create a 'snapshot' of learning spaces and pedagogic practices at the outset of the study. This then allowed the innovation of pedagogy to be analysed through repetitive measurement at a later point in time, whilst also generating a data set from which to consider possible avenues of change. It also provided a quantitative pen portrait of learning spaces against which the success of the innovative new learning spaces included in the new build could be considered at the end of the study.

To ensure the Baseline reconnaissance was as representative as possible it needed to encompass the opinions of all those involved in classroom practice; the Senior Leadership Team (SLT), Teaching and Learning Responsibility holders (TLRs), Teachers, Teaching Assistants (TAs) and students. This also provided opportunities for triangulation of responses as there should be some similarities between staff and student experience of learning spaces and classroom practice (Cohen *et al,* 2011). In addition, the data collection around pedagogy needed to find a balance between being able to show comparison through time through a repetition of focus, yet also acknowledge that innovation is an emergent process. Therefore, to be too pre-emptive of future foci would lead to data collection at later points in time being of limited effectiveness.

In order to meet all the extensive requirements of the Baseline and Finalline data collection, a questionnaire approach was primarily selected with additional exploration of data coming from subsequent follow-up semi-structured group interviews. This was further complemented by external sources of data such as reviews of teaching and learning.

In order that pedagogic comparisons could be conducted at the end of each Action Research cycle within the study some consistency of data collection was necessary. As a result of

this, the Review Point data collection was to comprise questionnaires for all groups, however, with a reduced focus. Unlike the Baseline and Finalline data collection, these questionnaires were not accompanied by group interviews due to time constraints. Instead, findings were supported through documentation as appropriate.

4.8 Sampling

Wherever the population engaged in the study is determined to be too large to collect data from every individual then sampling must be applied. Sampling can take a number of forms and can be seen to operate on a continuum from probability sampling, where techniques such as random or systematic sampling can be viewed as being statistically impartial, to non-probability sampling where the driving force of selection is determined through convenience factors such as accessibility or the cooperation of participants (Cresswell, 2007). In addition, sample size must also be considered as, if the intention is to infer characteristics of the whole population from analysis of the sample, this is crucial (Opie, 2004). That the larger the sample, the more reliable its results is a clear link, however, the constraints of time and access inevitably necessitate a pragmatic approach to such decisions (Bell, 2010).

4.8.1 Sampling for quantitative data collection methods

The study school had around 80 teaching staff and 30 teaching assistants (TAs), therefore, all teaching staff and TAs were invited to complete the questionnaire as a whole population sample at all data collection points. This also ensured that the smallest group, TAs, was close to the minimum recommended sample size of thirty for quantitative data collection (Cohen *et al*, 2011). The study school did, however, have 1200 students which would have

led to excessive quantities of data being generated and so sampling of the student population was employed consistently at all data collection points.

Firstly, as the main drive of the project was around innovation of the KS3 curriculum, KS4 students were excluded from the data collection. At KS3, years 7, 8 and 9, were each divided into nine form groups of approximately 27 students balanced in terms of gender. Within this, the students with greatest language need were focused in one form to ensure most effective teaching assistant and peer support. In addition, these students also demonstrate severe linguistic limitations and show the greatest 'turbulence' through arrivals and departures from the study school. Therefore, purposive sampling was used to exclude this form as being unrepresentative of the year group as a whole. Convenience sampling was then employed with the remaining form groups, three form groups from each of the three years being randomly selected. This ensured data collection from one third of the KS3 students at every data collection point, around 240 students, equivalent to 20% of the whole cohort.

4.8.2 Sampling for qualitative data collection methods

Group interviews were conducted at the Baseline and Finalline data collection points with both teaching staff and students, with between six and ten individuals being considered ideal for both groups. The selection of staff for group interviews was largely opportunistic as this data collection necessitated time outside the school day which the participants had to be willing to give. At both points, an open invitation was put to teaching staff and, due to the small number of responses, all were invited to join the interview group. Whilst this sampling methodology remained consistent for both Baseline and Finalline data collection events, the personnel did not due to staff turnover and time constraints. The data collected from staff interview groups was also augmented by information from meetings and feedback sessions in order that it was as fully representative as possible.

In addition a student group was created to explore responses to the Baseline and Finalline questionnaires in more detail. Selecting students inevitably brings bias as the numbers selected are only a small percentage of the overall population. This was exacerbated by the fact that students selected to be involved in group interviews needed certain attributes; for example, a good grasp of spoken English and the confidence to share their opinions on issues, so systematically selecting students was not going to be appropriate. Convenience sampling was therefore employed, with tutors of the forms involved in questionnaire completion asked to nominate a student granted parental consent to be involved in interviews creating a group of around nine interviewees. In order to try and negate any potential bias, tutors were asked to ensure that the students were representative of a range of opinions and that they did not filter out students who were disaffected with school. They were also asked to ensure that the students were not taught by the researcher. Again, the methods of selecting students for both Baseline and Finalline data collection were constant, however, due to the movement of students through the year groups and tutor selection, the individual students were not.

4.9 Data collection techniques

Thus, the methods employed during the course of the research were:

- Questionnaires
- Group semi-structured interviews
- Supporting documentation produced by both external bodies reviewing the teaching and learning within the study school such as OfSTED and notes from group meetings and the quality assurance of teaching and learning

4.9.1 Questionnaires

Three questionnaires were used at the Baseline, Finalline and Review Points to collect responses from teaching staff, teaching assistants (TAs) and students. Questionnaires have the advantage of being time-efficient, relatively cheap and allow collection of data which can easily be coded for analytical purposes. In addition, they generate precise numerical results (Bell, 2010) without ruling out the opportunity to explore some ideas further. However, they also bring the disadvantages of relying on co-operation for completion and the possibility of ambiguous questions (Oppenheim, 1966). In an Action Research project, however, where repetition of relatively consistent data collection is a beneficial element for analysis, the positives of a questionnaire approach outweighed the potential disadvantages.

There is a vast amount of literature available to support questionnaire design and several assertions that good questionnaire design is far from easily achieved (Bell, 2010) with consideration of question style, ordering and layout all being important. Question style is primarily divided between closed and open questions. Closed questions offer respondents a predetermined choice of replies or collect singular factual responses such as a number. They are generally considered easier to answer and analyse. However, they can also be considered to be leading (Oppenheim, 1966), can exclude some potential responses and, whilst being ideal for finding out facts, they do not facilitate the investigation of how or why (Opie, 2004). Open questions offer no predetermination of answers and instead allow free response reflecting participants' opinions in far more detail. However, they can be more time consuming to complete, be avoided by respondents (Opie, 2004) and are far more difficult to analyse. In response to this Cresswell (2007) identified a third set of questions, semi-closed, where an initially closed question is extended through the request for an additional information which qualifies the response further.

That some respondents will have a limited literacy level, particularly in a school with a high percentage of EAL learners, suggests a mainly closed questioning style as the potential for misinterpretation of the question is minimised through the answers supplied (Denscombe, 2002). In addition, further support for closed questioning is the perceived need for quick

and easy data collection to avoid repetition becoming onerous for the participants. However, to ensure that the resultant data did not become simplistic, a number of the questions were semi-open to explore the rationale behind responses both to develop a deeper understanding but also to form the basis of the subsequent group interviews, further validating the data collected (Drever, 1995).

Following construction, all questionnaires were piloted by the appropriate respondents in order to consider the clarity of questions, any ambiguous language use and the time taken to complete them (Bell, 2010). Questionnaires were issued via an internet based programme, Survey Monkey, which was already regularly used in school. A further attribute of this package was the access to easier data analysis as electronic responses which could be filtered by respondent segment or cross tabulated to look at trends in contrasting areas of the questionnaire (Survey Monkey, 2013).

As data collection was to be repeated over time (Figure 4.6), it was important to collect a consistent set of respondent characteristics in order to avoid bias and facilitate comparisons through time. However, confidentiality for respondents was also important in order that respondents could be honest in their opinions. To these ends, a consistent series of closed questions were used in all the questionnaires issued.

With respect to students, information was restricted to year group, gender, Special Educational Needs (SEN) identification and students for whom English was an Additional Language (EAL). This information ensured that a representative selection of students engaged with the questionnaires but also meant that confidentiality was achieved as, high student numbers made it impossible to link data to individual students.

With respect to staff data, confidentiality was harder to ensure, particularly in an environment where, as an insider researcher, the researcher's knowledge about the attributes of the respondents is considerable. One option was to not collect any staff respondent data; however it was felt this would potentially limit the analysis of data. Another option was to ask staff respondents to identify themselves but researcher

experience suggested this would limit respondent numbers and the candour of responses. Therefore a compromise was utilised where staff respondents were asked for a range of information which would allow data analysis to be completed effectively but still ensure respondents could not be identified as individuals. This comprised their seniority, experience and the learning zone they would be attached to. Following initial data analysis, respondents not stating zone attachment was found to present challenges within the data analysis and so this characteristic was made compulsory for subsequent questionnaires.

4.9.2 Baseline questionnaire design

The purpose of the Baseline questionnaires for teaching staff, TAs and students was to explore the current pedagogy and the use of learning spaces as well as generating ideas about potential future learning and spaces in the new building from a range of stakeholders. All three questionnaires were created with similar outlines and question styles to allow triangulation of results. However, the language used within questions was rephrased where necessary. In addition some aspects were removed where appropriate, for example, those regarding lesson design processes were removed from the student questionnaire as they were beyond student's experiences. Finally, the principles of designing postal questionnaires were applied as, although completed on-line, the constraint of completion without researcher input remained (Bell, 2010). Copies of all Baseline questionnaires can be found as Appendices 1, 2 and 3.

Respondents were initially asked about their current experiences of teaching and learning, specifically around attributes liable to change in the new school. These areas were identified in a brain storming session carried out by the SLT and briefly comprised issues around learning spaces (such as format, content, establishing identity and consistency of use) and the promotion of new pedagogic principles (including collaborative planning, cross-curricular learning and team teaching).

As responses were based on actual experience, rather than perception, questions were semi-closed with fixed singular or multiple response choices, complemented by an 'Other' option for extension if required. Many questions also had sub-sections, for example to ask which year groups or subjects had been involved in specific activities to allow greater consideration of the issues whilst avoiding surplus questions for respondents who did not experience certain phenomena. In addition, questions could be left blank if the respondent did not want to answer.

The second section of the questionnaires examined respondent's visions, aspirations and concerns for learning in the new school build. Questions in these sections were again common to all questionnaires, though a clarification of language was necessary for TA and student questionnaires due to the use of jargon, such as 'team teaching' which, whilst effective in communication with teachers, could be ambiguous to others (Opie, 2004). As creating a vision for learning incorporating a variety of viewpoints was more subjective, a more qualitative approach was needed here. However, with such a significant number of responses created on multiple occasions, completely open ended responses were not suitable (Bell, 1999). The solution was therefore to use some form of ranking or scaled response bringing the advantage of flexibility of response whilst still allowing easy analysis of the results (Cohen *et al*, 2011).

The initial questions involved fifteen desirable characteristics of learning in the new school. These were based on the vision for teaching and learning drawn up by the SLT at the inception of the project (Study School, 2008a) and comprised:

- Individual work
- Paired work
- Group work
- Role play/Drama
- Creative teaching strategies i.e. poetry, art, music
- Teachers using ICT
- Students using ICT

- Use of hand-held devices such as mobile phones, i-phones, Blackberries etc.
- Students as researchers
- Students doing enquiries to discover learning
- Kinaesthetic styles of learning
- Learning with identified skills involved
- Student choice of learning locations
- Student choice of learning activities
- Student leadership in lessons

Respondents were asked to rank their five most desirable characteristics in order from 1 to 5 before considering the frequency of their use or exposure to them. Here respondents had a series of appropriate time units (days, weeks, months, and terms) on a Likert scale within which it was hoped that all respondents could approximate their answer.

The next question area looked at levels of confidence when engaging with these aspects of pedagogy. Here both Likert scales and semantic differentials facilitated this investigation, with the former looking at the extent of agreement with a statement on a numerical scale whilst the latter allows respondents to consider where their opinion lies on a continuum between contrasting end statements (Cohen *et al*, 2011). In this area, the inclusion of student responses is important as to find contrasting adjective responses with a student accessible literacy level is challenging yet indications on a sliding scale are harder to quantitively categorise, therefore a Likert scale was used (Bell, 2010).

Likert scales can have even or odd number of response options and this factor also needed consideration. An odd number of responses could be seen to allow respondents to avoid making a decision through selecting the middle ground (Oppenheim, 1966) whereas even numbered scales left no option for those respondents who felt that they genuinely did not have a preference (Cohen *et al*, 2011) and without a middle value the effectiveness of using mean scores could be questioned (Oppenheim, 1966). After consideration, an even scale was used for the pilot and, in consideration of student involvement, the number of responses was maximised at four to avoid over-complication.

The final section of the questionnaire was focused on the aspirations and challenges of innovating learning. Here an unwillingness to lead respondents through predetermined options meant open responses were necessary. However, to ensure that respondents did not feel pressured to be too descriptive and to facilitate more effective data analysis, respondents were directed to contribute five words or short phrases, though there was no specific word limit prescribed.

Cohen *et al* (2011) write a thorough review advocating that the more time spent in planning the initial questionnaires, including extensive piloting, the greater the validity of the results generated and the less time required to analyse the data. Consequently, all three questionnaires were piloted. Teaching staff questionnaires were piloted first from which one amendment was to remove the ranking element of the pedagogies and instead ask respondents to reflect the best 5, unranked. One member of teaching staff, however, also had difficulty in applying learning space questions to their subject, PE, due to the variety of learning spaces they worked in. One possible response to this was to create a separate questionnaire for teachers of PE. However, this generated significant concerns with respect to both anonymity and data analysis. An alternate solution was to adapt some of the initial questions to allow teachers of PE to identify themselves as such and skip questions which did not apply to their situation. Although this raised some issues around confidentiality, the inclusion of all responses within one data set minimised these concerns and eased analysis. Therefore the latter option was chosen and the revised questionnaire successfully piloted with a different member of PE staff.

Teaching assistant questionnaires incorporated the question clarification from the teacher feedback prior to piloting and were successfully piloted with minimal alterations.

Student questionnaires were piloted with six Year 7 students including those with EAL and SEN needs assuming that if the youngest potential respondents could answer the questions then older year groups would also be able to do so. Students identified a number of concerns with the questions, mainly around the language used. As a result of this significant changes were made to questions; for example, 'Which of the following classroom layouts

do you have lessons in?' was changed to 'What are most of your classrooms like?' There were also issues over the meaning of completing an 'enquiry' and so that was exemplified as a 'lesson where you ask a question and then work out the answer'.

The biggest change necessary, however, was in the descriptive aspects around students' preferred lessons or classroom. Here the students struggled with the concept being investigated and were putting answers like 'amazing', 'magnificent' etc. which were not meaningful with respect to finding key design features. After reiterating the purpose students rephrased the question with respect to design, i.e. 'if you were to plan the perfect lesson/classroom, what would you include?' This was again followed by an encouragement to think of five aspects. As such a significant number of linguistic issues had been raised, the students' questionnaire was piloted again successfully.

4.9.3 End of cycle (Review Point) questionnaires

To reflect on the changes achieved in order to fully inform the next cycle of Action Research, consistent questionnaires were completed at Review Point 1 and 2 by all three groups of respondents following initial questions on participant data. Whereas a key focus of the Baseline questionnaire had been a reconnaissance of current learning spaces and pedagogies, the focus of the Review Points was on pedagogic change and its impact due to an inability to influence the design of spaces. A reduction in breadth was also considered prudent to ensure that respondents did not become reluctant to engage in data collection at future points.

Within the Review Point questionnaires, participant data was followed by questions which focused on the layout and possible changing of learning spaces. Unlike the Baseline questionnaire, however, follow-up questions around the rational for this were not added as it was felt that the rational for changes would not have significantly altered.

The next section of all questionnaires used mainly semi-closed questions to investigate the development of the pedagogic strands at the core of this study. This allowed progress within these innovations to be tracked whilst also offering opportunities for more detailed responses which could be used to steer future innovations. As the study progressed, there was significant realignment of the language of these pedagogies which was also incorporated into questions (Table 4.1).

The final two questions on the teacher, TA and student questionnaires were a repeat of the Likert scaled questions on the frequency and confidence levels associated with the use of different pedagogies in order that the overall impact of innovations could be tracked and used to inform future Intervention Cycles. Full copies of Review Point 1 and 2 questionnaires can be seen as Appendices 4 to 9.

Focus	Focus of Baseline questionnaire	Adapted focus at the end of cycle 1	Adapted focus at the end of cycle 2	Adapted focus of Finalline questionnaire
Thematic learning	NA	Questions specifically focused around the '7Cs' including involvement in development	Shift away from involvement in development to usage and barriers to utilisation	Focus remained on use and barriers to use but also investigated confidence levels
Group work / roles	Likert questions around frequency of use/confidence	NA	Questions asked around frequency, participating year groups and the use of group work roles	No change
Empowered learners	Likert questions around frequency of use/confidence	NA	Questions asked about students' level of skill and C3B4ME	No change
Enquiry learning	Team teaching	No change	No change	No change though only accessed by respondents not engaged in enquiry learning
	Cross-curricular learning	Focus expanded to include cross-curricular homework projects	Focused expanded to include trialling of enquiry projects	Only asked of those not completing enquiry learning
	Collaborative planning	Responses organised around learning zones	No change	Focused on collaborative planning specifically for enquiry learning. Extended questions considered confidence around process

Table 4.1 The four pedagogic strands demonstrating the language adaption over the course of the study

4.9.4 Finalline data collection

Whilst end of cycle data collection had seen a reduction in questions in order to avoid respondent fatigue, the Finalline line data collection necessitated inclusion of all areas under consideration. This was partly to facilitate a complete comparison against the Baseline results, but also in recognition that significant staff turnover and changes in educational thinking that had occurred since the Baseline data collection. In order to encourage high quality results, teachers and TAs were provided with time within the school day to complete Finalline questionnaires whilst students again completed questionnaires during tutor time. The Finalline questionnaires were also piloted to success (Bell, 2010), the results of which are incorporated into the design description.

Initial participant data collection remained constant in order to compare findings and establish any potential bias with Baseline and end of Intervention Cycle results. This was followed by repeated questions on the use and confidence with the fifteen key pedagogic styles which had been innovated which had been moved forward in response to pilot findings. These were enhanced by follow-up question asking which five of the fifteen key pedagogies respondents considered easier to utilise in the new building in order that the effectiveness of the design could be considered.

Within the teacher questionnaire, the next set of questions on learning spaces were a repeat of the mainly semi-closed questions included in the Baseline allowing consideration of learning space layouts and contents as well as the frequency and rationale for change. These were followed by questions on the movement of learning, though here significant changes were made with the Finalline using closed questions to investigate the impact of improved ICT availability. The Finalline also investigated moving of learning to innovative learning spaces, again using closed questions to consider the frequency as well as the associated advantages and disadvantages of such learning locations.

Collaborative planning, cross-curricular learning and team teaching had all been foci of the previous Review Point questionnaires as developmental attributes of enquiry learning. However, following the move to the new school, the focus needed to shift to

enquiry learning *per se*. A series of closed questions established whether the aims of enquiry learning were clear before assessing the nature and success of collaborative planning in preparation for its delivery.

The next section investigated the logistics of delivered enquiries since the school move including duration and student involvement through a series of closed questions. Also within this section, the questionnaire investigated the perceived success of enquiry learning. This included analysis of key pedagogic aspects promoted within enquiry learning via a series of scaled response questions using Likert scales to indicate the extent of agreement with statements as well as offering a consideration on which ability learners benefitted most from this style of learning. This section also analysed the impact of developing enquiry learning on cross-curricular links in curriculum lessons. Finally within this section, a closed question analysis of further developments required within this pedagogy was offered.

Following analysis of enquiry learning, focus within the teacher questionnaire switched to the three pedagogic strands developed in support of enquiry learning: transferable learning, group work roles and empowered learners. Semi-closed questions in these sections were a direct repeat of the Review Point questions as innovation to these pedagogies had been minimal in the intervening time and so analysis was focused on progress.

The TA and student Finalline questionnaires followed the sequencing used in the teacher questionnaire very closely. However, the questionnaire for students saw significant adaptation of the language used. All three Finalline questionnaires (Appendices 10, 11 and 12) concluded by asking respondents whether they were pleased that the school move had been completed.

Baseline questionnaires had also contained two questions asking respondents for five words or short phrases that described their ideal learning space and pedagogy respectively. Whilst it was considered important to repeat this data collection, analysis of the electronic data generated from these questions had proved very challenging. It was therefore decided to ask this question verbally to teachers and TAs and via a

PowerPoint to students (Figure 4.6) and collect the results in hand-written format. The question was phrased thus;

Figure 4.6 PowerPoint slide to collect student opinions on the learning spaces and pedagogies within the new build.

4.9.5 Group interviews

As has already been discussed, questionnaire use has many advantages; however, the most significant disadvantage is that of a lack of depth to responses. In order to negate this effect and triangulate the findings, more detailed information from both staff and students was sought through group interviews. However, in recognition of the time involved in interviewing, this was not an aspect of end of cycle methodologies.

Interviews have a range of advantages including an ability to follow up ideas, probe responses and investigate motivations to a depth not accessible via questionnaires by allowing respondents to develop their own ideas, feelings, insights, experiences and attitudes to the subject (Wilson & Fox, 2009). However, interviews also bring disadvantages, they can easily consume time which is greater than the return of information justifies and produce data which is difficult to analyse. There are also

considerations regarding the extent to which the interviewee feels able to engage in the interview honestly and fully (Opie, 2004). Assurances of confidentiality and the manner adopted by the interviewer should assuage some of these concerns; however, interviewing someone is a complex skill if the outcomes are to be purposeful and preparation is vital (Bell, 2010).

When exploring opinions generated through large scale questionnaires, it is unintuitive to seek one individual's opinion and so group interviews were chosen. Group interviews generate particular challenges, noticeably the need to avoid dominance by one particular strong character (Wilson & Fox, 2009), but also to create an environment where the ability of the participants to explore ideas collectively is beneficial in the generation of more detailed responses.

The structure of interviews can be seen to fall on a continuum from an unstructured narrative (Blaxter et al, 1996) to a verbal questionnaire (Anderson *et al*, 1994). Considering the exploratory purpose of the interviews to have adopted the latter approach would not have been productive. Conversely, an unstructured conversation may have missed areas of the questionnaire requiring exploration (Denscombe, 1998). Therefore, a semi-structured was utilised with a broad structure ensuring coverage of all the key topics (Drever, 1995).

Questions for the teachers were circulated prior to the interview in order that respondents could feel prepared and comfortable with the process. This was not felt to be appropriate for the student interviews due to the respondents' age. Instead each question was written on a separate piece of paper so it could be referenced throughout the subsequent discussion. Copies of the questions for group interviews are available as Appendices 13-16.

The group interviews fell into two sections for both teachers and students; validation and exploration of the findings around current pedagogy and learning spaces followed by a discussion around the vision for pedagogy and learning spaces in the new build with the use of open questions being imperative in order that ideas could be fully explored (Scott & Usher, 1999). Finally, the recording of the information was considered. Blaxter and others (1996) present a thorough consideration of the merits of note taking as

opposed to audio recording, with the former having the benefits of an instant record and no need to categorise the information post collection whilst taping interviews provides an unequivocal record of the events and leaves the interviewer free to focus on the respondents. However, both have disadvantages such as the perceived increase in formality of a taped interview and the assumption of significance attached to any comments which may be noted down. For the purpose of this interview, note-taking was used to record the necessary details as it was important that the respondents were able to contribute freely to the conversation and comprehensive verbatim information was not felt necessary. Interviewees were also welcomed to view notes after the interview in the spirit of transparency.

4.9.6 Documentation

The above data collection combined to produce a thorough and representative snapshot of pedagogy within the study school. The researcher then looked to supplement this with opinions from external agencies such as OfSTED and 'Challenge Partners' a school to school support organisation whose work also resulted in an externally produced report on pedagogy. Internal reflections on the progress of change were also gathered by the researcher through the collection of information from presentations and training sessions, minutes from pedagogy meetings held within and beyond the researcher's presence and documentation relating to the progression of the new building including media coverage.

4.10 Data analysis

In order that the findings from the research could become meaningful, analysis of the data collected was necessary.

4.10.1 Questionnaire data analysis

The vast majority of the data drawn upon within this study was generated by the questionnaires presented to teachers, TAs and students. Use of an online survey tool meant that analysis of the quantitative data could also be completed electronically saving significant amounts of time. This did reduce the opportunities for the editing for completeness, accuracy and uniformity which can help increase the validity of data collected (Cohen et al, 2011). However, parameters built into the online survey ensured that respondents could not enter more than one response to a singular response question nor skip questions requiring a response. Within the data collection package a range of analysis options allowed filtering of data by singular categories, for example findings from just Year 7 students, but also cross-tabulation of results so analysis of fine groupings of respondents could be achieved, for example teachers working in Exploration zone who used group work on an at least weekly basis.

Whilst quantitative data collection within the questionnaires was extensive and restricted editing, this could be applied to qualitative data collection. Qualitative data collected was therefore edited for accuracy with erroneous responses noted and responses which fell into predetermined categories, and therefore added through misinterpretation, reassigned. Data collected within such questions required no further analysis. Instead it was either used to exemplify findings or to refine the response categories of future questionnaires in a similar way to the results of piloting.

The most significant aspect of qualitative data collection, due to its collection as a direct open question rather than a clarification or exemplification of a closed question, was the collection of opinions around desires or perceptions of learning spaces and pedagogies. As a result of this, these questions generated a huge variety of responses which required significant editing to become meaningful.

The first step, was to spell check responses and turn them into ‘proper English’; for example changing ‘u’ for you and ‘cos’ to because. Some inappropriate answers were also removed at this stage. Another problematic feature of this data was the tendency of respondents, particularly students, to identify singular features in a huge variety of ways. For example, write on white boards were referred to as ‘normal’ and ‘real’ to

distinguish them from interactive whiteboards; which, in turn, were called 'touch boards', 'touch screen boards', 'smart boards', 'HD boards' and 'Promethean boards'. Therefore the data was further 'corrected' to apply consistent use of terminology to allow the analysis of ideas. The resultant data was termed 'processed data' with an example as Appendix 14.

The first method of analysis applied was to categorise the processed data by identifying the main features identified as desirable within it. Categories were driven by the responses rather than being pre-determined as predicting ideas was not possible, however, this did lead to a number of categories registering only one or two entries. This data could then be analysed and compared using statistical means; however, this resulted in a quantitative analysis of what is primarily qualitative data and so an alternative method was also employed. Here the processed data was fed into a word analysis package (Wordle) which visually demonstrated the most population ideas which were most popular whilst also allowing the inclusion of more unique responses.

Reference to data is noted by respondent group, the period of data collection (Baseline BL, Review Point 1 RP1, Finalline FL) and then by question number. The number of respondents is also included in each figure description to add value to the results presented.

4.10.2 Group interview data analysis

The inclusion of qualitative data collection within mixed method studies brings advantages through the facilitation of triangulation. Defined as the;

> *"process of corroborating evidence from different individuals, types of data or methods of data collection [triangulation] ensures that the study will be accurate because the information draws on multi-sources of information, individuals or processes"*
>
> (Cresswell, 2009).

First popularized by Elliott and Adelman in the Ford project (Hopkins, 2008), triangulation has become a much talked about method of validating studies though utilising more than one methodology in a place and time to give convergence of the findings and therefore an increased validity (Denzin, 1970 in Cohen *et al*, 2011).

Data collected via interview methods is much harder to analyse than questionnaire responses, however, due to its more expansive nature. Group interviews were recorded via a note-taking method generating a plethora of data which needed refining to be of a usable format. The ability to be able to combine that analysis of such data with that of external and internal sources outlined below was also considered to be beneficial (Newby, 2010). Therefore a system of coding was employed where;

> *"the same code is given to an item of text that says the same thing or is about the same thing"*
>
> (Gibbs, 2007 in Cohen et al 2012:559)

Coding can operate in a number of ways and at a number of levels. Open coding involves the assignment of a label to units of text; from individual words to whole paragraphs (Cohen et al, 2012), whereas analytical coding uses codes to summarise the meaning of the text. Coding can also allow further complexity of understanding either through the use of axial and selective coding which seek to combine the results of open coding and then use these to generate theory respectively, or by densely coding sources through the application of multiple codes to units of data. Dense coding can also be used to represent a layered data analysis with themes identified at a range of levels from sophisticated to complex (Cresswell, 2005).

Within this study a system of densely layered open coding was utilised. As data collection was driven by the innovation of the core pedagogies coupled with an analysis of learning spaces, these aspects formed the core basis of the coding system (Table 4.2). Added to this was a second layer of coding indicating whether information about the pedagogies or learning spaces was linked to training, experience, awareness or facilitation. A final layer of coding indicated whether the information was positive or negative in its reflection. An example of coded notes can be found as Appendix 18.

Primary coding		Secondary coding		Tertiary coding	
e	Enquiry learning	*tr*	Training	*+ve*	Positive
tt	Team teaching	*exp*	Experience	*-ve*	Negative
cp	Collaborative planning	*aw*	Awareness		
xc	Cross-Curricular	*fac*	Facilitation		
g	Group work roles				
i	Empowered learners				
7c	7Cs				
ls	Learning Spaces				

Table 4.2 Coding symbols used in qualitative data analysis

Group interview information is represented by respondent group, data collection period, group interview and question number [Teacher BL GI Qx].

4.11 Ethical considerations

All research studies involve ethical considerations, particularly those studies with interpretivist tendencies where some of the data generation is based on an assumption of trust between researcher and research participant (Mills, 2011). In addition such research is not entirely pre-determined due to the unfolding nature of its development and hence the need to remain ethically vigilant is perhaps greater in such methodologies as Action Research (Anderson et al, 2007). Within the area of education, the element of trust is also further exemplified as a significant amount of this research is conducted upon or about society's most vulnerable members; children. As Schmuck states the "*ethical bottom line is that no student is harmed by the Action Research"* (2006:55), an assertion that Gorman (2007 in Campbell & Groundwater-Smith, 2007) takes further

when they state that unethical research can harm individuals, institutions and even whole professions.

There are a multitude of ethical considerations around the participation of individuals within research, and educational research in particular (Smyth & Williamson, 2004:10 in Hopkins, 2008). The key concern in making research around human actions ethical is that informed consent needs to be made at a range of scales; individual participants, authorities and, in the case of students, appropriate adults (McNiff & Whitehead, 2005). Within a school environment, consent for engagement is primarily the concern of the school leader. However, consent must also be sought from the individuals involved as the decision of a leader cannot be seen as a directive to others and personal choice is important. The giving of consent must also be completed within an awareness of the wider implications of involvement, such as data usage and the risks inherent within this (Hopkins, 2008).

The consideration of both anonymity and confidentiality are also key factors in the consideration of involvement. Anonymity is defined as being 'not identified by name' (Oxford, 2010) and is an important premise within research which must be directly considered by ensuring that individuals are not named within work through, for example, the use of codes. It must also, however, be considered indirectly when a combination of facts could allow unintentional identification. Thus the consideration of anonymity is crucial in both the design process but also the subsequent analysis and presentation of findings.

Confidentiality is a fact which it is intended to keep secret, hence it is centred on not revealing what is known rather than ensuring it is not known in the first place. In research projects involving an insider researcher it is perhaps confidentiality which is more important than anonymity as through the nature of the tacit knowledge they possess, identification of contributors is sometimes hard to avoid and so confidentiality must be assured from the outset.

Once reassured that data collection will be either anonymous or confidential as appropriate, all participants in Action Research must be aware that they engage voluntarily in the process and as such are also free to disengage at any time without

recourse. Within this study, anonymity of data collection ensured that within each data collection point, participants were free to choose whether to complete questionnaires or volunteer to participate in semi-structured interviews or not and hence had autonomy over their involvement.

Finally, we must consider the position of the researcher. We all make decisions about who we are and what we are trying to achieve and hence through this unconscious action, we influence our research however hard we try to be impartial (McNiff & Whitehead, 2005). Again, the nature of participatory research makes the impact of such actions potentially more significant as the results are much more open to interpretation. The consideration of keeping good faith seeks to address this area of potentially unethical action by steering the researcher to constantly drive towards integrity and quality (Hopkins, 2008) when there is no greater check than their own conscience.

4.11.1 Ethical considerations within this study

Within the large scale data collection aspects of this study, teacher participants engaging in online data collection did so voluntarily and having read an introductory statement that outlined the ethical considerations of the study, thereby giving their informed consent without the need to infringe on confidentiality (see Appendix 19). Participant data collected was minimal, ensuring anonymity coupled with an assurance of confidentiality, and questions could generally be skipped as required to ensure that participants controlled their contributions.

Student participants were also shown a confidentiality statement prior to commencing the on-line questionnaires. However, permission was also from an appropriate adult to ensure an ethical approach was maintained. To this end, a letter was sent home to all potential participants giving parents the opportunity to withdraw their child from the data collection. However, to ease the work load of form tutors, reply slips were not required to give permission (Appendix 20).

Group interviews present different ethical challenges but also more direct opportunities to ensure that participants are aware of the implications of their involvement. All participants in such interviews were informed about the collection, use and audience of the data and assured of confidentiality from the researcher. Adults engaging in these activities also signed a consent form (see Appendix 21). The engagement of students in interviews is more complex as the consent of an appropriate adult must be sought. In light of this, students selected to be interviewed by tutors were given a letter explaining the purpose of the research, contact details in case further clarification was necessary and a response form to indicate their consent for their child to be involved in these activities (see Appendix 22). Any student for whom responses were not returned was then not selected for interview by the tutor.

Final consideration of the ethics of this study must lie with the use of the data and the interpretation of the results found. All data was made available to the SLT within the school, as were the writings based upon it as the concept of transparency is an important one (Salant & Dillman, 1994). In order to increase the accessibility of findings, summarised information was also shared with the SLT member involved in the leadership of teaching and learning on a regular basis and, on occasions, with the whole staff to indicate the progress being made and to support future interventions. It is hoped that this transparency coupled with the sharing of key findings works to ensure good faith in the interpretation of results.

Chapter 5 Baseline Data analysis

In order to allow the tracking of changes as preparation for the move to the new build developed, a Baseline reconnaissance against which comparisons of learning spaces and pedagogy could be made was necessary. This was created by combining the results of questionnaires from teachers, teaching assistants (TAs) and students at Key Stage 3 (KS3) with follow-up group interviews. In addition, complementary data was drawn from external sources such as evidence of teaching quality. Baseline data was collected in the summer term of Academic year 1 (Figure 5.1).

5.1 Baseline Results

As has been outlined in the research methodology, all three questionnaires completed by teachers, TAs and students followed a broadly comparable structure; initially collecting respondent characteristics, followed by a consideration of the learning spaces and pedagogies participants engaged with at the point of the Baseline data collection. This was followed by questions seeking to understand respondents' hopes for the new building and their understanding of the potential offered by this opportunity to change learning within the study school. Presented below is a summary and analysis of the findings from the Baseline questionnaires. A complete data set can be found in Appendix 19.

5.2 Respondent characteristics

Data on the nature of the respondents was collected to ensure that the responses collected could be considered to be representative of the staff and student bodies.

		Transferable learning (7Cs)	Group work roles	Empowered learners	Enquiry learning
	Summer Academic year 1	Baseline data collection (Chapter 5)			
Action Research Cycle 1	(Chapter 6)	Intervention cycle 1	Intervention cycle 1		Intervention cycle 1
	Autumn Academic year 2	Review Point 1 data collection (Chapter 6) Reflection Influence on next cycle			
Action Research Cycle 2	(Chapter 7)	Intervention cycle 2	Intervention cycle 2	Intervention cycle 1	Intervention cycle 2
	Summer Academic year 2	Review Point 2 data collection (Chapter 7) Reflection Influence on next cycle			
Action Research Cycle 3	October	Move to new build			
	(Chapter 8)	Intervention cycle 3	Intervention cycle 3	Intervention cycle 2	Intervention cycle 3
	Easter Academic year 3	Repeated Baseline (Finalline) data collection (Chapter 8)			

Figure 5.1 The position of the Baseline data collection

The teachers' questionnaire was completed by 71 out of a possible 89 respondents; an 80% response rate. From analysis of the data (Table 5.1), we can conclude that respondents to the Baseline questionnaire were broadly comparable to the make-up of the school's teaching staff both with respect to seniority and teaching experience. Follow-up interviews were conducted to further explore some of the issues arising from the Baseline teacher questionnaires. Teachers were asked to volunteer for these as they needed to occur in their own time. Six teachers volunteered for the Baseline group interview comprising one member of SLT, three TLR holders and two main scale teachers representing a range of zones.

TA questionnaires showed an excellent response rate of 93% and again were broadly in line with all the TAs employed in the study school (Table 5.2). There were, however, significant discrepancies between the study school's perception of TA allocation to specific learning zones and the TAs own perceived links, possibly as TAs have answered the questions based on the lessons they normally support rather than any specific allocation.

		Entire teaching staff		Teacher respondents Baseline	
		Number	%	Number	%
I am a member of teaching staff	Within Senior Leadership Team (SLT)	7	8%	7	10%
	With a Teaching and Learning Responsibility (TLRs)	45	50%	36	50.5%
	Neither of the above (CPS teachers)	37	42%	26	36.5%
	Skipped question			2	3%
	TOTALS	89		71	80%
I am attached to the following zone	Discovery (Science, Technology & Math)	26	29%	16	23%
	Exploration (Humanities, Citizenship, MFL & ICT)	27	30.5%	24	34%
	Expression (English, PE, Expressive Arts)	29	33.5%	22	31%
	Reflection (SEN & EAL)	7	8%	6	8%
	Skipped			3	4%
	TOTALS	89		71	
I have worked within education for ...	0-5 years	28	31%	18	25%
	6-10 years	29	33%	20	28%
	11-20 years	16	18%	16	23%
	Over 20 years	16	18%	17	24%
	Skipped			0	
	TOTALS	89		71	

Table 5.1(i) Teacher respondent characteristics compared to characteristics of the whole teaching staff. [Teacher Baseline (BL) Q1, 2 & 3. 71 respondents].

		Entire teaching staff		Teacher respondents Baseline	
		Number	%	Number	%
I have worked at the study school for ...	0-5 years	41	46%	34	48%
	6-10 years	25	28%	16	22.5%
	11-20 years	18	20%	16	22.5%
	Over 20 years	5	6%	4	6%
	Skipped			1	1%
	TOTALS	89		71	

Table 5.1(ii) Teacher respondent characteristics compared to characteristics of the whole teaching staff. [Teacher BL Q4. 71 respondents].

		TAs in school		TA respondents Baseline	
		Number	%	Number	%
Most lessons I support are in the following zone	Discovery (Science, Technology & Math)	1	3%	7	25%
	Exploration (Humanities, Citizenship, MFL & ICT)	1	3%	1	4%
	Expression (English, PE, Expressive Arts)	2	7%	4	14%
	Work within various zones	26	87%	16	57%
	Skipped				
	TOTALS	30		28	93%

Table 5.2 Teaching Assistant (TA) respondent perceived zone attachment compared to the study school perception of TA attachment. [TA BL Q3. 28 respondents].

Student respondents are representative of the school's KS3 population with respect to age and gender (Table 5.5). The question relating to whether or not students had an identified Special Educational Need (SEN) did present some challenges to respondents. Only seven students (3%) were confident that they did have an SEN identification which is significantly lower that the school percentage and not statistically possible given the distribution of SEN needs equally across form groups. However, 21% of student respondents indicated that they thought they may have an SEN identification by answering 'don't know'. It was therefore decided to combine the 'yes' and 'don't know' responses to this question for this and all subsequent questionnaires. This resulted in an SEN percentage of 24% which is in line with the school percentage. The EAL Baseline percentage is broadly in line with the school population. A follow-up group interview was also conducted with eight students representing all year groups.

In summary, it is considered that the Baseline data collection questionnaires and group interviews were representative of the school population.

5.3 Characteristics of learning spaces at the Baseline data collection point

In order that a Baseline and Finalline comparison could be conducted around the effectiveness and utilisation of new learning spaces for the benefit of pedagogy, the first section in all questionnaires explored the ownership, layout and facilities of learning spaces in the original school building. Respondents were also asked whether learning was ever relocated to other learning spaces, either for whole class or small group activities, and whether alternative locations were considered to be appropriate.

		Students attending the study school (KS3)		Students who completed Baseline survey	
		Number	%	Number	%
TOTAL number of students		718		241	34%
What year are you in?	Year 7	238	33%	92	38%
	Year 8	240	33.5%	74	31%
	Year 9	240	33.5%	75	31%
Are you ...	Male	406	57%	128	53%
	Female	312	43%	109	45%
	Skipped			4	2%
Are you on the SEN register? (Special Educational Needs). **Answer 'Yes' & 'don't know'**		198	28%	57	24%
Do you usually speak English at home? **Answer 'No' to imply EAL**		86	12%	38	16%

Table 5.3 Student respondent characteristics compared to the characteristics of the KS3 population. [Student BL Q1, 2, 3 & 4. Respondent numbers in table].

One of the potential changes as a result of the BSF study school rebuild was a reduction in the number of learning spaces and therefore a potential increase in the frequency with which teachers might need to teach across a number of spaces. Analysis of the Baseline findings indicated that 58 out of 70 (83%) responding teachers delivered the majority of their lessons in a single 'home' learning space (Teacher BL Q5) although 19 of the 50 also taught some lessons outside this space (Teacher BL Q6). Therefore, findings indicate that movement around learning spaces was not uncommon and in line with the vision for the new building.

One of the main aims of the BSF rebuild was to provide flexible learning spaces incorporating a range of learning activities and group sizes as well as the effective integration of learning resources such as ICT. Certain areas within the old school building demonstrated a predominance of fixed facilities, such as Science and Design (Table 5.4). However, in other areas desks laid out in rows or groups predominated indicating an encouragement of some student interaction. This finding was also replicated with 60% of student respondents experienced learning in spaces with group table arrangements (Student BL Q5) indicating experience with students working in groups.

Which of the following most closely matches the organisation of the learning space you are most commonly teaching in?					
	Total	Discovery	Exploration	Expression	Reflection
Respondents	44	14	14	11	4
Tables individually	6 (14%)	2 (14%)	4 (28%)	0	0
Tables in rows	13 (30%)	1 (7%)	7 (50%)	4 (36%)	0
Tables in groups	13 (30%)	3 (21%)	2 (14%)	4 (36%)	4 (100%)
Fixed facilities	12 (27%)	8 (58%)	1 (7%)	3 (28%)	0

Table 5.4 Teacher respondent information on 'home' learning space layout considered by learning zones. [Teacher BL Q8. Respondent numbers in table (1 skipped dependent question)].

Where it was possible, 34 out of 49 respondents changed the room layout occasionally, mainly to facilitate group work (34 respondents) or deliver different learning activities (32 respondents) such as discussions (18 respondents) (Teacher BL Q11). This would indicate that altering learning spaces facilitated different pedagogies more effectively (Nair & Fielding, 2013) and would promote the inclusion of flexible learning spaces in the BSF design (Study School, 2008). Findings around learning spaces also indicated that many spaces lacked basic amenities such as adequate heating and luminescence (Schreider, 2002) whilst the availability of ICT was patchy at best (Figure 5.2). Where facilities were poor, teachers reported that *"if the room isn't good enough; if heating means it is cold or damp, then the students don't learn as well as they could"* (Teacher BL GI Q1)

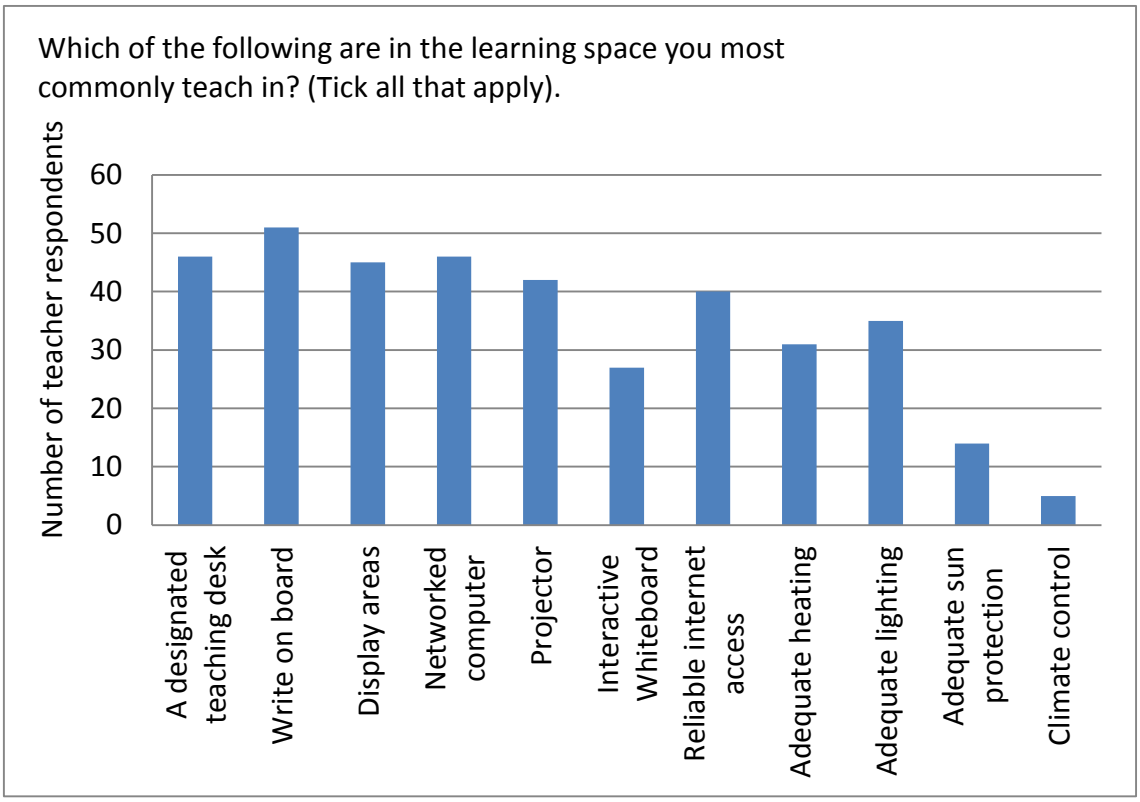


Figure 5.2 Graph to show facilities in the learning space within which teacher respondents normally taught. [Teacher BL Q14. 62 respondents].

The design of the new building promoted flexible learning spaces, such as plazas, into which groups could move to facilitate different pedagogies (Study School, 2008). Baseline results indicated that movement of learning by choice was a frequent occurrence amongst teachers from all zones (Teacher BL Q16 / TA BL Q12 / Student BL Q8), "*mainly because I needed the student to use computers"* (Teacher BL GI Q2) or the library (Teacher BL Q17 & 18 / TA BL Q13 & 14 / Student BL Q10 & 11). This would imply that more mobility around learning spaces presented less of a challenge as teachers and students were already familiar with this concept.

In summary, a significant amount of teachers demonstrated experience of delivering learning in a variety of spaces with several choosing to change pedagogy or move learning for the benefit of pedagogy, usually to access ICT or library facilities. Therefore, the necessity of moving learning in the new build was potentially less disruptive than had been feared and the potential to maximise flexible and innovative learning spaces was already present. However, these were only occurring with limited frequency and would need support to become the common attributes required. The majority of learning spaces were basically equipped though integrated ICT was uncommon. Unfortunately, the findings around the physical conditions of the classrooms were very low with only half considered to be adequately heated and under 60% adequately lit.

Consideration of these factors against the specifics of the design brief for the study school showed some characteristics upon which change could be built, such as a willingness to move learning to appropriate locations which would indicate that learning plazas would be utilised. Other areas, however, such as the rearrangement of learning space layouts to facilitate different learning activities would require promotion whilst the provision of a positive physical environment with effectively integrated ICT was significantly overdue.

5.4 Baseline occurrence of pedagogies

Another main focus within the study was the investigation into the effective innovation of pedagogy and so, again, a reconnaissance against which the impact of innovation could be considered was necessary. It can be clearly seen that there was a significant variety in learning activities within the old building as considered against the fifteen pedagogies included in the new school teaching and learning vision (Table 5.5). Students worked individually on a daily basis according to 56 out of 60 teacher respondents (93%) though, interestingly, only 63% of students agreed. Paired work also showed significantly higher prevalence amongst teachers than students. Figures for group work occurrence were, however, more closely in line with around 70% of staff and students using or experiencing group work at least once a week.

These findings raise some interesting questions. Whilst it would appear that group work is a clear definition for teachers and students, the understanding of what 'working on your own' or 'work in pairs' meant required investigation. In group interviews, students confirmed that *"working on your own means without the teacher's help"* (Student BL GI Q1) thereby differing in meaning from teachers who envisage work by an individual in isolation. Teachers also indicated that whilst they may often ask students to work on their own, they *"rarely enforce complete silence unless it is an assessment as students learn more if they can check with each other"* (Teacher BL GI Q4). An alternative theory is that teachers tell students to work on their own yet students choose to collaborate quietly with others.

Of the other pedagogies analysed, only the use of ICT by staff and learning including identified skills were commonly occurring. Kinaesthetic learning was used at least weekly by 50% of teacher respondents. However, further analysis of this data by zone showed that these responses were skewed by the Expression and Discovery zones where PE, Dance, Drama and Design Technology have movement within learning as a fundamental aspect of many lessons.

At least once a ...	Teacher respondents					Student respondents			
	Day	Week	Day plus week	Response count	Very confident to use	Day	Week	Day plus week	Response count
Individual work	56	3	98%	60	96%	62%	12%	75%	214
Paired work	40	16	93%	60	81%	41%	36%	77%	213
Teachers using ICT	36	12	81%	59	40%	50%	22%	73%	205
Kinaesthetic learning	25	17	71%	59	56%	16%	27%	43%	206
Group work	22	20	70%	60	57%	27%	43%	69%	214
Identified skills included	24	12	64%	56	43%	26%	34%	60%	202
Student leadership in lessons	7	20	47%	58	35%	8%	14%	22%	204
Students doing enquiries	3	19	39%	56	30%	32%	23%	55%	205
Students as researchers	3	19	37%	59	31%	16%	34%	50%	205
Creative teaching strategies	8	9	30%	56	21%	9%	20%	29%	208
Students using ICT	5	11	27%	59	41%	15%	43%	58%	209
Student choice of learning activities	0	11	19%	58	18%	9%	13%	22%	205
Role play/Drama	2	4	11%	56	11%	4%	19%	23%	208
Use of hand held devices	0	5	9%	57	11%	10%	5%	15%	204
Student choice of learning locations	2	1	5%	56	12%	8%	14%	22%	203

Table 5.5 The frequency of use of pedagogies by teacher and student respondents plus the percentage of teacher confident to use them. Most common response highlighted green. [Teacher BL Q31 & 32, Student BL Q24. Respondent numbers in table].

Pedagogies showing only moderate levels of teacher experience included creative teaching strategies, student use of ICT or students as researchers. Within this category was also enquiry learning, a key aspect of the pedagogic vision for the new building

indicating that overcoming barriers to the utilisation of this pedagogy needed to be a key focus of development. There was also a greater likelihood of students being able to use these less common pedagogies in Year 7 with their frequency decreasing as students move into Year 8 and then Year 9 as exemplified for creative learning in Table 5.6.

Many of the results around the uses of different methods of learning were reflected in teacher confidence levels, for example, use of hand held devices had low usage and confidence whereas common pedagogies such as individual, paired or group work, were ones that teachers felt very confident delivering (Teacher BL Q32). Therefore, promoting teacher confidence in pedagogy also needed to be a core consideration during the innovation period.

How often do you learn in these ways at the moment? Answer: Using music, art or poetry to learn something			
Answer Options	Year 7	Year 8	Year 9
Once a day	8 (11%)	7 (10%)	3 (5%)
Once a week	19 (26%)	12 (17%)	11 (16%)
Once a half term	11 (15%)	14 (20%)	17 (26%)
Occasionally	18 (25%)	11 (16%)	19 (29%)
Never	17 (23%)	25 (36%)	16 (24%)
	73	69	66

Table 5.6 Student respondents' opinions of the frequency of creative styles of learning across KS3. [Student BL Q24. 208 respondents].

This comparison does, however, identify a number of pedagogies which teaching staff felt confident to deliver yet rarely choose to do so; for example students using ICT or choosing their own learning location. Findings from the group interviews around these areas were dominated by references to learning spaces and appropriate facilities. All participants in the group interviews reported that student research, ICT use and enquiry learning were all restricted by very limited access to ICT rooms and issues of reliability and speed meaning that many had *"given up trying as I and the students get so frustrated it's not worth the hassle"* (Teacher BL GI Q5). Similarly, trying to do role play or creative activities in standard classrooms, or offering a choice of activities in such a small space all created *"a chaotic environment where the students can't really get on with a purpose and find it too easy to opt out of learning"* (Teacher BL GI Q5). They also

felt that the level of expertise and behaviour management to facilitate such activities in restrictive conditions needed to be exemplary and that this put many people off. As a potential consequence of not delivering these pedagogies frequently, it was reported that the opportunities for student leadership within lessons was limited as *"student leadership is a natural follow-up to these [above] activities but doesn't fit so well with the activities we are using in the lessons and so feels too much like a 'bolt-on'"* (Teacher BL GI Q5).

Sources of external data which support this pedagogic picture, primarily include the study school's OfSTED report which identified that *"teaching and learning within the college was good and improving"* (OfSTED, 2012:4). In addition there is the study school's own analysis of teaching and learning through the system of faculty reviews. This reported evidence of collaborative planning in Modern Foreign Languages, Special Educational Needs and Citizenship, clear procedures for supporting group work in English where rooms were also deemed to be *"conducive to learning"* and some opportunities for kinaesthetic learning in Humanities. However, the need to use "*learning spaces to further maximise learning opportunities"* in SEN and EAL lessons, to *"consider seating arrangements that facilitate effective pair and group work"* and the distractions provided by *"poor physical environment meaning that sunlight renders use of the whiteboard impossible"* were reflective of the Baseline findings.

In summary, pedagogy within the old school build was significantly removed from a purely didactic style. There was a good amount of paired and group work happening, coupled with a reasonable variety of other learning activities. However, there were a number of pedagogies that could be considered key within the learning vision for the new school which were not yet fully utilised. Crucially, these included enquiry learning as well as contributing elements such as student choice of learning locations and activities and the effective integration of ICT. Findings indicated that both staff confidence levels and appropriate facilities were barriers to these learning activities hence addressing these within the innovation of pedagogy would be vital to the realisation of the new school learning vision.

5.5 The position of the aspects of enquiry learning at the Baseline point of data collection

The identification of the low occurrence of enquiry learning reinforced the innovation of this pedagogies position at the core of this study. As has been previously explained, the development of enquiry learning *per se* was significantly limited through timetabling, spatial and temporal constraints. Instead attention needed to focus on the teacher skills necessary to develop this pedagogy: the facilitation of collaborative planning, the promotion of cross-curricular learning, and the skill of team teaching. The next section of all three questionnaires sought to establish the Baseline occurrence of these aspects in order that an understanding of the necessary innovation could be developed.

Collaborative planning was seen as crucial to the development of enquiry learning in that it allowed teachers from different subject areas to combine subject matter effectively within singular projects. It was also seen as advantageous as it facilitated combining the skill sets of teachers, and where possible TAs, to develop creative approaches to learning and spaces. Therefore, the study school had already started to promote this prior to the commencement of this study.

50 out of 71 teachers reported that they had been involved with collaborative planning (Teacher BL Q19) mainly within their own faculty and primarily involving teachers working together. The main focus was on planning schemes of work and lessons, with a lesser focus on planning enquiry style projects and assessments (Figure 5.3) with TA involvement focusing more on the individual aspects rather than enquiry overviews. Exploration of this in more depth was a focus within the group interviews where participants reported that *"collaborative planning means we get more ideas coming together and so we are able to plan stuff that is different from the normal lessons and seems more engaging"* (Teacher BL GI Q3).

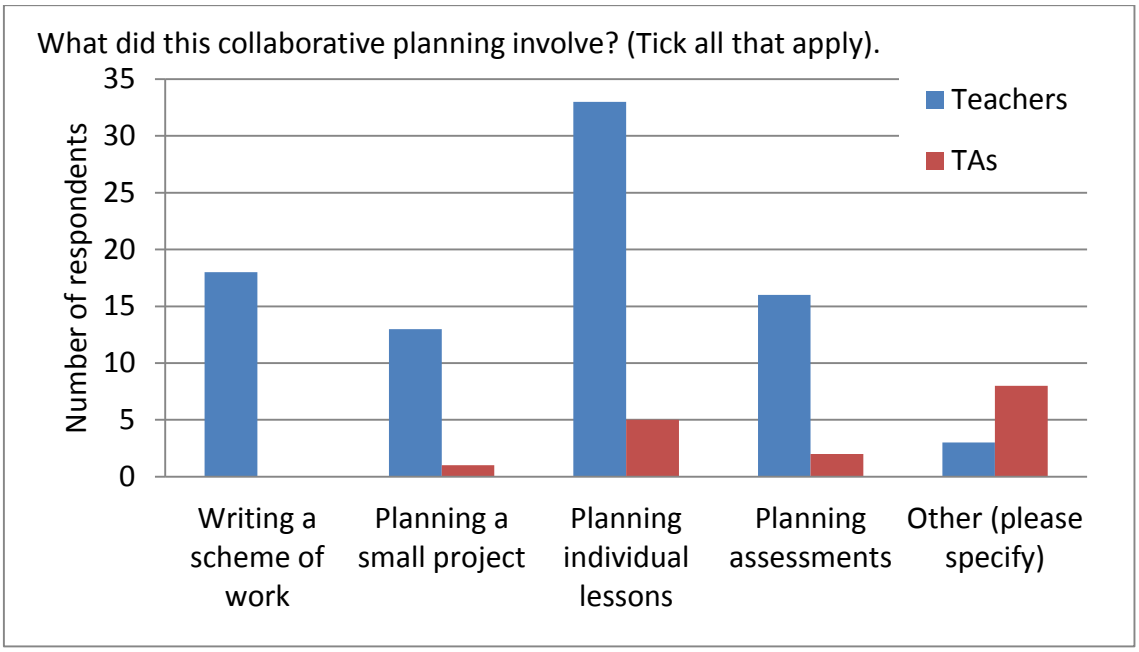


Figure 5.3 Teacher and TA respondent data to show the focus of collaborative planning. [Teacher BL Q21 (49) / TA BL Q21 (16). Respondent numbers in brackets].

To support the collaborative planning of enquiries, teachers needed more ideas of how subjects could be effectively linked together and, therefore, the promotion of cross-curricular learning was also a key factor. 36 out of 61 teachers (Teacher BL Q20) reported experience of delivering some cross-curricular learning at the Baseline point, particularly within the Discovery zone, potentially driven by the national Science, Technology and Maths (STEM) initiative. Around a third of students also reported having experienced some cross-curricular learning again dominated by subjects within the Discovery zone which accounted for over 75% of responses. For example, within the group interview, the Year 7 respondent stated that *"science lessons have linked with maths and technology as well as using ICT and doing volcanoes like Geography"* (Student BL GI Q2).

The final element considered crucial to enquiry learning was for teachers to get used to teaching together. Within the old building, the majority of teachers had a 'home' learning space within which they delivered the majority of their learning which meant that teachers rarely worked together. Breaking this trend would require direct intervention rather than the subliminal hopefulness associated with the failure of previous open plan education (Bennett & Hyland, 1980 in Brogden, 2008). Despite the constraints around facilities and timetables in the old building, 21 out of 60 teacher

respondents reported that they had been involved in team teaching (Teacher BL Q26), though, half were there as timetabled support so team teaching driven by a desire to innovate pedagogy was effectively restricted to 12 teachers. However, it was occurring in all zones and, in two thirds of instances, involved the delivery of a lesson which had also been collaboratively planned (Teacher BL Q27).

41% of students also reported that they had had lessons with more than one teacher in them (Student BL Q18), predominantly in the areas of English and Humanities (Student BL Q19). However, students were unclear of the differences between team teaching and teachers being supported by TAs or observed by teacher trainees. As one student stated *"they help me with my work, does that count as teaching?"* (Student BL GI Q3). As a result of triangulating these findings with those of teachers, it was felt that the students' perception of team teaching was probably over-exaggerated.

Teachers identified a range of benefits of team teaching, particularly learning from those they were working with, improvements in student behaviour, greater assistance for individual students as well as increased opportunities to explore new pedagogies (Teacher BL Q29). Students were also complimentary about the benefits of team teaching with 79% reporting that they felt it was an advantage as they got help faster. However some students identified that two different versions of instructions could be confusing on occasions (Student BL Q21 & 22).

In summary, in line with previous findings around pedagogies, the contributing factors to enquiry learning were present, but to a limited extent. The foundations provided by the study school had ensured that teachers continued to engage in collaborative planning and recognised the benefits this could bring. However, the practice remained largely within faculties. This was doubtless a contributing factor to the low levels of cross-curricular learning which was only really established around 'STEM' subjects. Team teaching also saw low levels of engagement and findings highlighted the potential for confusion that poor team teaching could have on students. When considered against the vision of enquiry learning operating across zones with numerous teachers planning and delivering lessons together (Study School, 2008), these findings would indicate that

there were pockets of innovative practice upon which to build but significant gains needed to be made.

5.6 The synergy of pedagogy and space at the Baseline data collection point

In order to address the research questions, the synergy between space and pedagogy also required consideration. At the Baseline point of data collection, learning spaces were a significant influence upon pedagogy in largely negative ways. Pedagogies where teachers demonstrated some confidence, such as student use of ICT, choosing learning location and, most significantly enquiry learning, were not frequently utilised due in part to a lack of appropriate spaces. That this drove significant number of teachers to move learning to more appropriate spaces, however, was a positive indicator that flexible learning spaces were likely to be effectively utilised in the new building, as was the indication that teachers rearranged learning spaces for pedagogic reasons. That both of these events lacked frequency, however, indicated that further support for these would be necessary. This was also true of promoting the combination of pedagogies that would be required to effectively fill the new learning spaces with attributes of enquiry learning, such as team teaching and learning with ICT, requiring support and encouragement if they were to maximise the opportunities to be presented.

5.7 Desired learning spaces

Having created a representation of the learning spaces and pedagogies within the old building, further exploration around the vision for their inclusion within the new building was considered appropriate. This also ensured that when shaping desired pedagogies into specific teaching and learning strategies, the opinions of stakeholders were taken into account.

A quarter of the 54 teacher respondents expressed a preference for learning spaces arranged with groups of tables, however, 24 out of 56 wanted flexible layouts which were easily rearranged (Teacher BL Q9), facilitating different learning activities and promoting more effective paired and group working (Teacher BL Q11). As one teacher identified *"activities are better if the furniture layout is suited to the task"* (Teacher BL Q11). Some teachers also linked flexibility to the ability to support students of different abilities, a factor which may also be behind the TA support for group layouts. Despite these indications, only 10 respondents regularly rearranged the layout of learning spaces at this time, therefore, significant promotion of this strategy would be necessary if the potential of flexible learning spaces was to be maximised.

As well as considering learning space layouts, teacher and student respondents were also asked to consider other features they would like to see in learning spaces within the new build. Teacher processed responses (see section 4.10.2) were dominated by physical factors (37 out of 48 respondents) such as spacious environments, adequate lighting, temperature control and colourful rooms (Figure 5.4). Only 21 responses referenced more altruistic aims of being attractive, stimulating, inspiring and engaging as aspired to within the learning vision; however, flexibility and integrated ICT were also reasonably well supported.

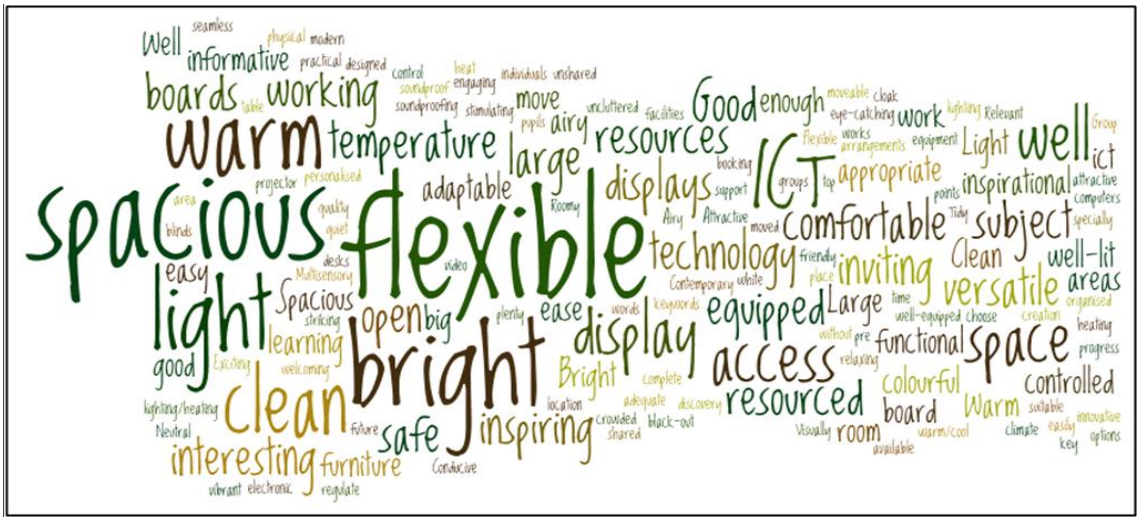


Figure 5.4 'Wordle' to show the features teachers desired in the new school learning spaces. [Teacher BL Q33. 48 responses].

Analysis of the students' responses placed far greater emphasis on ICT than on the physical environment, though references to new furniture in large colourful environments was made. However, the domination of the words 'tables' and 'chairs' perhaps give some indication that many students found imagining a learning space radically different from their current and previous experiences quite a challenge (Figure 5.5). There were also a number of less common but thought provoking responses around graffiti walls, reading areas, areas to get help and two students even wanted fish tanks!

In summary, desires for the attributes of new learning spaces, whether by teachers or students, were largely centered around a better version of the status quo, however, beyond these findings, some interesting messages are apparent. The mismatch between the desire for flexible learning spaces and the lack of individuals rearranging layouts would indicate that, whilst the vision was right, simply providing the facilities was potentially not going to be enough to realise it. Also, the strong student preference for ICT was again an area where current practice was limited and so identified another potential training need for teachers. Finally, the lack of vision contained within many of these findings indicated that if the learning spaces were to be effectively utilised then work on exploring the potential of the learning spaces was vital.

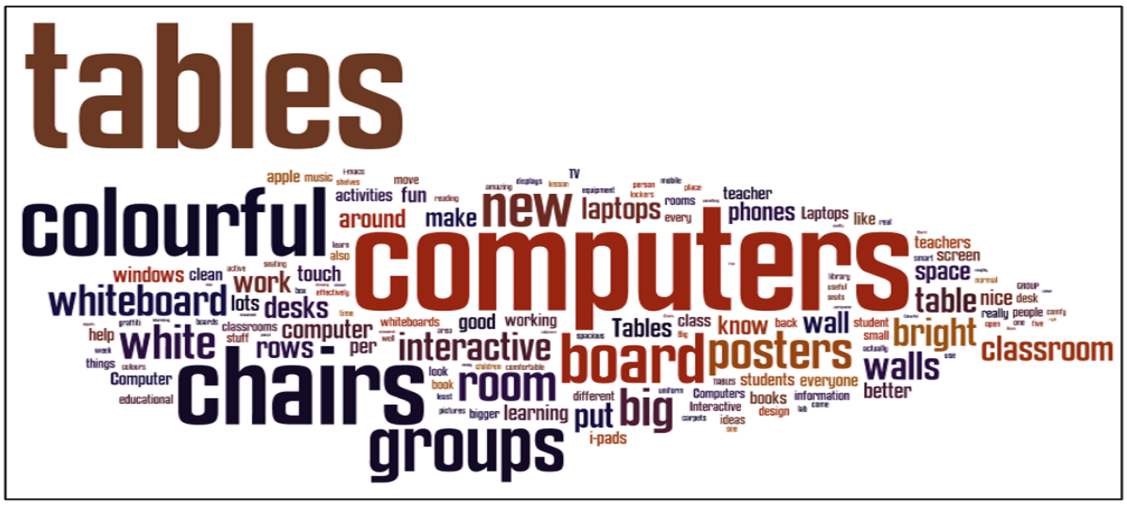


Fig 5.5 Wordle to show features Students desired in the new school learning spaces. [Student BL Q26. 144 Responses].

5.8 Desired pedagogic styles

In order to contribute to the refining of the vision for teaching and learning, all respondents were asked to prioritise the five aspects of teaching and learning they considered the most important within the list of fifteen pedagogies distilled from the original design brief (Section 4.9.2). In addition, teachers and TAs were asked to complete a self-assessment of their confidence in delivering these pedagogic styles in order that necessary training could be considered. Analysis of this data was completed quantitatively allowing comparison between different respondent groups.

Within Table 5.7, the fifteen possible pedagogies are ordered by popularity taking an average percentage preference. This clearly shows that working in a group was the most desirable pedagogy with 72% of all respondents prioritising it on average. It also comprised the highest or joint highest scores from all the individual groups of respondents. Beyond this clear preference, however, the findings become more complex. Working individually is the next most desirable pedagogy collectively. However, this hides a huge discrepancy with both teachers and TAs giving it their second highest preference yet students ranking it 14th out of 15 options. Conversely, the third most preferred pedagogy, that of students using ICT in lessons achieves this result as it is the students' second most desirable option, yet both teachers and TAs placed it lower. Interestingly, the fourth most preferable pedagogy, learning by moving around, sees a completely different promotion with TAs ranking it as their joint first preference yet both students and teachers seeing it as less desirable.

These results were very interesting and raised a significant issue for the investigation. Firstly, if the study school was striving to move teaching and learning forward, the fact that the end vision was different for different groups indicated that the vision and its rationale required reinforcement. And secondly, given that the pedagogic preferences indicated by teachers again closely replicate the findings around teacher confidence (Table 5.7), significant investment in moving teachers out of these comfort zones would be essential.

	Average % preference	Teacher preference ranked	TA preference ranked	Student preference ranked
Working in a group	1 (72%)	1 (69%)	1 (74%)	1 (74%)
Working on your own	2 (51%)	2 (59%)	2 (74%)	14 (22%)
Using ICT in lessons	3 (50%)	10 (35%)	6 (53%)	2 (63%)
Learning by moving around	4 (49%)	9 (35%)	3 (74%)	5 (40%)
Working in a pair	5 (44%)	3 (57%)	9 (42%)	9 (33%)
Being able to research ideas	6 (41%)	12 (31%)	5 (58%)	10 (33%)
Asking a question and then trying to answer it	7 (38%)	6 (36%)	4 (58%)	15 (21%)
Being able to choose which activity to do	8 (38%)	11 (31%)	13 (32%)	3 (52%)
Using music, art or poetry to learn something	9 (37%)	8 (35%)	8 (47%)	11 (30%)
Learning skills like literacy or team work in lessons	10 (37%)	5 (38%)	7 (47%)	13 (24%)
Being able to lead bits of lesson	11 (36%)	4 (52%)	12 (32%)	12 (25%)
Teachers using ICT to present information	12 (35%)	7 (35%)	11 (37%)	6 (35%)
Being able to use devices like mobile phones	13 (30%)	13 (22%)	14 (26%)	4 (41%)
Doing a role play	14 (29%)	14 (12%)	10 (42%)	8 (34%)
Being able to choose where you learn	15 (22%)	15 (9%)	15 (21%)	7 (35%)

Table 5.7 The preference for the fifteen key pedagogies by respondent group ranked by average percentage preference. (Shading indicates top 5 ranked pedagogies for each respondent group). [Teacher BL Q30 (58). TA BL Q22 (19). Student BL Q23 (227). Respondent numbers in brackets].

5.9 Conclusions

In conclusion, teaching and learning in the old school involved most teachers having their own fixed layout learning space which could be considered to have a largely poor physical environment and facilitated only limited student interaction. Pedagogy had, however, moved away from a didactic style as paired and group work were common, many lessons incorporated ICT and kinaesthetic ways of learning were also increasing. A similarly positive indication of preparation for the move to new learning spaces was the promotion of various attributes which would contribute towards enquiry learning. Significant numbers of staff were involved in collaboratively planning lessons, however, the focus was still largely on intra-faculty collaboration and hence cross-curricular learning, whilst established in some areas, was not commonly seen. The occurrences of team teaching by choice were also limited.

Further investigation into these findings would indicate that where opportunities to innovate were presented, such as moving learning for the benefit of pedagogy or team teaching lessons, a number of teachers were prepared to experiment with these ideas. However, to do so appeared to require the overcoming of significant barriers such as timetabling and a lack of appropriate learning spaces. These barriers would also appear to offer the excuse for other teachers to 'opt out' of such activities and reinforce the assertion that learning space is a significant, if not the only, determinant on pedagogy.

Encouragingly, the desire to see a different pedagogy in the new building was indicated by all staff and so willingness to innovate is present, particularly the desire to be able to teach flexibility in a technology rich, group oriented and pleasant learning environment. However, promotion of the teacher confidence to make these changes becomes a fundamental aspect within subsequent Intervention Cycles.

Chapter 6 Intervention Cycle 1

6.1 The position of Intervention Cycle 1

Following analysis of the Baseline data, a sequence of Action Research cycles were initiated (Figure 6.1) to facilitate the generative development of the pedagogic aspects considered necessary for the implementation of enquiry learning (McNiff & Whitehead, 2002). Within the first Intervention Cycle, focus was placed on the development of three of the four pedagogic aspects described in the Research Methodology; transferable learning, group work roles and enquiry learning. This was both a strategic and pragmatic decision as much literature indicates that innovation in schools is challenging and complex (Evans & Lakowski, 1996 in Groundwater-Smith, 2013) and that focused intervention has a greater likelihood of success than trying to move everything forward at one time. In addition, much of this change was to be initially driven by the researcher with some support from the Teaching and Learning Team (TLT), hence there was a finite amount of work that could be completed. It is also important at this point in the study to identify that, whilst analysis of the different development areas was completed as separate elements, the interlinked nature of the innovations cannot be overlooked (Figure 3.3).

Findings from the Baseline informed the innovations needed. Almost two thirds of teachers and 70% of students had experience of learning with identifiable skills (transferable learning) involved, a strong position supported by 40% of teachers being very confident to utilise this pedagogic tool. The group work pedagogy was also well established with usage figures around 70% for all respondent groups. However, teacher confidence in delivery of this area was lower and so focused intervention in this area was identified and the use of roles still to be added.

Enquiry learning, however, showed a much lower Baseline position with less than half of respondents experiencing this learning, a fact potentially linked to constraints from physical spaces. In recognition of this, analysis had also been made of the pedagogic tools whose development would contribute towards enquiry learning. Here, results were more pleasing with high levels of engagement with the process of collaborative

planning. However, this was largely still faculty based and so a switch in focus would be necessary which would hopefully also create an increase in cross-curricular learning outside Science, Technology and Maths. Team teaching was also going to require support if it was to increase.

6.2 The development of transferable learning within Intervention Cycle 1

The development of transferable learning within the study school evolved from concerns about students' inability to carrying skills from one subject area to another. In addition, it was hoped that a consistent learning language would ensure that all learners, particularly the less able, would be more able to make cross-curricular links. The need for development in this area was also identified through analysis of the Baseline data where only two thirds of teachers included identification of transferable skills within learning (Table 5.9) with students reporting even lower usage. The identification of cross-curricular learning was similarly low with 36 out of 61 teachers (59%) reporting that they made links to other subjects at least weekly, but only 35% of students supported this statement. Both these areas, therefore, had significant potential, and need, for expansion.

A number of initiatives around transferable skills already existed both at a national scale, for example Guy Claxton's Building Learning Power themes of Resilience, Resourcefulness, Reflectiveness and Reciprocity (Claxton, 2002) and more local approaches such as the 5Rs adopted at another local school; Resilience, Resourcefulness, Reasoning, Responsibility and Reflection. The study school, however, felt that it wanted to have an individual approach and that the complex language involved in many such 'hooks' of learning was not ideal considering the significant number of English Additional Language learners within the study school. In addition, much of the literature around innovation promotes the benefits of change driven by change agents with the personal mastery that enables them to realise a strategic vision (Senge, 2012) rather than imposition of a 'top down' approach where the benefits of

shared decision making and a reflective approach are often minimised (Hargreaves & Shirley, 2009). Finally, it was felt that this growth needed to come from every curriculum area if adoption was to be across the study school.

		Transferable learning (7Cs)	Group work roles	Empowered learners	Enquiry learning
	Summer Academic year 1	Baseline data collection (Chapter 5)			
Action Research Cycle 1	(Chapter 6)	Intervention cycle 1	Intervention cycle 1		Intervention cycle 1
	Autumn Academic year 2	Review Point 1 data collection (Chapter 6) Reflection Influence on next cycle			
Action Research Cycle 2	(Chapter 7)	Intervention cycle 2	Intervention cycle 2	Intervention cycle 1	Intervention cycle 2
	Summer Academic year 2	Review Point 2 data collection (Chapter 7) Reflection Influence on next cycle			
Action Research Cycle 3	October	Move to new build			
	(Chapter 8)	Intervention cycle 3	Intervention cycle 3	Intervention cycle 2	Intervention cycle 3
	Easter Academic year 3	Repeated Baseline (Finalline) data collection (Chapter 8)			

Figure 6.1 The research plan showing the position of Intervention Cycle 1

As a result of the Baseline data identifying a need for greater frequency of skills learning within lessons an initial clarification of the concept of transferable learning was completed by the TLT. This concluded that to be successful, students needed to be taught to use a range of skills structured around a clear framework. This concept was then presented to teachers using one possible suggestion, 'CLICK', to further articulate the idea (Figure 6.2). Staff were divided into groups containing a mixture of experiences and subject backgrounds representing all the proposed zones and asked to develop a possible learning hook for use within the study school.

Figure 6.2 An initial learning hook idea: 'CLICK'

From this exercise five possible solutions were broadly outlined for further consideration (Table 6.1). However, it was recognised that to continue to develop an idea with so many differing opinions was not practical. Hence a smaller research group was created pragmatically comprising teachers who fit Senge's (2012) definition of 'change agents' through having personal vision, a mastery of pedagogy, a drive for enquiry and being able to work collaboratively. In addition, the group was also selected to reflect the four learning zones so that the outcome would be applicable to all areas of the curriculum. To have chosen teachers via a formal sampling process would undoubtedly have been less biased. However, this could have resulted in over

representation of certain curriculum areas and presented constraints over the potential timings of development sessions.

The 5 Cs	The 5 Rs	The 5Is	CLICK	CROWN
Confidence	Resourceful	Independence	Communicate	Communicate
Communication	Resilient	Innovate	Learn	Responsibility
Collaboration	Responsible	Investigate	Independent	Organise/Ownership
Creativity	Reasoning	Imagine	Collaborate	Work-ethic
Commitment	Reflective	Inform	Know	Nourish

Table 6.1 Five possible learning hooks

The group was led by an identified member of the TLT in order that its direction and purpose remained true to the school vision and was completed in a timely manner. Whilst it must be acknowledged that this could be seen as being an undue influence on the outcomes, it was made clear to the lead teacher that the group was to be autonomous and that steerage should be kept to a minimum. The group initially spent some time considering the attributes of an ideal student (Figure 6.3) before using these to consider the practicality and suitability of the five proposed learning hooks (Figure 6.4) and assessing how well they covered the range of skills.

As a result of this work the decision was made to adopt the 7Cs of learning; Confidence, Communication, Collaboration, Commitment; Construct; Care and Creativity. The focus group were then subdivided to concentrate on different 'Cs' and subsequently critique each other's work before the definition of the 7Cs was finalised (Table 6.2). The 7Cs were also subdivided into different potential levels of achievement in preparation for the assessment of students learning skills and subsequent rewarding of abilities.

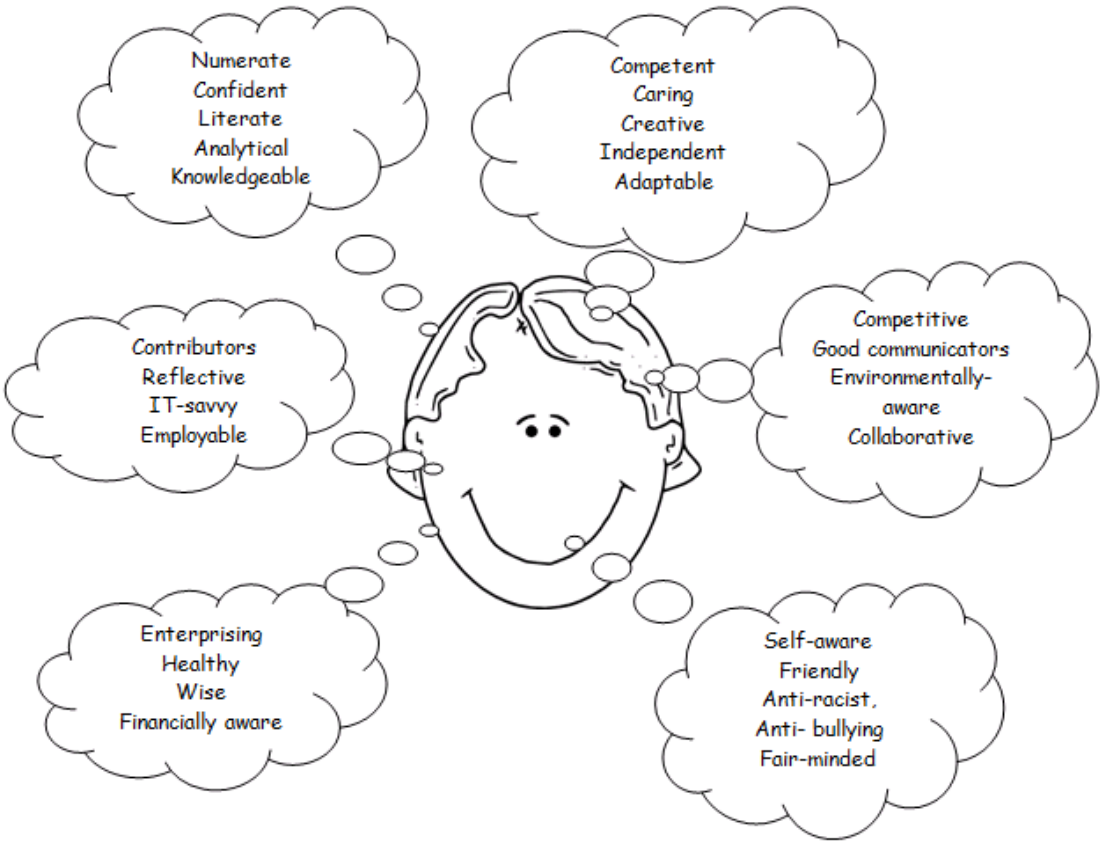


Figure 6.3 Desirable attributes of student learners

The research group were then asked to trial the 7Cs within lessons in order to give the idea practical application before it was presented to the whole staff. This involved the use of the 7Cs as learning objectives; to remind students of the skills they were using in different tasks. The 7C concept was presented to the whole teaching staff shortly before completion of the Review Point 1. To enhance the innovation, feedback was also provided from staff involved in the development of the 7Cs.

As the final aspect of transferable learning development within Intervention Cycle 1, staff were invited to start using the 7Cs from this point forward. However, more specifically the research group all worked with one other member of staff to support their increased use of the 7Cs in an organic and reflective pattern of development (Koshy, 2005). Therefore, by the end of Intervention Cycle 1, the 7Cs were established as the vehicle of transferable learning, albeit with further refinement of the concept inevitably being required.

Creativity	I am open to new ideas. I learn creatively. I use my imagination and experiment.
Confidence	I am able to make good decision. I am able to solve problems. I attack any challenge. I am prepared to make mistakes and learn from them.
Commitment	I use my time effectively. I strive to do my best. I promote a good image of my school.
Communication	I can present effectively. I can write effectively. I can speak appropriately. I can actively listen.
Collaboration	I make positive and valuable contributions when working with others. I respect and value the skills, ideas and contributions of others. I can lead and support others by demonstrating, teaching, explaining or encouraging.
Care	I show respect. I think of others. I care about my health.
Constructing	I am able to use numbers. I am able to plan an extended task logically. I am able to analyse information and draw conclusions. I am able to evaluate. I am able to transfer and use my knowledge and skills.

Table 6.2 Initial categorisation of learning skills into the 7Cs

6.3 The development of group work roles within Intervention Cycle 1

The development of all the pedagogic aspects through a whole school approach, whilst having much to recommend it in terms of staff engagement (Fidler, 1996), was also considered to be impractical in terms of time (Flood, 1999). Therefore, it was decided to develop the other three pedagogic aspects each within an individual zone.

The study school had completed a significant amount of professional development supporting group working prior to the commencement of this study. Analysis of the Baseline data demonstrated that group work was commonly occurring. However, the

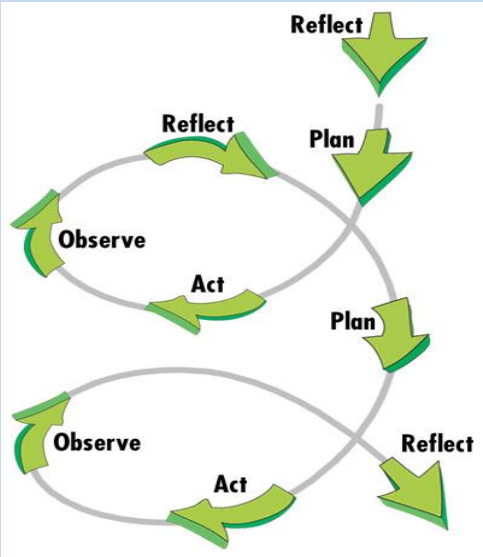
frequency was significantly higher in the Expression zone (Table 6.3). Coupled with the fact that both Expressive Arts subjects (Drama, Art and Music) and PE, by necessity, completed a lot of group activities, it was logical to develop group work roles within the Expression zone.

Teacher BL Q26	Whole school (60)		Discovery (16)		Exploration (19)		Expression (19)		Reflection (4)	
	No.	%	No.	No.	%	%	No.	%	No.	%
Group work completed daily	22	37%	5	31%	1	5%	11	58%	3	75%
Group work completed weekly	20	33%	8	50%	7	37%	4	21%	1	25%

Table 6.3 Baseline results around the prevalence of group work analysed by zone [Teacher BL Q26. Respondent numbers in brackets].

Within the Expression zone, one member from each curriculum areas of English, PE and Expressive Arts were pragmatically selected through the identification of strong teachers as it was felt that this basis would allow them to experiment with pedagogy without an adverse reaction on behaviour management. In addition, they were staff not in leadership positions so as to avoid work overload but also to encourage organic growth of ideas rather than top-down development.

Within the initial meeting, staff were shown how group work roles fitted into the pedagogic vision for enquiry learning and briefly introduced to the principles of Action Research (Figure 6.4). The initial discussion was steered via the 'Things to consider' section; however, the researcher was careful to provide minimal 'answers' within this in order that the participants could explore the concept in an unbiased way.



A visual representation of the Action Research cycle

We want you to think about the processes behind group work in order to consider the attributes of good group work. You need to think about teaching students' skills as well as subjects within one year group and one topic.

Between now and next session, we need you to design a group work roles learning activity, deliver it, reflect on it and come prepared to share how it went with the other researchers.

At this point, we want you to consider the best way to approach group work roles and then plan a further activity in conjunction with someone else in your zone thereby spreading the learning.

Therefore, we need you to think not only about how to promote group based learning but also what kind of structures could be commonly followed within 'Expression' to establish a routine for this type of learning.

The final stage of this cycle will be to present your findings to the rest of the school with a group work roles learning template which they can replication enabilig students to share skills more closely.

Things to consider:

Which group will this work with?

What topic will suit it best?

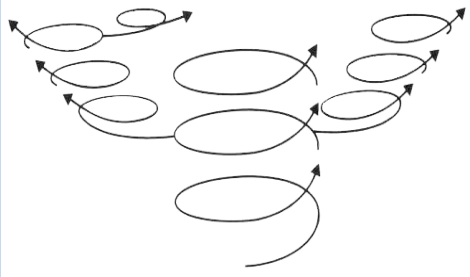
Do you have a control group doing the same thing in a traditional way so you can compare impacts?

How will you differentiate for different abilities?

How will you manage resources?

How will you measure success?

What else do you need to know?



Remember, action research is not a one route process; be prepared to diverge!

Figure 6.4 Information given to participants in the Action Research cycle for group work roles development

Over the next few weeks, the research group met to consider the potential of group work roles within an effective pedagogy. All participants felt that group work worked better when students had consistently clear roles with a specific purpose. However, whilst some staff were occasionally using the technique of assigning roles, the roles they

were using were different. For example English were using group 'Leaders' whereas PE were using 'Captains' and Expressive Arts 'Directors' with *"other staff using a whole load of other bits of roles and terms"* (English participant). The research group had themselves identified that this was *"confusing for the students - they don't know which roles equate to each other"* (PE participant) and so had taken the initiative to bring together the different roles they felt were needed. During the feedback meeting these different roles were discussed and links started being made between different versions. In addition, the number of roles were discussed as English had seven roles as *"much of our group work is done in larger groups"* (English participant). However feedback from Expressive Arts had indicated that *"ideally groups are around four participants, otherwise students are too easily distracted by each other"* (Expressive Arts participant). At the conclusion of the discussion, six individual roles was established as an ideal number with the recognition that students in smaller groups would be able to do more than one role each or more able students could double up roles to provide challenge.

As well as establishing the different roles, the focus group felt that students needed guidance on the purpose of each role and this was to be largely based around the work of the English faculty where *"group work role sheets which tell students what their role is and some talking tips to help them articulate what they need to say"* (English participant) were already in place. Following this discussion, the research group established associated tasks for the roles which were then revised, for example through clarification of the language used in consideration of SEN and EAL learners; discussion around allocation of specific tasks to particular roles and confirmation around the group work role titles. A final set of descriptors was then established (Table 6.4) with more detailed interpretations available as Appendix 20.

Director	Checker	Creator	Motivator	Recorder	Resource Manager
Lead the project	Check the quality of work and progress	Create resources required like presentations	Encourage others to do their best	Make sure everything is recorded carefully	Keep a track of time and resource use

Table 6.4 Proposed 'job descriptions' for individual roles within group work

The creation of roles represented satisfactory progress within Intervention Cycle 1 and created a strong foundation for the next step of the development processes, trialling the roles with students in preparation for sharing the information with both teachers and teaching assistants. However, these developments were restricted to the research group.

6.4 The development of enquiry learning within Intervention Cycle 1

A number of attributes of enquiry learning meant that delivery of this pedagogy prior to the school move was not possible. Therefore enquiry learning was promoted through development of its constituent parts; collaborative planning, cross-curricular learning and team teaching.

Analysis of the Baseline data around these three pedagogic tools (Table 6.5) showed that whilst all zones showed equal engagement in collaborative planning, and Discovery and Exploration were equally involved in team teaching, the delivery of cross-curricular learning was far greater in the Discovery zone. In addition, the 'Theme days' which demonstrated the greatest cohesion were again those which involved the STEM subjects such as designing, building and racing of a boat and the production of an LED T-shirt, another reason to promote enquiry learning through the Discovery zone.

Have you been ...	Whole school (60)		Discovery (Science, Tech, Maths) (16)		Exploration (Humanities, ICT, Citizenship, MFL) (19)		Expression (English, PE, Arts) (19)		Reflection (SEN / EAL) (4)	
	No.	%	No.	No.	%	%	No.	%	No.	%
Been involved in Collaborative planning	50	82%	13	81%	16	84%	15	79%	3	75%
Delivered any cross-curricular	36	59%	13	81%	7	37%	10	53%	4	100%
Engaged in team teach	21	35%	6	38%	7	37%	4	21%	3	75%

Table 6.5 Baseline results showing teacher engagement with the attributes of enquiry learning. [Teacher BL Q 19, 22 & 26. Respondent numbers in brackets (6 not linked to a specific zone)].

The investment of directed time in collaborative planning as a precursor to enquiry learning meant that a significant number of the staff were involved in this activity at the time of the Baseline data collection (Figure 5.3). However, cross-curricular learning was less commonly experienced by staff and few of the teaching staff had any experience of team teaching (Te RP1 Q8). As a result of these findings it was clear that there were a number of fundamental teacher traits that needed to be developed in order to facilitate these aspects of pedagogy.

To facilitate team learning towards a shared vision (Hargreaves & Shirley, 2009), the whole staff were asked to consider topics which could combine curriculum areas within each zone. A significant amount of collaborative planning time was also provided to start to develop some of these initial enquiry learning ideas in conjunction with a tentative timetabling framework around which enquiry projects could be built. Against this background understanding, the research group was launched using a similar outline to that used for the group work role developments (Figure 6.5). The group were then asked to complete one 'enquiry learning project' with one class in order to explore some of the key factors within enquiry learning.

Based on what you have learnt in the session so far, we want you to think about how you could include an enquiry based learning approach into your lessons. You need to think about teaching students' skills as well as subjects within one year group and one topic.

Between now and next session we need you to design an enquiry based learning activity, deliver it, reflect on it and come prepared to share how it went with the other researchers. At this point, we want you to consider the best way to approach enquiry based learning and then plan a further activity in conjunction with someone else in your zone thereby spreading the learning.

Therefore, we need you to think not only about how to promote enquiry based learning but also what kind of structures could be commonly followed within STEM to establish a 'routine' for this type of learning.

The final stage of this cycle will be to present your findings to the rest of the school with an enquiry based learning template which they can replicate enabling students to share skills more closely.

Figure 6.5 Information shared with participants of the Action Research cycle around the development of enquiry learning

Having been given a period of time to complete this work, the enquiry learning research group was reconvened to consider the success of their enquiry learning practice and to establish the key aspects involved in an enquiry learning project. Participants reported very favourably and positively about the work they had done. Enquiry projects had been trialled with Year 7 in Maths, Year 9 in Science and Year 8 in Technology providing, by coincidence, a good overview of impact across KS3, and had varied in length from three to eight lessons. Participants reported that engagement and enthusiasm by the students had been high with the Technology participant stating that one student who was usually hard to engage in the classroom had *"shown some really imaginative ideas that wouldn't normally fit into the structure of the lesson and so you would see them as a bit of a distraction"*. Participants also commented that, despite some reservations, *"behaviour was good, particularly when they [the students] were told that they were researching something and being pioneers of a kind"* (Science participant).

Feedback around the ability of the students to complete an enquiry project, however, was less positive, as was information about the progress made by students. For example, the Maths participant reported that *"the week I had intended to do this with Year 7 was nowhere near long enough and it took me two in the end to get them to learn*

what they needed to". This was a sentiment echoed by the other two participants one of whom had also had to give extra time and one of whom had had to curtail the enquiry due to the group moving to another subject area. Further investigation into the reasons for a slower pace of learning established that students had the enthusiasm and, in many cases, the skills necessary to complete an enquiry but they lacked the confidence to implement them. *"They (the students) expect everything to be given to them and if you leave it up to them they spend ages thinking about what to do and how to do it because they don't have any strategies to hand"* (Technology participant). The Science participant supported this, reporting that after two lessons they had had to break the remaining three lessons down into tasks to be completed in each lesson in order that the enquiry project was completed.

As a result of these findings, the researcher questioned what would counteract these challenges. Participants reported that students needed much more structure to the enquiries *"even if we take it away after a few projects when they are used to it"* (Maths participant). The participants were then asked to talk through the structure of their project where the following aspects of the projects were seen to be important if they were to be successful:

- A big question in simple language
- Establish what students already knew (and unpicking any misconceptions)
- Support students to break the question down into a series of mini-questions
- Encourage students to use lots of resources and not just 'google it'
- Set clear expectations for work to be completed each lesson
- Build in opportunities for work to be monitored

As a result of these findings, participants felt that a clear common structure was required in order that students reduced the time spent on the innate skills of learning and focused more on the subject being covered. Following this discussion, the researcher took the identified core aspects of enquiry learning and incorporated them into a framework which was circulated to the participants for consideration. A further discussion was then held based around the outline (Figure 6.6). In particular, it was felt that there was not enough steerage towards staff and students considering their prior knowledge and so a

'Brain-dump' aspect was added where students were encouraged to write down everything they already knew about the topic. It was also felt that the assessment needed to incorporate the importance of mid-point checking as established by the trial group. This also allowed the incorporation of the 7Cs which were starting to be shared more widely at this point.

At the end of Intervention Cycle 1, significant work had been completed to create a framework for enquiry learning incorporating the work completed on the 7Cs. This work had not, however, been shared widely with staff.

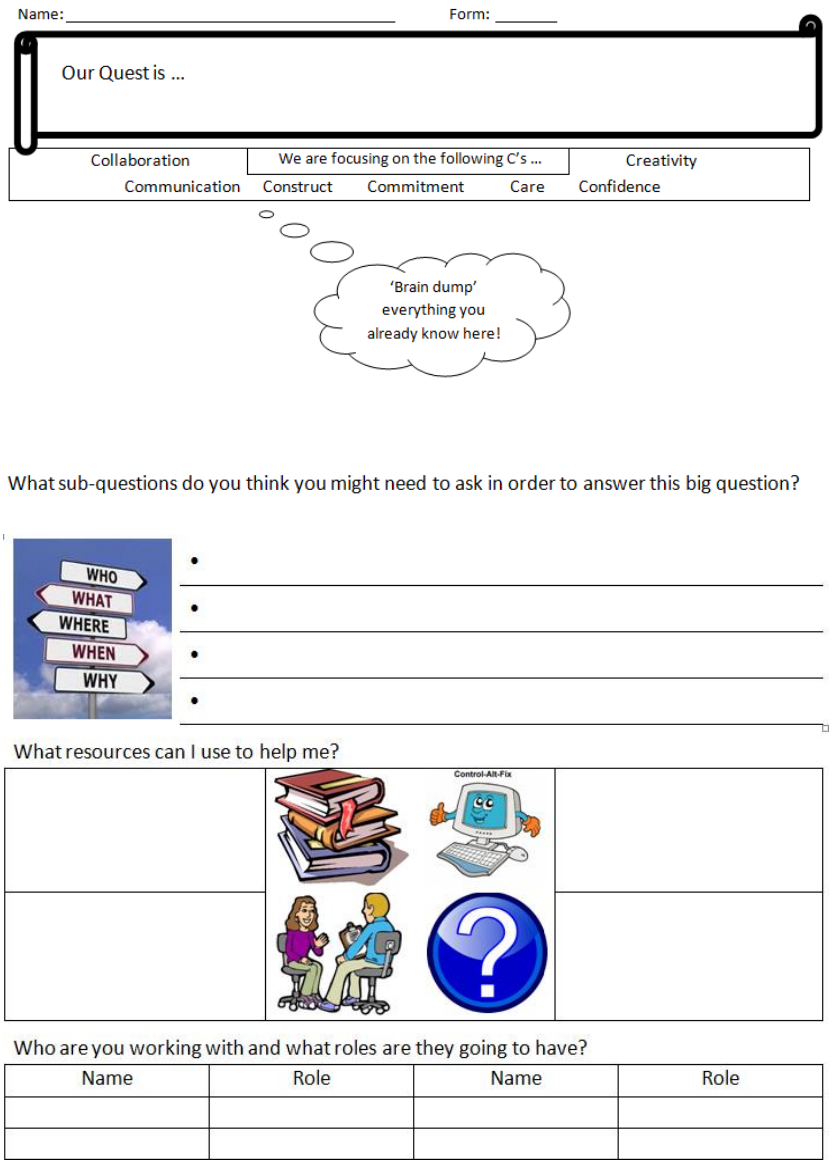


Figure 6.6 Enquiry learning sheet Version 2.

6.5 Review Point 1 (RP1) findings

Information at the end of Intervention Cycle 1 was collected via three on-line questionnaires designed to reflect the Baseline questionnaire and, again, targeted at teachers, TAs and KS3 students. A complete set of data from Review Point 1 can be found as Appendix 21.

6.5.1 Respondent characteristics

The teacher's questionnaire was completed by 52 members of staff; at 58% a lower response rate than the Baseline response rate of 71%. Analysis illustrates that the seniority of respondents and their time working within the study school were broadly comparable to the whole teaching staff makeup (Table 6.6), though there was a slight over-representation of the Exploration zone.

Analysis of the TA results raised a number of concerns; not least that 33 TAs completed the Review Point 1 survey despite only 30 being employed by the study school (Table 6.7). This indicates that either some TAs responded twice, or that some teachers followed the incorrect link from the study school's intranet page. There were also continued discrepancies between the school view of TA zone allocation and TA perception of the areas they worked in. As such, the TA findings should be treated with caution.

The number of students responding to the Review Point 1 questionnaire was significantly greater than those who had completed the Baseline; however, the year groups were more unbalanced with more Year 7 and Year 8 students participating than Year 9 (Table 6.8). Other percentages remained broadly representative of the school's KS3 population.

In summary, teacher and student respondents at Review Point 1 were broadly comparable to the whole school population, however, a skew towards Year 7 and 8 students and Exploration zone teachers should be noted. TA respondent data should be treated with caution.

		Entire teaching staff		Teacher respondents			
				Baseline		Review Point 1	
		Number	%	Number	%	Number	%
I am a member of teaching staff	Within Senior Leadership Team (SLT)	7	8%	7	10%	5	10%
	With a Teaching and Learning Responsibility (TLR's)	45	50%	36	50.5%	29	56%
	Neither of the above (CPS teachers)	37	42%	26	36.5%	17	33%
	Skipped question			2	3%	1	1%
	TOTALS	89		71	80%	52	58%
I am attached to the following zone	Discovery (Science, Technology & Math)	26	29%	16	23%	14	27%
	Exploration (Humanities, Citizenship, MFL & ICT)	27	30.5%	24	34%	17	32.5%
	Expression (English, PE, Expressive Arts)	29	33.5%	22	31%	16	30.5%
	Reflection (SEN & EAL)	7	8%	6	8%	5	10%
	Skipped			3	4%	0	
	TOTALS	89		71		52	
I have worked within education for ...	0-5 years	28	31%	18	25%	8	15%
	6-10 years	29	33%	20	28%	13	25%
	11-20 years	16	18%	16	23%	18	35%
	Over 20 years	16	18%	17	24%	12	23%
	Skipped			0		1	2%
	TOTALS	89		71		52	

Table 6.6(i) Teacher respondent characteristics compared to the characteristics of the whole teaching staff and the Baseline data. [Teacher RP1 Q1, 2 & 3. Respondent numbers in table].

		Entire teaching staff		Teacher respondents Baseline		Teacher respondents Review Point 1	
		Number	%	Number	%	Number	%
I have worked at the study school for ...	0-5 years	41	46%	34	48%	21	40%
	6-10 years	25	28%	16	22.5%	12	23%
	11-20 years	18	20%	16	22.5%	15	29%
	Over 20 years	5	6%	4	6%	4	8%
	Skipped			1	1%	0	
	TOTALS	89		71		52	

Table 6.6(ii) Teacher respondent characteristics compared to the characteristics of the whole teaching staff and the Baseline data. [Teacher RP1 Q4. Respondent numbers in table].

		TAs in school		TA respondents Baseline		TA respondents Review Point 1	
		Number	%	Number	%	Number	%
Most lessons I support are in the following zone	Discovery (Science, Technology & Math)	1	3%	7	25%	9	26%
	Exploration (Humanities, Citizenship, MFL & ICT)	1	3%	1	4%	3	9%
	Expression (English, PE, Expressive Arts)	2	7%	4	14%	4	12%
	Work within various zones	26	87%	16	57%	17	50%
	Skipped					1	3%
	TOTALS	30		28	93%	34	113%

Table 6.7 TA respondent perceived zone attachment compared to the study school zone attachment and the Baseline data.

[TA RP1 Q3. Respondent numbers in table].

		Students attending KS3		Student respondents Baseline		Student respondents Review Point 1	
		Number	%	Number	%	Number	%
What year are you in?	Year 7	238	33%	92	38%	155	41%
	Year 8	240	33.5%	74	31%	163	43%
	Year 9	240	33.5%	75	31%	60	16%
	Skipped			0			
	TOTALS	718		241	34%	378	53%
Are you …	Male	406	57%	128	53%	226	60%
	Female	312	43%	109	45%	152	40%
	Skipped			4	2%	1	≈0%
				241			
Are you on the SEN register? (Special Educational Needs). **Answer 'Yes' & 'don't know'.**		198	27%	64	24%	111	29%
Do you usually speak English at home? **Answer 'No'**		86	12%	38	16%	46	12%

Table 6.8 Student respondent characteristics compared to the characteristics of the KS3 population and the Baseline data.

[Student RP1 Q1, 2, 3 & 4. Respondent numbers in table].

6.6 Progress of transferable learning assessed at Review Point 1

At the end of Intervention Cycle 1, the 7Cs had been developed by a research group initially comprising twelve teachers and further expanded to twenty members of staff (Koshy, 2005). In addition, just prior to Review Point 1, the concept had been introduced to the whole teaching staff who had been invited to start using this pedagogic tool. Review Point 1 data, therefore, indicated that awareness of the 7Cs was high with only two teacher respondents being unaware of this development (Teacher RP1 Q25). 14 out of 51 of teacher respondents considered themselves to have been directly involved in the development of the 7Cs, spread across all three main zones (Figure 6.7). However, Exploration zone showed far greater involvement possibly as it contained four faculties comprising seven subjects and so in order to ensure full subject coverage, more staff from this zone were included in developing the 7Cs. More SLT members and TLR holders were also involved in the 7C development due to their greater experience and availability of directed time causing them to be over-represented in the selection process.

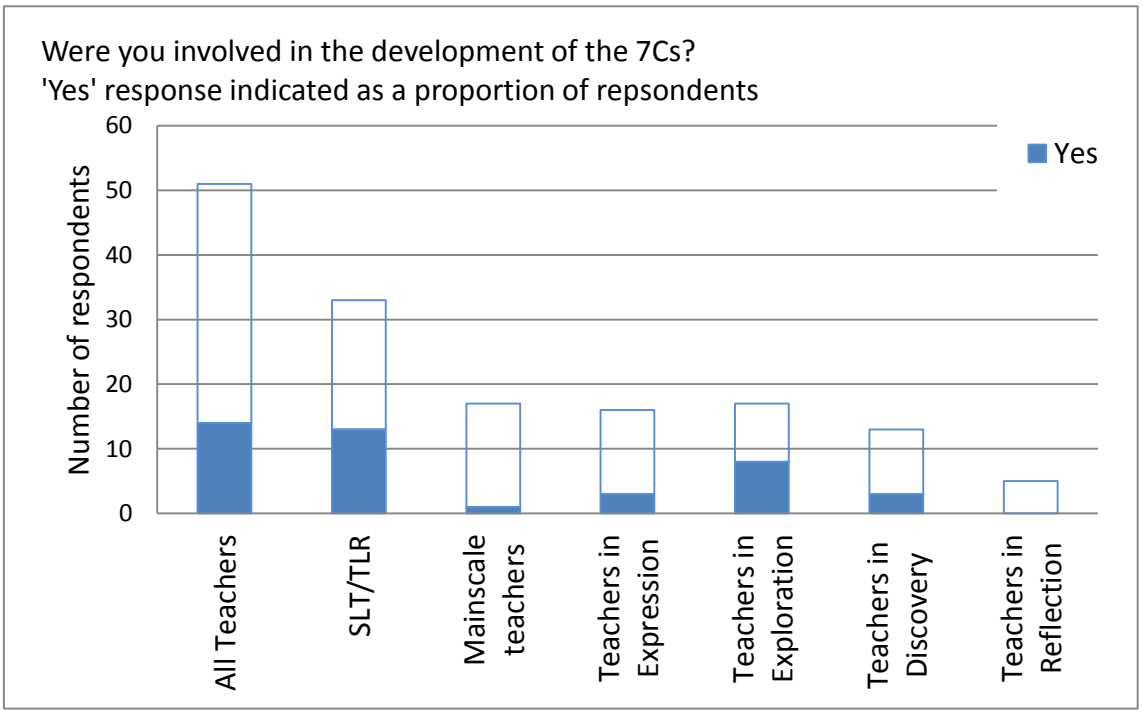


Figure 6.7 Graph to show percentage of teacher respondents involved in the development of the 7Cs. [Teacher RP1 Q21. 51 respondents].

39 of 49 teachers, spread across all zones, had made some use of the 7Cs in lessons at the end of Intervention Cycle 1 (Figure 6.8) illustrating well the organic growth of the initiative beyond teachers directly involved in development and leading to a 58% student respondent awareness (Student RP1 Q25). Use of the 7Cs was primarily as learning objectives, to identify learning skills students were gaining through completing subject tasks and to help articulate tasks (Teacher RP1 Q24). Where teachers had made less use of the pedagogic tool, time constraints were cited as the major limitation (Teacher RP1 Q25), though there were also some concerns over the complexity of the strategy.

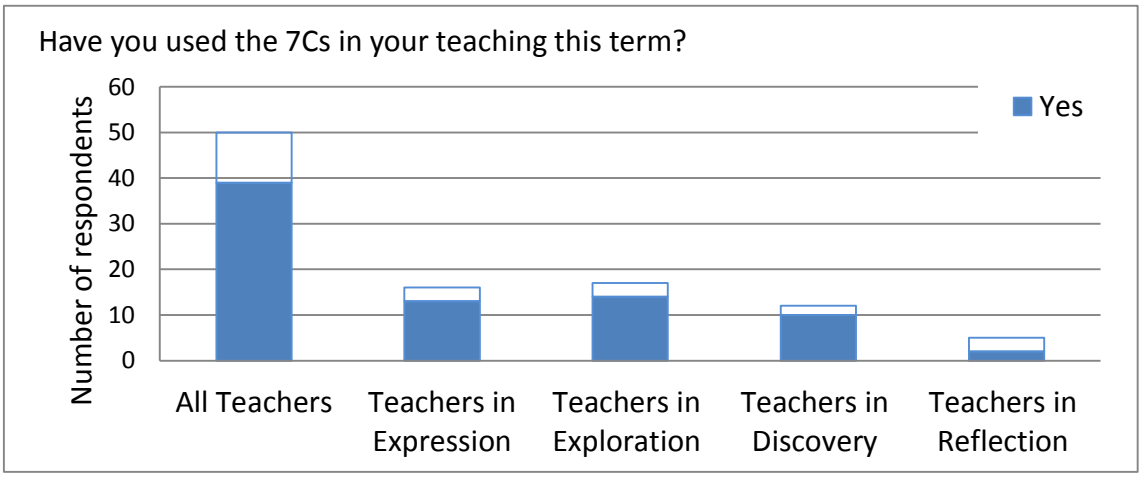


Figure 6.8 Graph to show the number of teachers using the 7Cs in their teaching analysed by zone against respondent numbers. [Teacher RP1 Q23. 49 respondents].

Respondents were also asked to indicate how successful they felt this strategy would be in supporting students to transfer learning across curriculum areas. Here, 38 out of 48 teacher respondents felt the 7Cs would be of some support to learning (Table 6.9), as exemplified by comments from the research group feedback session:

- *"Using the Collaboration 'C' has really enhanced group work"*
- *"Creativity has been really useful in getting students to connect their learning across different areas of the subject"*
- *"Confidence, Creativity, Construct and Communication have been quite easy to apply during practical lessons"*

As well as practical ideas for application:

- *"I've added a 'C' focus alongside my Lesson Objectives"*
- *"I intend to display them like this; Today's C is..."*

In addition, other quotes highlighted areas where usage needed to be more flexible, for example:

"*Care and commitment have been hard to use as objectives – they can be recognised as and when they occur"*

Do you think the 7Cs will help student learn?	All Teachers	SLT / TLR	Main scale	Expression	Exploration	Discovery	Reflection
Total respondents	48	32	15	14	17	11	5
Yes - all students	30	21	8	13	10	5	2
More Able students only	7	2	5	0	2	2	2
Less Able students only	1	0	1	1	1	0	0
No students	10	9	1	0	4	4	1

*Table 6.9 Teacher responses indicating whether the 7Cs will help student learn, analysed by seniority and zone attachment. [*Teacher RP1 Q22. *48 respondents].*

7 predominantly main scale teachers, however, believed the strategy would only support more able students. In addition, 9 senior staff, felt that the strategy was not useful to any students; a concern as these are significant 'change agents' during implementation of initiatives (Fullan, 1993). This would support the conclusion that a deeper team learning around the initiative was needed by all staff (Senge, 2012) if the possibilities were to be fully realised.

65% of students who were aware of the 7Cs believed they would be useful (Figure 6.13); particularly with younger students. However, again the significant number of students who couldn't appreciate the potential impact of this innovation indicated that developments were still needed.

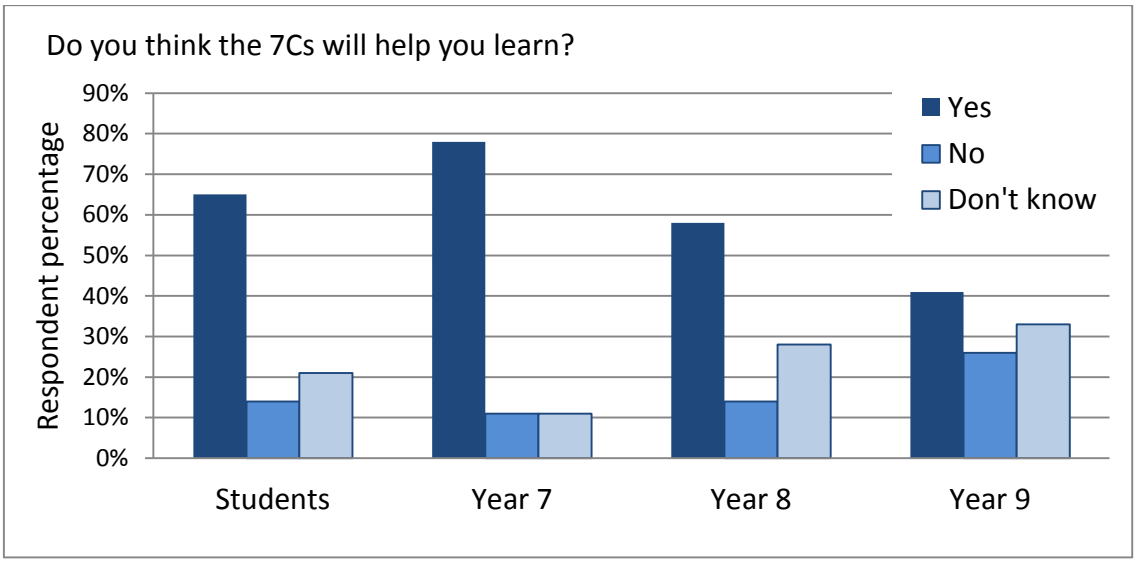


Figure 6.9 Student percentage responses indicating whether they believe the 7Cs will help them learn analysed by year group. [Student RP1 Q18 . 201 respondents].

In summary, therefore, transferable learning, through use of the 7Cs, had made significant progress towards becoming the desirable aspect of pedagogy that teachers wanted to see included in learning in the new school. A pedagogic tool personalised to the study school had been developed and shared with teachers as a result of which teacher usage had risen from the Baseline data collection point, though there were inconsistencies around this usage. However, perhaps in reflection of the lower confidence levels associated with transferable learning within the Baseline data collection, barriers to its implementation remained. Significant numbers of teachers were concerned that the tool would not support less-able or, in some cases, any learners. This may be partly due to a lower level of mastery amongst teachers not directly engaged with its development (Senge, 2012) or a reflection of the lack of confidence (Facer, 2011) and therefore perhaps experience of delivering such learning. Either way, it was an issue potentially exacerbated by a perception of over-complexity amongst a significant number of respondents. Student's awareness was also low, which, coupled with the Baseline findings suggested a lack of student vision of this attribute of learning (Fullan, 1993), again indicated an area requiring addressing.

Therefore, the next Intervention Cycle needed to address these areas by focusing on sharing good practice around 7C usage so that more teachers could visualise and

hopefully then realise the benefits for students (Senge, 2012). The continuation of an organic growth of the 7Cs, coupled with more refinement into subject areas, were ideas to be explored here, as were clear actions (Koshy, 1991) to reduce the complexity of the strategy to hopefully facilitate greater confidence around usage. Finally, promoting student awareness would be another focus in order that teachers would benefit from the enthusiasm, and pressure, that students could bring to the use of 7Cs in lessons (Hargreaves & Shirley, 2009).

6.7 Progress of group work roles assessed at Review Point 1

The Baseline data had indicated that utilisation of group work was reasonably high; teachers were confident to use the pedagogy and its expansion was a highly desirable feature within the teaching and learning vision for the new building. However, whilst work around the development of group work roles had been completed by the research group, there was only limited awareness of these developments amongst the whole staff (Figure 6.10). Consequently, group work roles were not explored during Review Point 1 with questions around pedagogy in general recording a slight decrease in group work generally possibly due to the fact that teachers were aware that developments were being made in this area and were, therefore, waiting for the results of these.

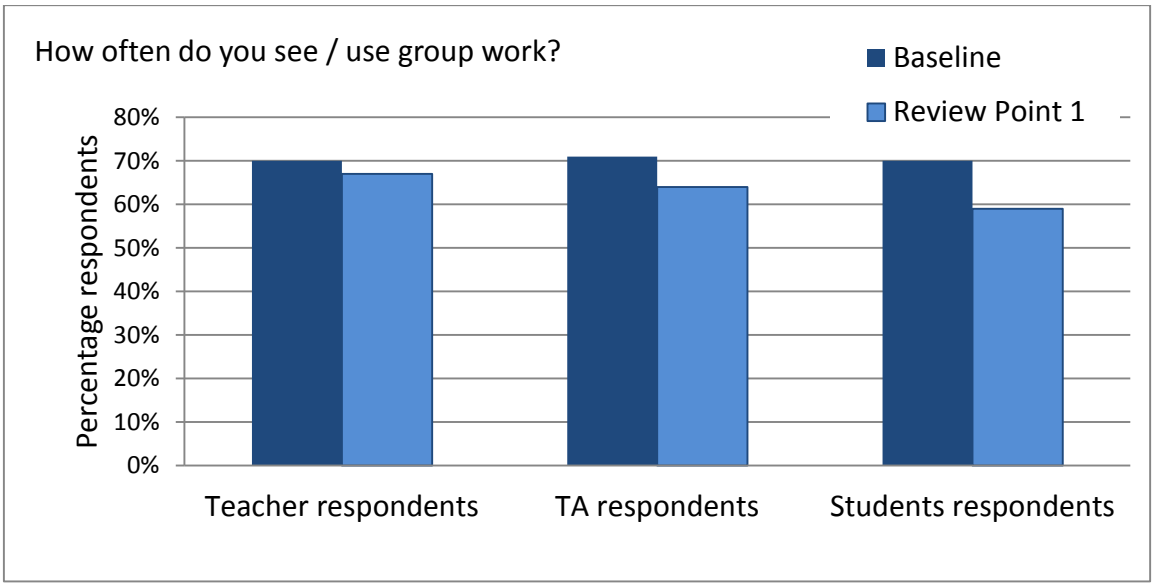


Figure 6.10 Graph to show the incidences of group work at Baseline and Review Point 1 data collection. [Teacher BL Q31 (60), RP1 Q26 (48) / TA BL Q24 (21), RP1 Q14 (28) / Student BL Q24 (214), RP1 Q19 (316). Respondent numbers in brackets].

6.8 Progress of enquiry learning assessed at Review Point 1

The Baseline data incorporated the state of enquiry learning *per se* as well as its identified constituent parts; collaborative planning, cross-curricular learning and team teaching. These findings indicated that only 39% of teachers used enquiry learning regularly within their lessons with only 11% indicating that they felt very confident to do so. In addition, whilst collaborative planning was common it was still very much faculty focused and cross-curricular learning was largely constrained to the Discovery zone subjects. Therefore, there were significant gains to be made in these areas.

Of most importance within this innovation needed to be a shared vision around the pedagogy, hence, references to enquiry learning were a frequent feature of staff meetings and training. It was also the driving force behind the provision of collaborative planning time to allow the drafting of enquiry projects to begin in earnest. In addition, more specific exploration around the enquiry learning concept was completed with the

three members of the Discovery zone research group. From this work, a commonly formatted resource for enquiry learning was produced (Knoster, 1991); however, this development had not been widely shared.

Teachers reported an increase in their involvement in collaborative planning by Review Point 1 (Table 6.10), within which, there was a decrease in collaborative planning within faculties and an increase in work done across zones. This was a very pleasing shift driven by the frequent references to the shared vision of enquiry projects combining learning across zones and indicated that the strategy of consistently sharing the big picture for learning was generating positive results. It was also a reflection of resourcing change through the provision of a number of hours of time in the school day to facilitate this work (Knoster, 1991). That many TAs were not contracted to work these hours is similarly the reason behind reduced stakeholder inclusion (Hargreaves & Shirley, 2009) (TA BL Q19, RP1 Q6). The increased clarity of vision was also potentially the driving force behind an increasing focus on the development of schemes of work and small projects rather than individual lessons or assessments; indicating that a switch to a more cohesive, self-sustaining longer term approach to cross-curricular learning was occurring (Fullan, 1993).

Delivery of cross-curricular learning had remained relatively stable at around 50% (Teacher BL Q22, RP1 Q11). However, where previous delivery had been dominated by lower year groups and the Discovery zone, delivery at Review Point 1 was far more equally balanced. This was again pleasing as it indicated a greater willingness to link learning across zone based enquiry projects. That there was also an increased percentage of delivery which lasted more than 4 lessons (Teacher BL Q25, RP1 Q14), again potentially indicated that teachers were more engaged with the shared vision for a connected zone-wide curriculum (Senge, 2012).

Have you done any collaborative planning in the last term?	Situation at Baseline (61)		Situation at Review Point 1 (51)	
	Number	%	Number	%
Involvement in collaborative planning (calculated from total respondents)	50	82%	47	92%
Involvement in collaborative planning within own faculty	36	59%	11	22%
Involvement in collaborative planning within own zone	4	7%	31	61%
Involvement in collaboratively planning schemes of work	18	30%	25	49%
Involvement in collaboratively planning small projects	13	21%	20	39%
Involvement in collaboratively planning individual lessons	33	54%	20	39%
Involvement in collaboratively planning assessments	16	26%	6	12%

*Table 6.10 Teacher involvement in collaborative planning. [*Teacher BL Q19 / RP1 Q8. *Respondent numbers in brackets].*

Student experience is interestingly in contrast to teaching staff experience with a marked increase in exposure to cross-curricular learning between the Baseline and Review Point 1, especially in the lower year groups considered to be the core audience of enquiry learning (Table 6.8). This possibly indicates a sub-conscious increase in the identification of cross-curricular links by teachers as they continually reflected on their own pedagogy (Hargreaves & Shirley, 2009).

Have you experienced any cross-curricular learning in the last term (excluding theme days)?	Situation at Baseline (241)		Situation at Review Point 1 (379)	
	Number	%	Number	%
Yes	79	33%	246	65%
Year 7 respondents	31	39%	105	43%
Year 8 respondents	25	32%	105	43%
Year 9 respondents	23	29%	35	14%

Table 6.11 Student exposure to cross-curricular learning at the Baseline and Review Point 1 data collection. [Student BL Q8, RP1 Q9. Respondent numbers in brackets].

Teacher engagement in team teaching had also decreased by Review Point 1 (BL Q28, RP1 Q18) to only 9 positive indications. Within these, 7 respondents were timetabled to be in the lesson so there was a significant fall in teachers choosing to spend time working with other colleagues in the classroom. This was possibly due to the loss of theme days, despite requests to exclude consideration of this from the Baseline responses, though may also be explained by some departing staff not being replaced due to financial constraints and hence reduced resources within the timetable (Knoster, 1991). Student responses, however, did not support these findings with the percentage of students experiencing team teaching remaining broadly stable though there was again a trend to increased engagement with younger year groups (Table 6.12). Either way, the lack of growth here indicated that teachers lacked the 'reward' necessary to invest time working hands-on with others (Whitehead, 2008) and so strategies to encourage this would be a vital consideration in Intervention Cycle 2.

Have you had any lessons with more than one teacher in them?	Situation at Baseline (228)		Situation at Review Point 1 (358)	
	Number	%	Number	%
Yes	94	41%	155	43%
Year 7 respondents	50	53%	70	45%
Year 8 respondents	23	25%	66	43%
Year 9 respondents	21	22%	19	12%

Table 6.12 Student exposure to team teaching at the Baseline and Review Point 1 data collection. [Student RP1 Q12. Respondent numbers in brackets].

In summary, the facets of enquiry learning being monitored showed largely pleasing changes. Collaborative planning showed significant increases overall but more pleasing was the shift towards planning longer term projects across subjects within zones in line with the vision for enquiry learning (Senge, 2012). Cross-curricular learning showed stability of teacher delivery. However, an equalising of engagement across the zones was a very positive step (Fidler, 1996). In addition, student responses indicated a significant increase implying that potentially a sub-conscious reference to cross-curricular links during lessons could be increasing. That there was a decrease in the use of team teaching during this time due to resourcing (Knoster, 1991) was a small set-back within this development, however.

Reflecting on these findings, the next step required a focus on the sharing of the enquiry learning format in order that collaborative planning and cross-curricular links could be developed within a framework for realisation rather than as an abstract concept. Clearly, the facilitation of team teaching would also be considered an area to improve though with constraints such as timetabling and finance this would be a harder area to manipulate; however, the loss of Y11 students after final exams had the potential to create some opportunities for experimentation.

6.9 Overview of the progress made in Intervention Cycle 1

Overall, the progress made during Intervention Cycle 1 can be seen to be encouraging despite much of it being slow and steady in pace. Transferable learning was seeing extensive use, albeit in limited ways. However, concerns around its applicability to less-able students required addressing as did the potential for the concept to become over-complex. Group work continued to be a well-used pedagogy, though innovation in this area had not yet been shared creating an ideal launch pad for further development within Intervention Cycle 2.

The development of enquiry learning continued to be the most complex innovation due to the restrictions on realising it as a whole. However, developments within 2 of the constituent parts were very pleasing. Collaborative planning had increased particularly around longer-term projects developed across zones and had potentially been a contributor to the parallel increase in student perceptions of cross-curricular links. The combined development of these two areas also gave a strong foundation onto which to launch the finalised enquiry learning proforma within which collaborative planning could find a stronger framework. That team teaching showed some decrease amongst teacher respondents is a little disappointing; however, considering the financial pressures effecting staffing, perhaps unsurprising.

6.10 Implication of the findings from Review Point 1 for the research questions

Whilst the first and third research questions focus on the effects and effectiveness of learning spaces and remain beyond the scope of this Intervention Cycle, the second, that of the effective innovation of pedagogy, can be in part considered through a reflection of these findings to inform the next cycle (Sagor, 2005). The literature would indicate that there are a number of aspects to successful innovation: change agents, personal mastery, collaboration, shared vision, reflective feedback, a strategic journey and self-

sustaining change (Table 2.2). Therefore the actions completed within Intervention Cycle 1 should be reflective of the framework (MacIntyre, 2000).

The development of transferable learning can be seen to be the most inclusive innovative process with respect to these aspects. The initial focus group is an example of collaborating change agents (Fullan, 1993) led by an individual demonstrating personal mastery (Senge, 2012). In addition, the inclusion of all staff in this development helped ensure that there was a shared vision (Hargreaves & Shirley, 2009) and the chance of a self-sustaining change through the promotion of organic growth (Fullan, 1993). It should therefore be unsurprising that such significant progress within this area had been achieved in Intervention Cycle 1.

Other aspects of pedagogy showed much lower levels of progress and, generally, had styles of innovation less inclusive of all the key ingredients for success. The innovation of group work roles again saw the identification of key change agents (Fullan, 1993) operating strategically towards a shared vision (Hargreaves & Shirley, 2009); however, this innovation lacked the whole school engagement of transferable learning and so this remained an area for subsequent improvement.

Similarly low levels of innovation methodology were also evidenced within the development of the resources to support enquiry learning which was also poised for further development in the subsequent cycle. However, the contributing factors within enquiry learning were progressing more positively, potentially through the benefits of being part of a strategic journey (Fullan, 1993) towards a shared vision (Hargreaves &S Shirley, 2009), though this vision was perhaps less clear than for transferable learning, being a more abstract concept at this point. That these changes were also being targeted at all staff simultaneously also removed the facilitation of change agents or personal mastery. However, that such aspects were being analysed and driven by data collection did demonstrate, as with all the other innovations discussed, significant aspects of reflective feedback (Fidler, 1996).

In conclusion, where the elements of successful innovation were being included, innovation was progressing more effectively. The challenge, therefore, was to introduce these elements into the innovation of all the pedagogic aspects.

Chapter 7 Intervention Cycle 2

Reflections upon Review Point 1 indicated that, within the overall framework the three commenced pedagogic innovations were at different stages of development with one innovation, that of empowering learners, still requiring initiation in order to promote a gradual rate of change (MacIntyre, 2000). Transferable learning required expansion of its potential applications in order further to increase teacher and student engagement and promote its applicability to learners of all abilities (Anderson *et al*, 2009). In addition, group work continued to be an established pedagogy ready for the application of roles developed within Intervention Cycle 1 by a research group. The greatest challenge, however, involved the synergy of the different aspects of enquiry learning, facilitated by promotion of the designed proforma, into a cohesive pedagogy which could then be shared with teachers, TAs and students in its entirety (Groundwater-Smith, 2013).

7.1 The position of the Intervention Cycle 2

The second Intervention Cycle occurred across the spring and summer terms at the end of the second academic year of the study (Figure 7.1). By the end of Intervention Cycle 2 the move to the new school would be imminent so pragmatically, the practicalities of the move would be all-encompassing. Therefore, Intervention Cycle 2 was seen as crucial in preparing to fully realise the innovations.

		Transferable learning (7Cs)	Group work roles	Empowered learners	Enquiry learning
	Summer Academic year 1	Baseline data collection (Chapter 5)			
Action Research Cycle 1	(Chapter 6)	Intervention Cycle 1	Intervention Cycle 1		Intervention Cycle 1
	Autumn Academic year 2	Review Point 1 data collection (Chapter 6) Reflection Influence			
Action Research Cycle 2	(Chapter 7)	Intervention Cycle 2	Intervention Cycle 2	Intervention Cycle 1	Intervention Cycle 2
	Summer Academic year 2	Review Point 2 data collection (Chapter 7) Reflection Influence			
Action Research Cycle 3	October	Move to new build			
	(Chapter 8)	Intervention Cycle 3	Intervention Cycle 3	Intervention Cycle 2	Intervention Cycle 3
	Easter Academic year 3	Repeated Baseline (Finalline) data collection (Chapter 8)			

Figure 7.1 The research plan showing the position of Intervention Cycle 2

7.2 Strategic whole school interventions occurring in Intervention Cycle 2

During Intervention Cycle 1, each innovation was developed as a separate entity creating an incomplete awareness of the cohesive vision; a fact potentially reflected in the different teaching and learning priorities identified by the three groups within their vision for learning in the new school (Table 5.7). As a response to this, and in order to promote the 'collaboration' and 'shared journey' recognised as key aspects of successful innovation (Fullan, 1993), whilst also promoting a holistic involvement in the Action Research process (Mills, 2011), the refined 'strategic vision' (Senge, 2012) for teaching and learning in the new school was shared (Figure 7.2).

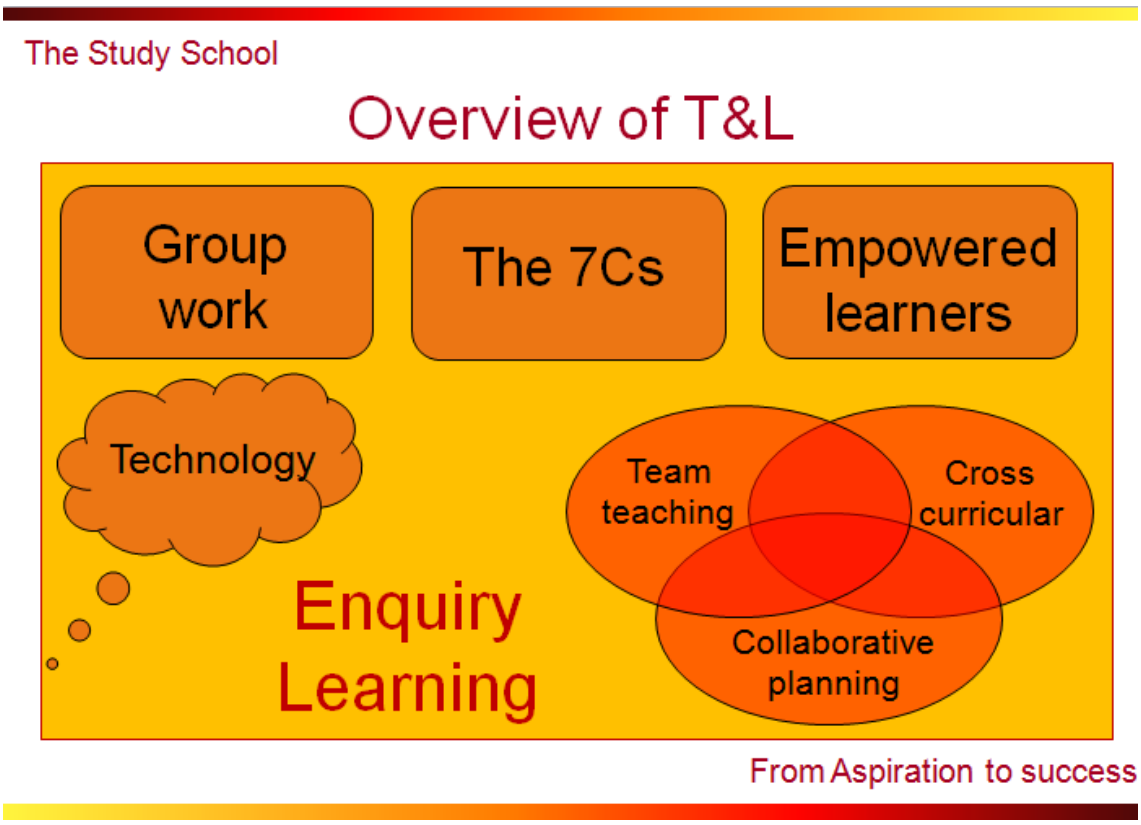


Figure 7.2 The vision for teaching and learning shared with all staff at the start of Intervention Cycle 2.

This vision identified how the previously disparate developments of group work roles and the 7Cs, along with the upcoming development of empowered learners, came together as core aspects of the enquiry learning framework. It was also felt that re-

engaging staff in an innovation process that was, by necessity, taking a substantial period of time was also important if momentum was to be maintained (Sagor, 2005).

7.3 The development of transferable learning (the 7Cs) within Intervention Cycle 2.

The purpose of transferable learning was to support students to carry knowledge and skills across subjects in order to maximise subject learning; a reflection of the 'learning to learn' principle placed at the core of the Personalised Learning vision (DCFS, 2008). At Review Point 1, all bar two teachers were aware of the 7Cs and 80% had made use of them in lessons to some extent (Figure 6.8). TAs also had high awareness of this tool; however, only 58% of students demonstrated awareness. Support for the concept of the 7Cs was also variable as, whilst the potential of the 7Cs to support the learning of all students was well acknowledged by those teachers who had been involved in the development of the concepts, recognition of this potential was less well established within the staff as a whole. In reflection of these findings, Intervention Cycle 2 needed to:

- raise staff awareness of the pedagogic tool and its application to supporting learning for all students; in particular to counteract the perception that the 7Cs had less application to less able learners and were potentially over complex
- utilise the pedagogic tool more extensively amongst students in KS3 through training staff to become more confident and generative users of the 7Cs

The work to grow the 7Cs organically continued building on the model used in Intervention Cycle 1 (Koshy, 2005) with all the teachers with whom the 7Cs had been initially shared again asked to work with another member of staff. Once one other staff member was introduced to the 7Cs then they in turn worked with someone else to ensure that growth was perpetual leading to almost complete coverage by the end of Intervention Cycle 2 (Fidler, 1996).

In addition to this organic growth of awareness, the 7C TLR group started to further expand this initiative through examining the possibility of rewarding students for demonstrating these skills. However, Review Point 1 findings had indicated some concerns over the complexity of this initiative, therefore, this development was perceived to make staff less inclined to use transferable skills and threatened the momentum of growth. As a consequence the concept of rewarding the 7Cs was side-lined during this Intervention Cycle.

Instead the TLR group focused on increasing the engagement of students with the 7Cs by creating an identity for each skill. Working with Gifted and Talented Design students in Years 7 and 8, each of the 7Cs was turned into a character associated with the seven colours of the rainbow (Figure 7.3), both representing the diversity of the study school and ensuring they were eye-catching and engaging. In addition, the colour associations and characters provided vital accessibility for less able students and those for whom English was an additional language.

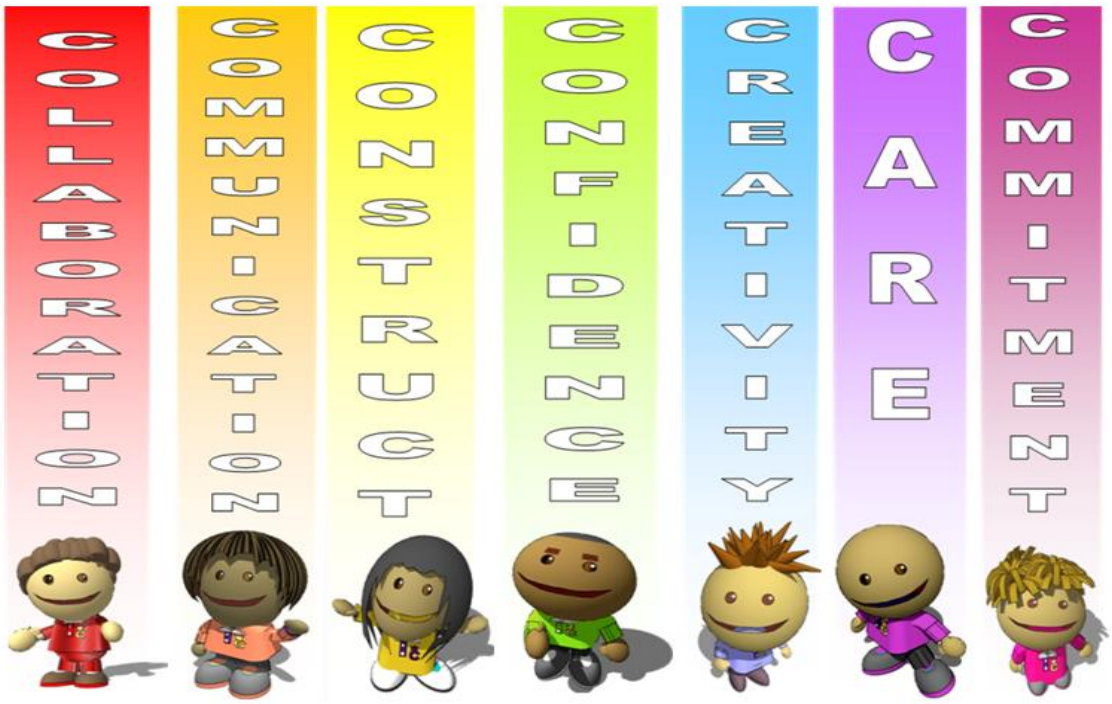


Figure 7.3 The 7C characters

The characters were introduced to all teaching staff at a whole school training event which occurred late in Intervention Cycle 2 following which a number of teachers put

printed versions into learning spaces as well as using the characters to reinforce learning objectives. Requests were also made for 7C characters to be adapted to support other initiatives across the college such as literacy (Figure 7.4).

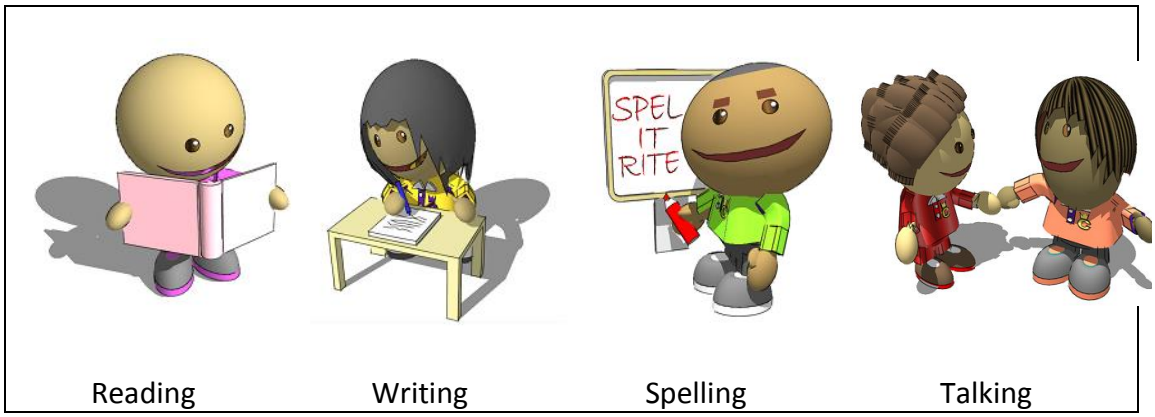


Figure 7.4 Literacy adaptations of the 7Cs

By the end of Intervention Cycle 2 it was hoped the 7Cs would have seen a significant increase in teacher awareness through the organic sharing building on the successes within Intervention Cycle 1. The greater teacher awareness of the 7Cs was hoped to also have developed greater TA and student awareness throughout this time period as a result of their experimental use within lessons. Of course, awareness is not the same as effective usage and there were, at this point in the development, no specific expectations around the use of the 7Cs. This was an area that would require further focus within Intervention Cycle 3 if this tool was to become an established and embedded aspect of teaching and learning.

7.4 The development of group work roles within Intervention Cycle 2

At the start of Intervention Cycle 2, the six group work roles had been developed and trialled within the research group, although wider sharing of these developments had not occurred. In addition, findings from Review Point 1 had demonstrated a slight decrease in the usage of group work since the Baseline data collection (Figure 6.10) and

so a reinvigoration of this pedagogy generally was necessary (Sagor, 2005) if the group spaces visioned within Building Bulletin 95 were to be effectively utilised (DfES, 2002).

In responses to these findings, the research group met again early in Intervention Cycle 2 to consider strategies to promote the use of group work roles. The group felt very strongly that the strategy needed *"to be easy to use as otherwise it will be too easy for staff not to bother"* (PE participant). They also believed that presenting the strategy at the start of a whole staff training was *"a bit lecturey and then people switch off from listening. It needs to be more personal than that"* (English participant). Consequently, the group decided that the roles should be shared during a zone based session to promote most staff engagement. Once this sharing had happened early in Intervention Cycle 2, the research group met again to discuss how well the introduction had gone. Feedback indicated that staff were reasonably happy with the idea of group work roles but were concerned about how well students would be able to engage with it if it remained in the abstract. As a result, it was decided to create group role cards outlining the specifics of each role, the associated talking tips and a link to the 7C characters (Figure 7.5) though these cards were still in development at the end of Intervention Cycle 2.

Director Confidence; Collaboration; Communication Talking tips "xxx, what do you think?" "Thanks for the idea but it's not connected to the task because ..." "xxx, have you got any ideas that would help ...?" "I'm going to help you with ... because ..."	• You must make sure that every voice is heard • Ensure that people in your group are doing jobs that are focused in the learning task • Organise/direct members of your group • Make sure that everything runs 'smoothly' • Be prepared to step into a role if someone in your group is absent or not fulfilling their role • Request help from the teacher when group members agree that they do not have the resources to solve a problem

Figure 7.5 Content of the Director role card

7.5 The development of empowered learners within Intervention Cycle 2

Due to time constraints, and a desire to not overload staff with new concepts, the promotion of empowered learners had not been addressed during the first Intervention Cycle. Within the school vision for learning, the creation of students with strong cognitive habits who could take advantage of an anytime, anywhere approach to learning (Study School, 2008) and to find solutions to their own learning barriers were key in promoting personalisation (Department for Children, Schools and Families (DCFS), 2009).

This pedagogy was also developed with a small research group representing the remaining zone of Exploration. Here the inclusion of Humanities and Citizenship promoted students' ability to make evidence based decisions and formulate considered opinions on a wide range of social issues provided a strong basis for the development of empowerment. Pragmatically, it was also important that every area of the study school was involved in pedagogic innovation if they were to fully engage in the implementation of the suite of developments (Fidler, 1996).

Again, the work of the research group was based around a reflective, generative process (McNiff & Whitehead, 2002), however, as the study school did not wish to reinvent the wheel, two approaches used in other schools were considered;

- the C3B4ME ('See 3 before me') concept which encouraged students to explore 3 other possible areas of support before requesting help from their teacher which had been introduced to the school via a number of subject networks including Design and Languages
- a numbered list of specific help strategies placed on walls

However, these ideas required a simplification of the language to ensure all students could access them, whilst the numbered approach was also removed so that students felt more willing to select the most pertinent strategy, rather than feeling constrained to use them in order (Figure 7.6).

C3B4ME

You need to try at least 3 of these ideas before you ask an adult for help with your work. They are in no particular order.

✓ Rewrite the problem in your own words so you are clear about what to do ✓

✓ Look back at your exercise books and any other notes you have to help you ✓

✓ Ask someone you are sitting near or discuss your thoughts with them ✓

✓ Underline the Key words in the question and any subject words which help you understand what you need to do ✓

✓ Think of a specific question to ask your teacher ✓

Figure 7.6 Initial statements devised to encourage empowered learning amongst students

The proposed language was also shared with a group of students who made some refinements including rewriting the initial final point from "Think of a specific question to ask your teacher" to "Think of a question to ask a member of staff that is not 'I can't do it' or 'I don't get it'". The ideas were also incorporated into a branded poster in keeping with the presentation of the other innovations (Figure 7.7).

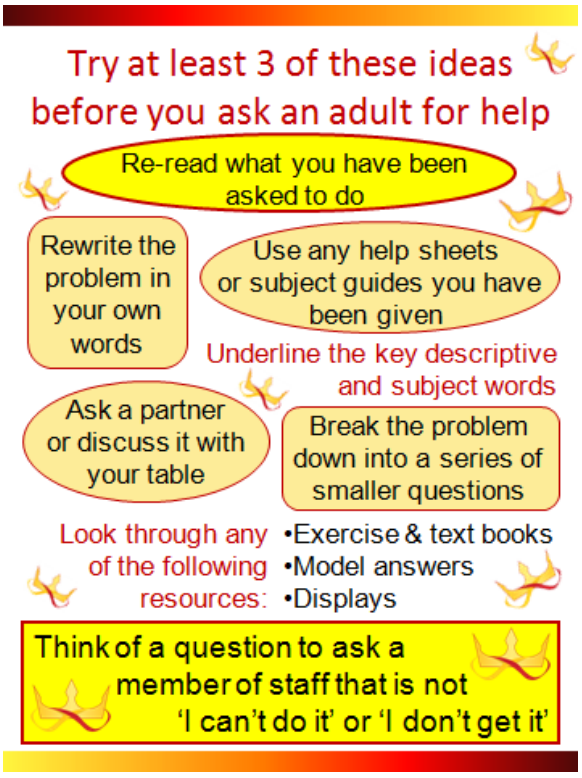


Figure 7.7 Poster of ideas to promote empowered learning amongst students

The research group also felt that this concept lacked a visual title to promote these ideas from which the 'C3B4ME' number-plate was developed as an instantly recognisable logo (Figure 7.8).

Figure 7.8 'C3B4ME' number plate

Therefore, by the end of Intervention Cycle 2 the final pedagogic strand had been developed by the research group, however, it had yet to be formally shared with teachers or students. Despite this, awareness of the strategy through subject networks meant it was already visible in some areas, albeit in an unrefined way.

7.6 The development of enquiry learning within Intervention Cycle 2

As the move to the new building became increasingly imminent, the main focus continued to be around the development of enquiry learning as a synergy of the aforementioned initiatives as well as collaborative planning, cross-curricular learning and team teaching (Figure 3.3). Also, the collaborative planning required to make enquiries cross-curricular necessitated the creation of far more structured planning time than was true of the other initiatives which, ultimately, were based more on the work of teachers independently. In addition, analysis of the progress made at the end of Intervention Cycle 1 had indicated that whilst engagement in collaborative planning was high and had significantly increased as a cross-zone activity (Table 6.8), occurrence of planned cross-curricular learning had remained stable and team teaching had decreased. Hence, whilst attention on maintaining the theoretical planning required within cross-zone projects was essential, the development of teachers' skills in these

contributing areas was also a vital element (Miliband, 2006). The proforma upon which enquiry learning would be presented to students (Figure 6.6) had also not been shared at the start of Intervention Cycle 2.

To support collaborative planning, the study school designated six hours of development time for enquiry learning planning during Intervention Cycle 2 with the intention that staff would start to trial aspects of enquiry projects under the direction of the overseeing member of the TLT (Figure 7.9). Finally, the agreed outline proforma for enquiry learning projects was shared with staff during whole staff training.

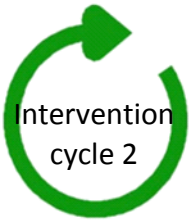
<table>
<tr><td colspan="2"></td><td colspan="2">Enquiry learning</td></tr>
<tr><td>Autumn Year 2</td><td colspan="3">Review Point 1 data collection</td></tr>
<tr><td rowspan="2">Second Intervention Cycle</td><td rowspan="2"> 
</td><td>End of Spring term Year 2</td><td>• 6 broad outlines should be completed (3 for Year 7 & 3 for Year 8)
• 1 Year 7 and 1 Year 8 project ready for trial and formatted onto the enquiry learning proforma.
• Plan for trialling / assessing student opinions of first two projects in place.</td></tr>
<tr><td>End of Summer term Year 2</td><td>• Two projects trialled / assessed by students
• Two projects ready for trial / student assessment.
• Two outlines developed in reasonable detail (front page of enquiry sheet completed)
• Zone leadership to have met to arrange delivery of first two enquiry projects (one for each of Year 7 and 8).</td></tr>
<tr><td>Summer Year 2</td><td colspan="3">Review Point 2 data collection</td></tr>
</table>

Figure 7.9 Outline of collaborative-planning deadlines and expectations tied to action research cycles

With the restraints on space, and the suspension of theme days, it was acknowledged that trialling enquiries could not replicate the final projects (Jilk, 2005). However, staff were encouraged to use larger learning spaces such as the school hall where the

dimensions of the learning plazas were marked out to try and recreate some sense of the flexibility that would be offered (Nicholson, 2004). In addition, teachers were encouraged to trial specific activities and resources with small groups to assess how well the desired learning would be received. It was also hoped that this would encourage more teachers to look at working together in team teaching arrangements, increasing the occurrence of this from Review Point 1.

Aspects of enquiries were trialled by the faculties attached to two zones. Within Expression this involved running a reasonably comprehensive trial of their 'Health and Wellbeing' project where a less able group attended workshops run in classrooms and the library over the course of a week before presenting their findings in the hall. This specific approach allowed them to ensure that their project was sufficiently differentiated to be applicable to all students. Exploration selected only some aspects of their 'What's special about Leicester?' for trial as most was adapted from a Humanities module and hence was already effectively trialled. Discovery did not trial projects specifically due to the development of their projects from previously run theme day activities.

7.7 Review Point 2 (RP2) findings

Data collected at the end of Intervention Cycle 2 reflected the Review Point 1 data collection with on-line questionnaires for teachers, TAs and KS3 students. As at Review Point 1, no change in learning spaces had occurred during Intervention Cycle 2 and so the questionnaire foci remained around engagement with innovations in teaching and learning. A complete set of the data is available as Appendix 22.

7.7.1 Respondent characteristics

Analysis of the nature of the respondents indicated that, generally, the respondents at Review Point 2 were broadly comparable to those of the whole school population (Table 7.1). Completion of the teacher questionnaire was lower than the Baseline responses rate but increased slightly from Review Point 1 with greater representation of TLR and experienced teachers. Analysis of the personal characteristics illustrated that zone allocation was more representative than at Review Point 1.

The TA data shows that respondent numbers had fallen from Review Point 1 and appeared more representative with TA respondents predominantly attached to the Reflection zone or spread equally across the remaining 3 zones; representing the increasingly strategic organisation of these resources (Table 7.2).

The number of KS3 students responding to Review Cycle 1 was comparable to the 34% who completed the Baseline and the balance between year groups and genders was also representative (Table 7.3). Special Educational Needs (SEN) students, however, were slightly under-represented.

		Entire teaching staff		Teacher respondents					
				Baseline		Review Point 1		Review Point 2	
		Number	%	Number	%	Number	%		
I am a member of teaching staff…	Within SLT	7	8%	7	10%	5	10%	5	9%
	With a TLR	45	50%	36	50.5%	29	56%	32	59%
	Neither of the above (CPS teachers)	37	42%	26	36.5%	17	33%	17	31%
	Skipped question			2	3%	1	1%	0	
	TOTALS	89		71	80%	52	58%	54	61%
I am attached to the following zone	Discovery (Sci, Tech & Math)	26	29%	16	23%	14	27%	16	30%
	Exploration (Hums, Citiz, MFL & ICT)	27	30.5%	24	34%	17	32.5%	17	31%
	Expression (English, PE, Exp Arts)	29	33.5%	22	31%	16	30.5%	14	26%
	Reflection (SEN & EAL)	7	8%	6	8%	5	10%	7	13%
	Skipped			3	4%	0		0	
	TOTALS	89		71		52		54	
I have worked within education for ...	0-5 years	28	31%	18	25%	8	15%	10	18.5%
	6-10 years	29	33%	20	28%	13	25%	14	26%
	11-20 years	16	18%	16	23%	18	35%	20	37%
	Over 20 years	16	18%	17	24%	12	23%	10	18.5%
	Skipped			0		1	2%	0	
	TOTALS	89		71		52		54	

Table 7.1(i) Teacher respondent characteristics compared to the characteristics of the whole teaching staff, the Baseline respondents and the respondents at Review Point 1. [Teacher RP2 Q1, 2 & 3. Respondent numbers in table].

		Entire teaching staff		Teacher respondents					
				Baseline		Review Point 1		Review Point 2	
		Number	%	Number	%	Number	%	Number	%
I have worked at the study school for ...	0-5 years	41	46%	34	48%	21	40%	16	30%
	6-10 years	25	28%	16	22.5%	12	23%	21	39%
	11-20 years	18	20%	16	22.5%	15	29%	13	24%
	Over 20 years	5	6%	4	6%	4	8%	3	6%
	Skipped			1	1%	0		1	1%
	TOTALS	89		71		52		54	

Table 7.1(ii) Teacher respondent characteristics compared to the characteristics of the whole teaching staff, the Baseline respondents and the respondents at Review Point 1. [Teacher RP2 Q4. Respondent numbers in table].

		TAs in school		TA respondents					
				Baseline		Review Point 1		Review Point 2	
		Number	%	Number	%	Number	%	Number	%
Most lessons I support are in the following zone	Discovery	41	46%	34	48%	21	40%	3	16%
	Exploration	25	28%	16	22.5%	12	23%	3	16%
	Expression	18	20%	16	22.5%	15	29%	3	16%
	Work within various zones	5	6%	4	6%	4	8%	10	52%
	Skipped			1	1%	0			
	TOTALS	89		71		52		19	63%

Table 7.2 TA respondent perceived zone attachment compared to the study school zone attachment and the attachment at the Baseline and Review Point 2. [TA RP2 Q3. Respondent numbers in table].

		Students attending KS3		Student respondents					
				Baseline		Review Point 1		Review Point 2	
		Number	%	Number	%	Number	%	Number	%
What year are you in?	Year 7	238	33%	92	38%	155	41%	95	37%
	Year 8	240	33.5%	74	31%	163	43%	80	31%
	Year 9	240	33.5%	75	31%	60	16%	83	32%
	Skipped			0				1	≈0%
	TOTALS	718		241	34%	378	53%	259	36%
Are you …	Male	406	57%	128	53%	226	60%	137	53%
	Female	312	43%	109	45%	152	40%	121	47%
	Skipped			4	2%	1	≈0%	1	≈0%
				241				259	
Are you on the SEN register? (Special Educational Needs). **Answer 'Yes' & 'don't know'.**		198	27%	64	24%	111	29%	58	22%
Do you usually speak English at home? **Answer 'No'**		86	12%	38	16%	46	12%	36	14%

Table 7.3 Student respondent characteristics compared to the characteristics of the whole KS3 student population, the Baseline respondents and the respondents at Review Point 1. [Student RP2 Q1, 2, 3 & 4. Respondent numbers in table].

7.8 Progress of transferable learning assessed at Review Point 2

During Intervention Cycle 2, significant time had been invested in the continued organic familiarisation of teaching staff with the 7Cs as identified as being effective at Review Point 1. In addition, the inclusion of the 7Cs within the teaching and learning vision (Hargreaves & Shirley, 2009) and the development of the 7C characters and subsequent subject adaptations potentially overcame the indication that some teachers were previously finding the 7Cs hard to relate to their subject (Teacher RP1 Q25). As a result of this work it was anticipated that the status and application of the 7Cs would have made significant gains by Review Point 2, thus the questionnaire emphasis shifted to utilisation. Overall, usage of the 7Cs at Review Point 2 remained constant (Figure 7.10), however, only 31 out of 51 teacher respondents (58%) considered themselves to be fully confident in their use clearly indicating that further support was required.

Strategies for using the 7Cs showed largely similar trends to Review Point 1 (Figure 7.11). Learning objectives continued to be the most frequent, and increased, usage (35 out of 41 respondents) with the linking of the 7C skills to tasks also relatively well established. Uses of the 7Cs around homework and assessment (an area also side-lined as a focus) both now demonstrated noticeably lower engagement and so were unlikely to be pursued further. Investigation into the impact of the 7Cs initiative also indicated that most respondents thought that the 7Cs would be of some benefit to students. However, this was still less robustly supported than would have been liked with over half indicating support for only some students (Teacher RP2 Q20).

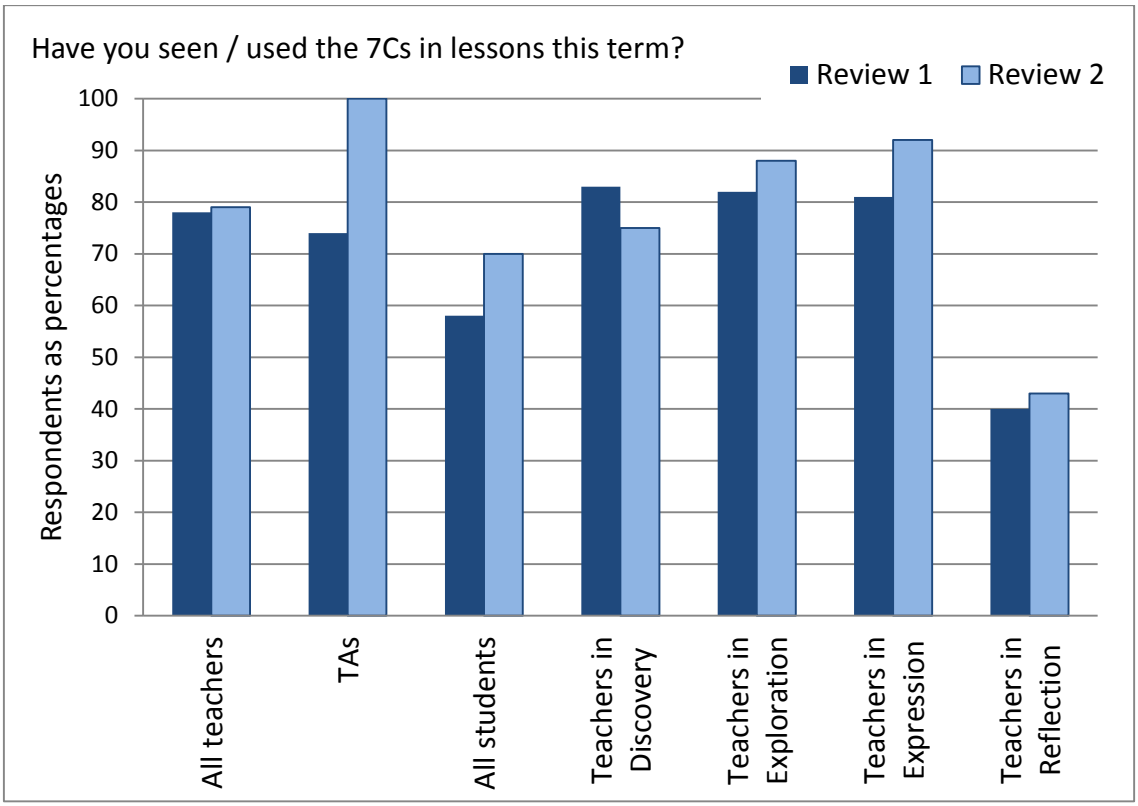


Figure 7.10 Graph to show percentage usage of the 7Cs in lessons at Review Point 1 and 2 analysed by category of respondent and teacher allocation to zones. [Teacher RP1 Q23 (50) & RP2 Q21 (53). TA RP1 Q11 (23) & RP2 Q9 (17). Student RP1 Q15 (353) & RP2 Q12 (244). Respondent numbers in brackets after question numbers].

In conclusion, use and awareness of the 7Cs was increasing pleasingly with many students able to articulate some of the 'C' skills (Student RP2 Q13). Most usage was still 'soft', though integration into learning objectives and task articulation was a very positive progression. With the school move imminent, the next step was therefore to increase expectations around these established uses and further support the adaption into subject areas. In addition, the 7Cs would have an important role to play in the realisation of enquiry learning and so in order to maintain these foci, it was likely that the assessment of the 7Cs would be dropped.

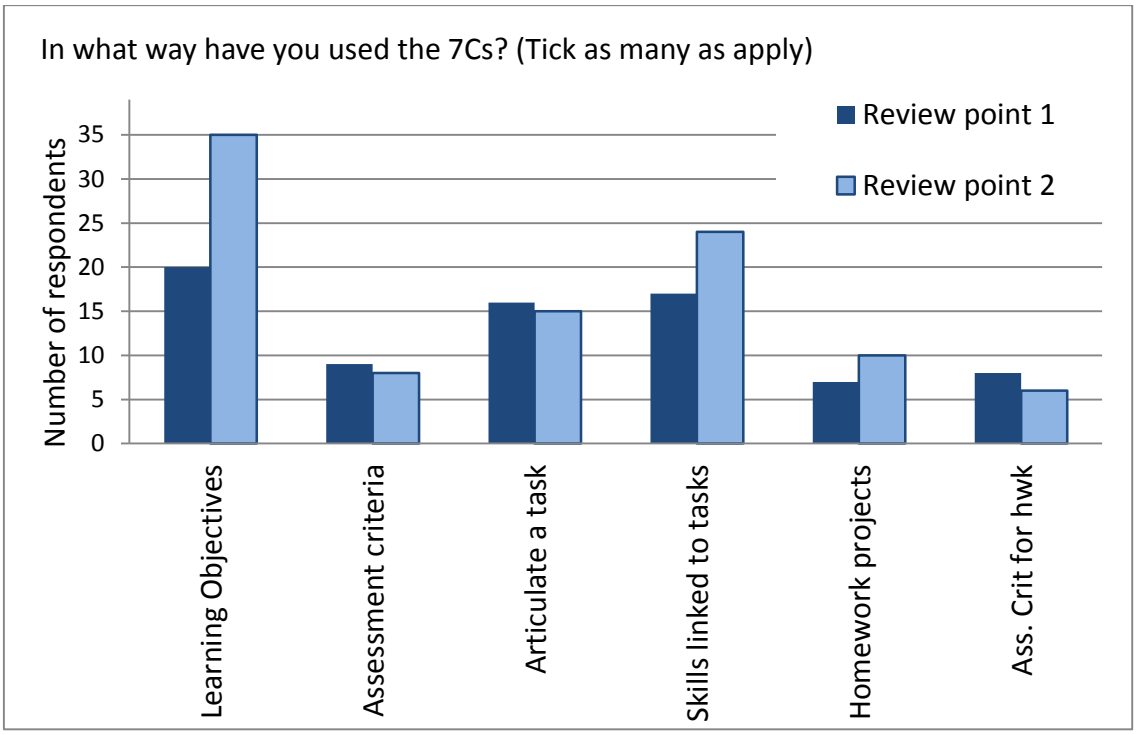


Figure 7.11 Graph to show teachers areas of use of the 7Cs at Review Point 1 and 2. [Teacher RP1 Q24 (37) / RP2 Q23 (41). Respondent numbers in brackets after question numbers].

7.9 Progress of group work roles assessed at Review Point 2

Within Intervention Cycle 2, the group work roles had been finalised and shared through zone based training whilst the creation of group role cards had been initiated but not yet completed. Analysis of Review Point 2 findings indicated that within group work, the assigning of roles was still embryonic reported by only 36 out of 53 (68%) teacher respondents (Figure 7.12). This was significantly higher within the Expression zone, however, where more students had also experienced group work roles than in other zones (Student RP2 Q17). This was a very pleasing finding for the zone leading this innovation, and again served to demonstrate that where collaboration around innovations was greater, impacts were also increased (Fullan, 1993).

That only 3 teacher respondents, 7% of students and no TAs felt that the addition of roles made group work more complex was a pleasing finding as it indicated support for this innovation (Teacher RP2 Q28, TA RP2 Q14, Students RP2 Q18). However, over half of teachers felt that students were not yet familiar enough with the pedagogy for it to be fully effective, indicating that further embedding was clearly needed. This was echoed by the third of students from all year groups who said that success of the strategy depended on their role, indicating that perhaps some roles were familiar or more straightforward than others.

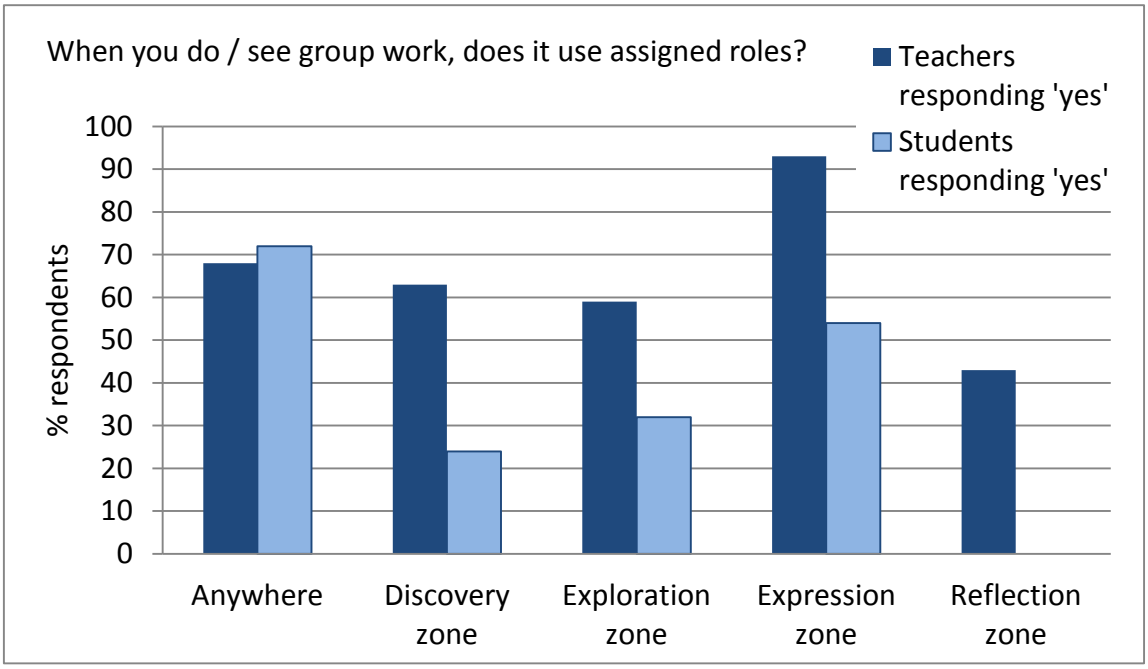


Figure 7.12 Graph to show the percentage use of roles within group work analysed by zone from teacher and student responses. [Teacher Q27 (51); Student Q 17 (216). Respondent numbers in brackets after question numbers].

In conclusion group work roles were growing across KS3, particularly within Expression where it had some strong initial foundations. Other zones were also seeing an increase in the use of roles, however, further awareness of the individual roles was needed to facilitate further utilisation.

7.10 Progress of empowered learners assessed at Review Point 2

In order to consider the success of this pedagogic intervention, the establishment of students' self-learning skills was considered appropriate and so was included as an aspect of Review Point 2. Over 80% of students considered themselves to have 'good' or 'very good' self-learning skills; a result significantly higher than the 40% of teacher who though students were 'OK' or better at learning by themselves. 19% of teachers and 40% of TAs, however, considered that students' self-learning skills improved across their 5 years of study.

At Review Point 2 the C3B4ME strategy and poster were still very embryonic. However, 33 out of 53 (61%) teacher respondents were aware of 'C3B4ME' as were a comparable proportion of students, particularly in Year 7 and Year 8 (Teacher RP2 Q31 & 32, Students RP2 Q21 & 22). Awareness was also not evenly distributed across the zones with students reporting much greater usage in Discovery whilst teachers reported greater awareness in the Exploration, the developing zone.

Teacher feedback on the potential of a poster to advise students about how to be more empowered learners was very positive with 46 out of 53 teacher respondents considering that this would help all students (Teacher RP2 Q32). This indicated that introduction of this pedagogic tool was likely to be easier than some of the other initiatives, as it was responding to a high level of desire (Knoster, 1991). Students, however, were far less positive about the potential use of such a resource and so work would be required to make sure students engaged with the resource effectively (Students RP2 Q22).

In conclusion, interventions to promote empowered learners had made a steady start and, for something still in development, levels of awareness and potentially effectiveness were pleasing.

7.11 Progress of enquiry learning assessed at Review Point 2

Enquiry projects could still not be accommodated within the study school at this point, nor had the proforma for enquiry learning been shared widely with staff. Therefore, analysis of the promotion of this pedagogy was centred on the development of the three identified attributes of enquiry learning in conjunction with the supporting proforma. In addition, expectations for project development (Figure 7.9) had seen the trialling of specific aspects of the potential projects on a small scale.

Analysis of the findings of Review Point 2 reveal that the investment of time in collaborative planning had generated rewards with the percentage of teaching staff involved in cross-zone and faculty based collaborative planning being very high at 48 out of 53 respondents (Teacher RP2 Q6 & 7). This included every teacher within the Expression and Reflection zones. However, involvement in the Discovery zone had fallen, which was concerning as this was the zone primarily promoting this development (Teacher RP2 Q5). Involvement of TAs also remained very low as they were not available during collaborative planning sessions (TA RP2 Q5). The nature of collaboration was evolving with schemes of work being superseded by the planning of individual lessons which rose more significantly from 20 to 33 teacher respondents between Review Points 1 and 2 (Table 7.4). This is an interesting finding when coupled with the increase in collaborative planning within faculties; either the large scale project overviews were complete and that finer level planning was therefore assigned back to subject specialists, or the need to invest more time in planning projects possibly meant that, pragmatically, teachers found it easier to find time to work with others on similar teaching patterns to themselves.

Collaborative planning for assessment (Table 7.4) also showed a noticeable increase, however, remained comparatively significantly lower indicating that, similarly to the 7Cs, staff focus was on delivery and classroom engagement rather than assessment against criteria which were still unclear.

Was this collaborative planning within your own faculty, own zone or beyond?		
	RP1 (47)	RP2 (48)
Planning within own faculty	11	28
Planning within own zone	31	36
What did this collaborative planning involve?		
Writing a scheme of work	25	32
Planning a small project	20	34
Planning individual lessons	20	33
Planning assessments	6	15

Table 7.4 Data to show the nature and purpose of teacher collaborations. [Teacher RP1 Q9 & 10, Teacher RP2 Q 6 & 7. Respondent number in brackets].

Another objective for Intervention Cycle 2 had been an increase in the amount of cross-curricular learning students had experienced. The proportion of teachers who had engaged in the delivery of cross-curricular learning remained around half; still down on the Baseline level of engagement (Teacher BL Q22 & RP2 Q8), but an improving position from Review Point 1. Part of this 'catch-up' was potentially attributed to the request to trial enquiry projects, therefore, respondents were able to report on up to three examples of enquiry learning. 64% of responses from teachers who had delivered extended cross-curricular learning referenced learning which had occurred over at least four lessons (Teacher RP2 Q11). These examples were spread across all three of the main zones though there were still examples of collaborations outside zone arrangements (Teacher RP2 Q14).

Students' experience of cross-curricular learning during the same time period had decreased to 50% by Review Point 2 (Student RP2 Q8). However, a very significant decrease in Year 9 contributed to these findings, most likely driven by the decision that initial projects in the new build would run with Year 7 and Year 8 only so work inevitably focused in these year groups (Table 7.5).

Have you experienced any cross-curricular learning in the last term?	RP1 (374)	RP2 (252)	Difference
All students responding positively	67%	50%	-17%
Year 7 responding positively	70%	60%	-10%
Year 8 responding positively	68%	55%	-13%
Year 7 and 8 responding positively	69%	58%	-11%
Year 9 responding positively	59%	35%	-24%

Table 7.5 Student experiences of cross-curricular learning at Review Points 1 and 2 analysed by year group. [Student RP1 Q8, RP2 Q8. Respondent numbers in brackets].

The final measurable attribute of enquiry learning was the prevalence of team teaching. Again, the directive to start trialling aspects of enquiries with small groups was expected to have an impact here and analysis of the findings around this pedagogy would support this with the percentage of team teaching increasing to a position back in line with the Baseline findings at 18 out of 54 (35%) teacher respondents (Teacher BL Q26). Most pleasingly, this included only 3 teachers who were timetabled to be in these lessons indicating that 15 were choosing to invest time working with colleagues within their zone, potentially in trialling enquiry learning.

In conclusion, the development of enquiry learning was showing a more undulating profile than other initiatives; unsurprising considering its complexity, spatial and temporal limitations. The findings around the 'background' work of planning were proving much more positive with the majority of staff involved in planning what would appear to be the finer details of projects in preparation for delivery. In addition, the significant investment of teacher time in cross-curricular delivery and a parallel increase in teachers choosing to team teach across zones can be hypothesised to be the result of more teachers trialling enquiry learning; a development which boded well for the success of enquiry learning within the new building.

7.12 Overview of the progress made in Intervention Cycle 2

Again, overall progress across Intervention Cycle 2 can be seen to be a positive response to the areas of foci identified at Review Point 1 though there remain variations across the development of the four promoted pedagogies.

The use of transferable learning skills was the most developed of the pedagogic tools at Review Point 1, a position which continued overall. However, the breadth of usage decreased through the removal of a formal assessment focus. That there was overwhelming support for the usefulness of this innovation from staff and students indicated that the investment in development time had also overcome some of the concerns around the applicability of the 7Cs for less able students. Moving forward, this innovation now needed embedding to ensure that usage moved beyond learning objectives and that the rhetoric of the 7Cs was fully accessible for all learners.

The majority of teachers and students were aware of group work roles and felt that they added value. However, there was an indication that more familiarity with all the roles was required before further development could maximise their impact. This was supported by the findings from students who appeared to be more confident with some roles than others.

The promotion and support of empowered learners was only initiated during Intervention Cycle 2. Despite this, the percentages of teacher and student awareness were reasonable and the findings indicated that pursuit of this innovation was a worthy investment of time and energy with further increases of awareness, particularly with students, being the specific focus for Intervention Cycle 3.

The development of enquiry learning as an overarching pedagogy was inevitably a more complex area for innovation, not least due to the restrictions placed on its development by space and timetabling. At the end of Intervention Cycle 1 the findings had indicated that, whist individual aspects were progressing well, the cohesion of these into a systematic and collective pedagogy was still a way off. Intervention Cycle 2 can be seen to have made significant progress within this area. Developments in collaborative planning continued both overall, and particularly within zones. This was coupled with a

return to the Baseline levels of engagement in team teaching, an increase in teachers choosing to engage in this activity as well as a significant increase in cross-curricular learning.

Of most satisfaction, however, are the findings which can be implied from an amalgamation of these results. A holistic view of the teacher engagement in team teaching, cross-curricular learning and collaborative planning suggested that significant levels of enquiry project trailing had begun. These findings would indicate that this was occurring particularly in the Expression zone, where levels of collaborative planning and team teaching were significantly higher, coupled with comparable levels of cross-curricular learning and the most positive student response. However, that this trend could be evidenced in all zones was very pleasing.

7.13 Implications of the findings from Review Point 2 on the research questions

Again, the implications from the findings are restricted to the second research question; how can pedagogy be most effectively innovated? The findings at Review Point 1 indicated that, if innovation was to be fully effective, the inclusion of more elements of successful innovation within the development of every pedagogic strand was necessary.

This was achieved within group work roles through smaller scale sharing so that the collaborative nature of the development could be enhanced. Other examples included the promotion of a shared vision for enquiry learning being achieved through the zone wide nature of collaborative planning and the continued organic growth of the 7Cs reflective of the feedback around the success of this innovative style previously.

Interestingly, the innovation initiated within Intervention Cycle 2 saw the inclusion of fewer aspects of success. Whilst the creation of a research group meant that 'change agents' were created (Fullan, 1993), the basing of this innovation on work from other schools rather than developing the idea from scratch limited the participants' ability to

develop personal mastery or to work in a truly collaborative way, though, at such an early point within the innovation, this could not be fully judged.

Chapter 8 Intervention Cycle 3

Within Intervention Cycle 3, which included the move to the new school building, the innovations developed during Intervention Cycles 1 and 2 needed to come to fruition. Therefore, practice around transferable learning, group work roles and student empowerment needed embedding and the individual aspects of enquiry learning; collaborative planning, cross-curricular learning and team teaching, could finally be synergised in appropriate learning spaces. However, it was also acknowledged that whilst the work completed prior to the move should allow these aspects to be demonstrated at a significant level of competence, embedding them fully would take a significant amount of time, and certainly beyond the time period of this study.

8.1 Position of Intervention Cycle 3

In accordance with the research methodology this was the last Intervention Cycle within this study and ran from the start of the academic year 3 until the following Easter (Figure 8.1) thus spanning the move to the new build in October. However, it was anticipated that much of the seven weeks prior to the move would be focused around the logistics of packing up a school and preparing it for demolition. Therefore, much of the intervention would be completed after the move.

		Transferable learning (7Cs)	Group work roles	Empowered learners	Enquiry learning
	Summer Academic year 1	Baseline data collection (Chapter 5)			
Action Research Cycle 1	(Chapter 6)	Intervention Cycle 1	Intervention Cycle 1		Intervention Cycle 1
	Autumn Academic year 2	Review Point 1 data collection (Chapter 6) Reflection Influence			
Action Research Cycle 2	(Chapter 7)	Intervention Cycle 2	Intervention Cycle 2	Intervention Cycle 1	Intervention Cycle 2
	Summer Academic year 2	Review Point 2 data collection (Chapter 7) Reflection Influence			
Action Research Cycle 3	October	Move to new build			
	(Chapter 8)	Intervention Cycle 3	Intervention Cycle 3	Intervention Cycle 2	Intervention Cycle 3
	Easter Academic year 3	Repeated Baseline (Finalline) data collection (Chapter 8)			

Figure 8.1 the research plan showing the position of Intervention Cycle 3

8.2 Strategic whole school interventions occurring in Intervention Cycle 3

During Intervention Cycles 1 and 2, 'change agents' (Fullan, 1993) were driving innovations within each zone; however, progress here was slower than with whole school stakeholder involvement (Hargreaves & Shirley, 2009). Therefore, a strategic realignment to promote further partnership was considered important (Mills, 2011). Where previously teachers within each faculty held teaching and learning responsibilities (TLRs) to support the work of individual subjects, i.e. the Head of English or Second in Maths, these roles were realigned through assigning each TLR holder one aspect of pedagogic development, which they would then support across all the faculties within that zone (Table 8.1). This meant creating more of a shared vision (Hargreaves & Shirley, 2009) and further promoted intra-zone collaboration.

The perceived benefits of this were many. Initially, a reduced breadth of workload ensured a greater understanding of individual pedagogies and an increased level of support within the zone. Over time the focus of the role changed from being developmental to analytical. As a result of this change, TLR holders became familiar with the concept of completing learning walks to gather evidence around pedagogy and became more confident at being the 'expert in residence' of their pedagogic strand in their zone, acting to refine pedagogies where necessary. This also provided TLR holders with the opportunity of supporting a zone wide group of teachers thereby facilitating their own professional progression to more senior positions (Knoster, 1991). TLR holders with responsibility for enquiry learning inevitably saw the greatest shift within this time from preparatory planning to overseeing enquiry delivery to multiple groups in new learning spaces. This included producing long-term plans, scheduling projects, assigning lead teachers as well as, most importantly, scrutinising projects to ensure that they included the core pedagogic aspects. It also involved engaging with the TLR holders for 7Cs and group work to ensure that all the elements came together within the projects.

	Intervention Cycle 1	Intervention Cycle 2
Teaching & Learning responsibilities	Based in faculties – each TLR holder responsible for a number of initiatives for one faculty.	Based in zones. Each TLR holder responsible for one initiative across all subjects within a zone.
Transferable learning	Initial development group of 12 led by a member of the teaching and learning team. Awareness spread through organic growth to around 45 teachers.	TLR group created with one member from each zone lead by the teaching and learning team member.
Group work roles	Developed by an initial research group of 3 Expression zone teachers (English, Expressive Arts and PE) working with the researcher.	TLR group created with one member from each zone lead by a teaching and Learning team member.
Enquiry learning	Contributing aspects of Collaborative planning, cross-curricular learning and team teaching developed across all teachers. Supportive resources developed by an initial research group of 3 Discovery zone teachers (Science, Maths Technology) working with the researcher.	TLR group created with one member from each zone lead by a teaching and learning team member.

Table 8.1 Changes around teaching and learning responsibilities and the associated leadership of innovations between Intervention Cycles 1 & 2.

Alongside the logistical benefits of this development, the status of the pedagogies was further raised through their placement at the centre of teaching and learning leadership. Other developments also supported this development such as the creation of a 'Teaching and Learning' handbook which included information on the 7Cs, the group work roles, empowered learning strategies and the enquiry cycle in order that this information was always easily accessible when teachers were planning lessons. In addition, group role cards were provided to every teacher and resources such as the 'C3B4ME' number plate and 7C posters were displayed in every learning spaces in the new building.

The point of movement into the new school building also created a 'new start' opportunity to reinforce the strategic vision for teaching and learning in the new build with all staff. This had been recognised as a successful aspect of innovation within Intervention Cycle 2 (Figure 7.2) and so actions within Intervention Cycle 3 built on this success by sharing the vision for student learning with all adults in the study school.

8.3 The development of transferable learning (the 7Cs) within Intervention Cycle 3

At the end of Intervention Cycle 2, the seven transferable learning skills each had an associated 'C' name, colour and character (Figure 7.3) with whole school training also resulting in high levels of teacher and TA awareness (Figure 7.10) which was increasingly reflected by students. Adaptation of the 7C characters into different learning areas had also begun (Figure 7.4) and soft use of the 7Cs such as within Learning Objectives (Figure 7.11) was significant. Therefore, the focus of development within Intervention Cycle 3 was on ensuring complete awareness to facilitate further increases in usage, particularly within enquiry learning projects.

Therefore, a number of supportive resources were developed such as PowerPoint slides incorporating the 7Cs and character images for notice boards. Alongside this, the 7Cs were also formally introduced to KS3 students through a series of assemblies to increase their awareness levels and reinforce that this was a whole school innovation. Once in the new building, A3 posters of the 7Cs were displayed in every learning space, from small intervention rooms to learning plazas and mentoring bases, so that everyone was aware of the learning tool but also to reinforce the fact that all staff had a responsibility to develop students' holistic skills (Hargreaves & Shirley, 2009). Inclusion in mentoring spaces necessitated some adaption for SEN learners (Figure 8.2) whilst translation to support EAL learners was also completed.

Other adaptations were more creative, such as the printing onto mini-whiteboards of the PE characters so they could be used in outdoor spaces, the 3D versions produced by

Textiles to be used as questioning tools and the stand-up versions with speech bubbles used in Technology to write prompts about how different skills could be promoted (Figure 8.2)

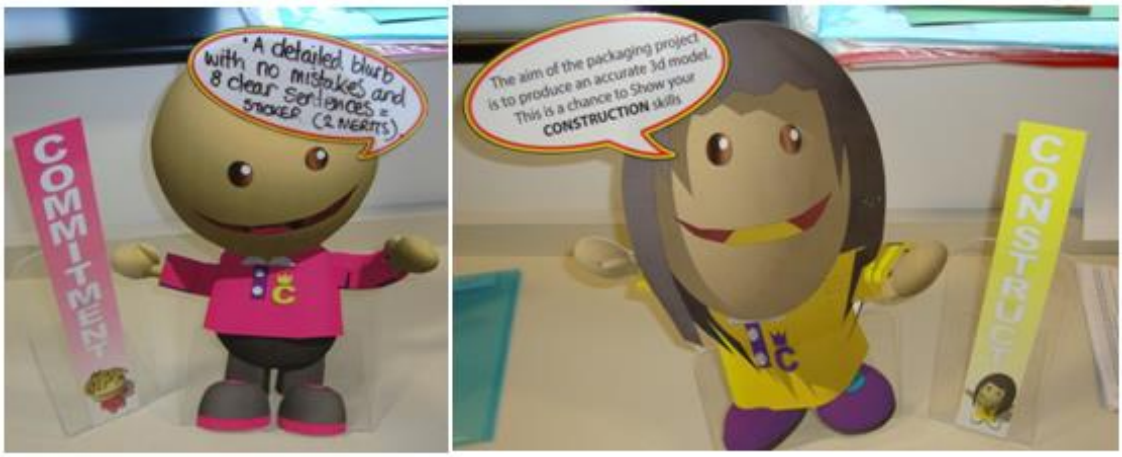


Figure 8.2 Photograph of the 7C adaptations within Technology

Whilst awareness of the 7Cs was one important attribute, usage was vital to embedding the initiative. All KS3 lessons were now expected to have an identified 7C objective, with the development of skills such as communication, collaboration and confidence being an integral aspect of activities. 7C TLR holders completed learning walks to analyse the extent to which this expectation was met as well as being available to provide support to teachers finding this application challenging. In addition, all enquiry learning projects highlighted the inclusion of 7Cs on the common front sheet before having the development of these skills as core aspects of lessons and instructions, a fact confirmed by the enquiry learning TLR holders.

The development of assessment and reward had also been an initial aim of 7C development, however, lower levels of support meant this was dropped as an expectation following Review Point 2. The work of the TLR group reasoned that some form of reward system would further promote the 7Cs and so an informal system of rewarding students demonstrating these skills was achieved using stickers and postcards (Figure 8.3) which could simply be incorporated into the study schools existing reward system.

Figure 8.3 Postcard reward for the 7Cs

In conclusion, the progress of transferable learning skills can be seen as very pleasing with skill foci in all KS3 lessons being a noticeable gain towards the development of holistic learners equipped for future employment (DCSF, 2008). That such development was achieved organically with the inclusion of such high numbers of staff (Senge, 20120) and further supported by innovative and creative visual stimuli (Hargreaves & Shirley, 2009) hopefully ensured that it was a development for the longer term and therefore a sustained shift within the study school (Fullan, 1993).

8.4 The development of group work roles within the curriculum

At the end of Intervention Cycle 2, the six group work roles had been shared with each zone. However, their use was still embryonic and concerns existed over their complexity and lack of student familiarity with the roles. This was addressed at the start of Intervention Cycle 3 by issuing sets of group role cards, including those adapted for SEN learners, during the sharing of the teaching and learning vision. The expectation that group role cards were to be included in significant pieces of group work within curriculum lessons was also presented at this point. To encourage consistency of use of the roles, and tackle the challenge of lack of student's awareness, PowerPoint resources were again created which outlined the six roles using the 7C vocabulary (Figure 8.4).

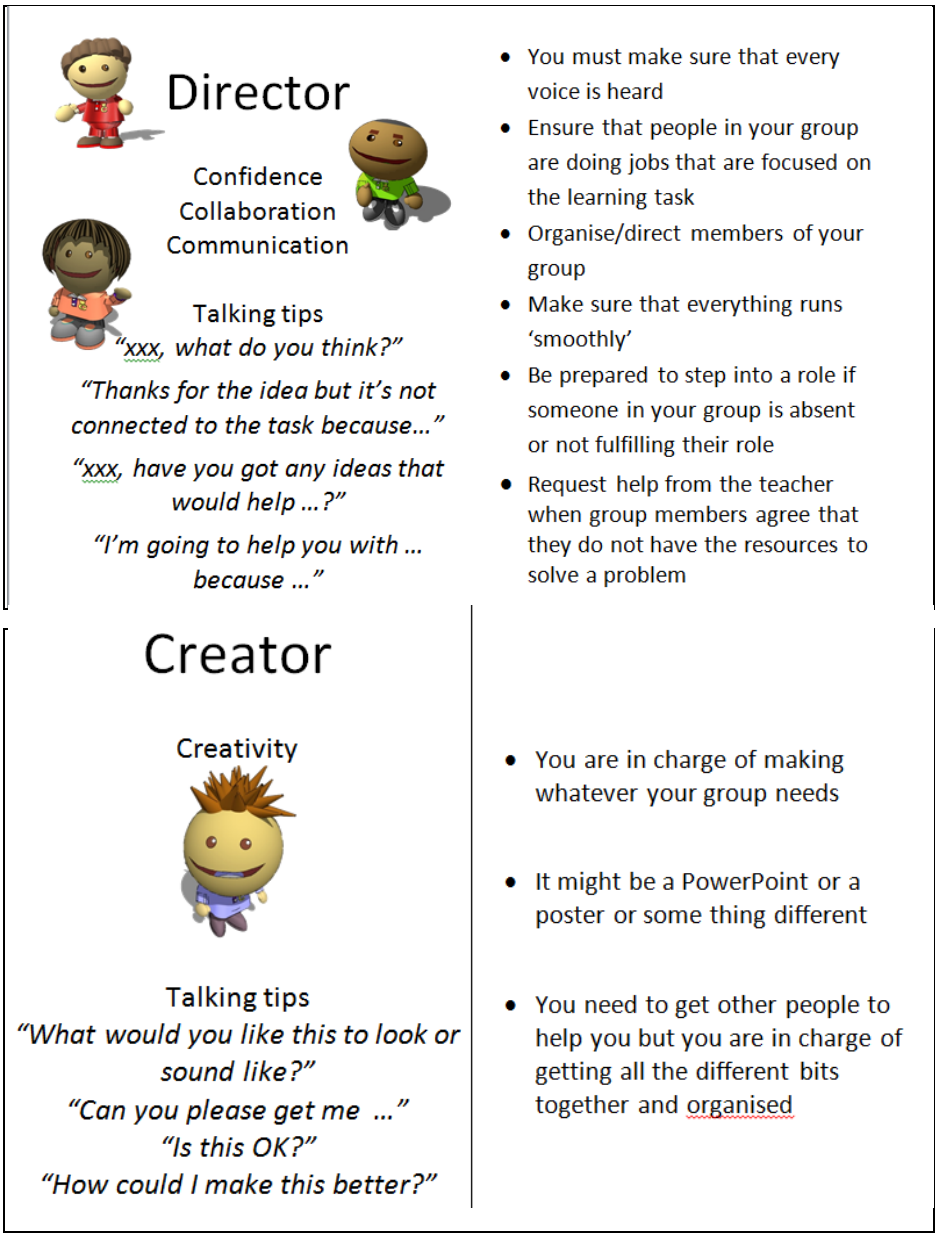


Figure 8.4 Example of 2 group role cards; a standard Director card and an SEN adapted Creator card.

Posters were also placed in all the larger learning spaces in support of the expectation that all enquiry learning projects were to include students working in groups and applying at least some of the group work roles developed.

In conclusion, therefore, work within Intervention Cycle 3 was about facilitating consistent and effective use. However, there was an acknowledgement that this development would not be visible in every lesson like the 7Cs, but should certainly be a feature of enquiry projects and significant pieces of group work in curriculum lessons.

8.5 The development of empowered learners with Intervention Cycle 3

Whilst the promotion of strategies to create empowered learners had been the last of the innovations to be started, its more simplistic nature and resource development, as well as the opportunities to build on techniques tried and tested in other schools meant that this could potentially also come to fruition by the time the move to the new building was made. To raise the profile of the strategy from the 60% awareness recorded at Review Point 2, the 'C3B4ME' number plate had been included in the teaching and learning presentation and placed in every learning space, accompanied by the strategies poster. Again, this included indirect learning spaces such as the mentoring base to ensure that students realised that learning is a continuous process across both space and time and in response to the fact that students were not yet fully recognising the potential of this strategy to be useful. However, there was no TLR role attached to this simpler innovation so following this introduction, C3B4ME received no further intervention.

8.6 The development of enquiry learning with Intervention Cycle 3

Enquiry projects were the key foci of the teaching and learning vision shared upon arrival in the new school (Study School, 2008). However, whilst other individual pedagogic developments, such as the 7Cs, could be realised in the old school building, this was not the case for enquiry learning as a holistic pedagogy. Analysis at Review Point 2 had indicated that significant collaborative planning around the common format had occurred and the provision of development time meant this continued; whilst the addition of TLR holders ensured that support was available within each zone for this process. More importantly, these individuals were also able to ensure that enquiries met the expectations around such learning from inclusion of the 7Cs to the premise of a 'big question' driving the whole process. The initial trialling of enquiry projects had also been initiated within Intervention Cycle 2 and so some associated increased in cross-curricular learning and team teaching had been seen.

Whilst previously the aim had been for each zone to deliver two projects to years 7 and 8 before the end of the academic year, this was realised to be an overambitious target and so the expectation was lowered to at least 1 project in each of years 7 and 8. Each zone took a different approach to meeting this expectation (Table 8.2). Discovery zone maintained some Maths lessons; therefore, the focus of the projects was on the integration of Science and Technology. Three classes were involved in each Discovery project simultaneously with the same teacher leading every lesson. The Discovery zone also ran the longest projects at three weeks with extensive use of the Plaza and Auditoria, supplemented by science laboratories as appropriate.

Zone	Year	Theme	Timetable arrangements	Group size	Le
Discovery	7	Why is Lewis Hamilton like a Jedi?	DT & Science lessons over 3 weeks	90	24
	8	What would happen without antibiotics?			
Exploration	7	What makes Leicester special?	Humanities & Citizenship lessons over 1 week.	60	6
	8	Flood fighters!			
Expression	7 & 8	What makes a good person?	All subject lessons over 1 week	240	10

Table 8.2 Approaches to enquiry projects across the learning zones

Exploration zone projects were constrained by different grouping arrangements meaning the Language input was minimal. Projects were run in the Plaza and Auditoria learning spaces over six lessons. However, in Exploration zone this required extensive re-rooming of curriculum lessons due to a lack of spaces. Teacher leadership was also not constant. The Expression zone went for a totally different approach to projects working with a whole year group across one week's worth of ten lessons. Delivery of the project therefore involved all the teachers and spaces within this zone.

Ensuring the delivery of enquiry learning had been one of the aims identified at the end of Intervention Cycle 2. However, of more importance was the combining of all the different elements within this enquiry so that it became an innovative learning

experience and not just a 'different' one. To assess this, a consideration of one example project was made (Appendix 23).

The 'What makes a good person' project was run within the Expression zone during Intervention Cycle 3. This project was started and finished in the Auditoria; in this case the hall with seating capacity for 250 people, hence maximising the potential of large learning spaces. Students then worked in groups with assigned roles and, under the leadership of the 'Director', selected workshops to visit which involved both practical and non-practical sessions delivered in a range of learning spaces. The focus of these workshops varied from those with a 'Care' focus delivered by PE staff, through 'Creative' skills delivered by Expressive Arts and into English where 'Communication' skills were explored in line with the 7C skills. From these workshops, students gathered information independently which then contributed to their group presentation.

Following the completion of projects in each of the zones, extensive teacher and student QA was completed by the TLR holder for enquiry learning within each zone. These findings are incorporated into the data analysis section of the Finalline.

8.7 A summary of the transformation in pedagogy across the study period

In conclusion, therefore, the following statements can be made regarding the pedagogic position at the end of Intervention Cycle 3, and therefore by default, the full duration of this study.

Transferable learning was not an identified aspect of pedagogy within the study school at the start of this study, though was present in around two-thirds of lessons. The development of transferable learning was a key change designed to allow students to achieve more curriculum learning through utilising a suite of learning skills which could be easily referenced by teachers. This was achieved through the development of the 7Cs of learning through a model of primarily organic growth across the whole staff. By the end of the study, the 7Cs of transferable learning had been extensively promoted

with students and staff and were an expected element of all KS3 lessons and enquiry projects. They were easily identifiable through characters and colours and were present in every learning space. Formal reward of the 7Cs has not been achieved; however, systems for informal recognition were being developed.

Group work was a familiar pedagogy within the study school at the start of the study, however, the utilisation of roles to increase the efficiency of students working in groups was sporadic and varied. Therefore, the identification and resource support for common group work roles was a key focus for innovation along with the expectation that group work roles were a core aspect of all enquiry projects and were utilised where appropriate within the curriculum.

A lack of student self-learning was a key concern of teachers at the start of this project and a key aim within the learning vision was for students to support their own learning. Drawing on work completed by other schools, the 'C3B4ME' approach was developed which provided students with a range of strategies to help them find their own answers. This was displayed in every learning space and had been introduced to students, teaching and support staff.

The establishment of enquiry learning to maximise the potential of the new learning spaces within the school rebuild was the ultimate aim of the transformation documented within this study. This was also the most significant change due to its low levels of occurrence within lessons at the point of Baseline data collection (Figure 5.5), though the development of theme days had given staff and students some awareness of the potential of enquiry learning.

Due to constraints with space and logistics, enquiry learning *per se* had not occurred in the old school. Instead, developments had focused on promoting collaborative planning, team teaching and cross-curricular learning, all seen as necessary precursors to the successful delivery of enquiry learning lessons. In addition, a proforma for enquiry learning promoting a common approach and driving inclusion of the complementing pedagogic tools had been developed by a research group working within the Discovery zone. These developments were then pulled together post-move, as demonstrated by

the completion of Year 7 and 8 enquiry projects running across the three main zones and occurring within the new learning spaces. In addition, the allocation of a TLR holder to the support of this pedagogy within each zone was ensuring that projects fitted the overarching pedagogic expectations but were also including the key elements required to bring all the innovations of pedagogy together.

In summary, the pedagogic shift had largely been facilitated within this period through the interventions completed within this study and culminating in the delivery of enquiry learning projects in all zones. The impact of these changes, and the extent to which they were embedded, was analysed through the Finalline data.

8.8 Finalline Review Point (FL)

The Finalline data collection looked to establish a quantitative and qualitative representation of pedagogy, learning spaces and the synergy between the two in the new building. Through analysis of this the impact of the innovation cycles could be considered in response to the research questions underpinning the Action Research project. The Finalline data collection was generated around Easter of the third academic year of the study; five terms after the commencement of the first Intervention Cycle (Figure 8.1).

The data for the Finalline was collected in the same way as the Baseline so that comparisons could be drawn between the two data sets. This included extensive on-line questionnaires for teachers, TAs and students, supplemented with subsequent qualitative semi-structured group interviews for teachers and students. As at the Baseline data collection, respondents were asked about their use of, and confidence with, the innovations developed within this study as well as their use of different pedagogies in general. There was also a return to the questions focusing on learning spaces in order that the first and third research questions around the success of new learning spaces in light of the pedagogic change could be considered. In order to ensure

high completion levels for the Finalline data collection, time within the school day was provided for all respondents. This had no impact on the confidentiality of the data. A complete set of the Finalline data collection is available as Appendix 24.

Data on the nature of the respondents was collected to ensure that the responses could be considered to be representative of the staff and student bodies. In addition, the whole school teaching and TA staff, as well as the KS3 students, were analysed again at this point to reflect the underlying changes in the study school population within the study duration. This showed that, whilst the student bodies and the TAs remained constant, there were changes in the teaching staff.

The teachers' questionnaire was completed by 71 out of a possible 77 teachers, a 92% response rate (Table 8.3); proportionally higher than during the Baseline data collection due to a decrease in the number of teachers employed overall through financial constraints. The teacher respondents at the Finalline were very closely representative of the teaching staff employed at the Finalline point. Follow-up group interviews were completed by seven volunteers comprising one member of SLT, four TLR holders and two main scale teachers in addition to the researcher and representing each of the four zones.

Analysis of the TA respondents (Table 8.4) indicates that the Finalline was completed by all TAs. During the duration of the study, an increasing percentage of TAs felt that they were attached to a specific zone, however, this assignment was again not reflected in the overall school position (TA FL Q1 & 2).

284 KS3 students completed the Finalline survey spread evenly across Year 7, 8 and 9 (Table 8.5), and a slight increase from the Baseline data collection point. Students with Special Educational Needs (SEN) were slightly under-represented in the respondents, though this difference would not be considered significant. Follow-up group interviews were also conducted with students' representative of the three year groups.

As at the other data collection points; the respondents were broadly representative of the study school. The increased response rates amongst teachers and TAs also ensured

that the Finalline data collection showed comparable depth to the Baseline, despite interim Review Points having lower response rates.

8.9 The position of the pedagogic aspects at the Finalline data collection

In reflection of the Baseline, the Finalline questionnaires sought to establish the progress of the key pedagogic changes as well as any changes to pedagogy generally between the data collection points. Finally, the contribution of all these aspects to the potential realisation of enquiry learning was considered.

The strategic whole school changes were significant in this process as the aligning of the Teaching and Learning Responsibilities to areas of innovation ensured that small groups of 'change agents' (Fullan, 1993) were established with the capacity to develop a personal mastery (Senge, 2012) in their area of focus through collaborative work that was reflective of all the zones (Hargreaves & Shirley, 2009). The dissemination of the leadership of these innovations was intended to ensure that the resulting changes became self-sustaining (Fullan, 1993). This change was coupled with the sharing of the refined vision for teaching and learning which again promoted both the shared vision and the strategic journey necessary to get there. These actions were designed to support the innovation process collectively and their success can be evidence in the progress made across the Intervention Cycle.

		Entire teaching staff at Baseline		Baseline		Entire teaching staff at Finalline		Finalline	
		Number	%	Number	%	Number	%		
I am a member of teaching staff…	Within SLT	7	8%	7	10%	7	7%	6	8%
	With a TLR	45	50%	36	50.5%	41	54%	41	58%
	Neither of the above (CPS teachers)	37	42%	26	36.5%	29	39%	24	34%
	Skipped question			2	3%			0	
	TOTALS	89		71	80%	77		71	
I am attached to the following zone	Discovery (Sci, Tech & Math)	26	29%	16	23%	24	31%	23	30%
	Exploration (Hums, Citiz, MFL & ICT)	27	30.5%	24	34%	24	31%	22	31%
	Expression (English, PE, Exp Arts)	29	33.5%	22	31%	24	31%	21	32%
	Reflection (SEN & EAL)	7	8%	6	8%	5	7%	5	7%
	Skipped			3	4%			0	
	TOTALS	89		71		77		71	
I have worked within education for ...	0-5 years	28	31%	18	25%	15	20%	14	20%
	6-10 years	29	33%	20	28%	17	22%	16	23%
	11-20 years	16	18%	16	23%	32	41%	29	41%
	Over 20 years	16	18%	17	24%	13	17%	12	16%
	Skipped			0				0	
	TOTALS	89		71		77		71	

Table 8.3(i) Teacher respondent characteristics compared to the characteristics of the whole teaching staff and the Baseline respondents. [Teacher BL & FL Q1, 2, & 3. Respondent numbers in tables].

		Entire teaching staff at Baseline		Baseline		Entire teaching staff at Finalline		Finalline	
		Number	%	Number	%	Number	%	Number	%
I have worked at the study school for ...	0-5 years	41	46%	34	48%	22	29%	21	29.5%
	6-10 years	25	28%	16	22.5%	27	35%	27	38%
	11-20 years	18	20%	16	22.5%	23	30%	19	27%
	Over 20 years	5	6%	4	6%	5	6%	4	5.5%
	Skipped			1	1%			0	
	TOTALS	89		71		77		71	

Table 8.3(ii) Teacher respondent characteristics compared to the characteristics of the whole teaching staff and the Baseline respondents. [Teacher BL & FL Q4. Respondent numbers in tables].

Most lessons I support are in the following zone	TAs in school at Baseline		TA respondents at Baseline		TAs in school at Finalline		TA respondents at Finalline	
	Number	%	Number	%	Number	%	Number	%
Discovery (Science, Technology & Math)	1	3%	7	25%	1	3%	6	20%
Exploration (Humanities, Citizenship, MFL & ICT)	1	3%	1	4%	2	7%	3	10%
Expression (English, PE, Expressive Arts)	2	7%	4	14%	1	3%	4	13%
Reflection / Work within various zones	26	87%	16	57%	26	87%	17	57%
Skipped			0				0	
TOTALS	30		28	93%	30		30	100%

Table 8.4 TA respondent perceived zone attachment compared to the study school zone attachment and the attachment at the Baseline. [TA BL & FL Q3. Respondent numbers in tables].

		Students attending KS3 at Baseline		Baseline		Students attending KS3 at Finalline		Finalline	
		Number	%	Number	%	Number	%	Number	%
What year are you in?	Year 7	238	33%	92	38%	239	33%	95	33.5%
	Year 8	240	33.5%	74	31%	239	33%	95	33.5%
	Year 9	240	33.5%	75	31%	240	34%	94	33%
	Skipped			0					
	TOTALS	718		241	34%	718		284	40%
Are you …	Male	406	57%	128	53%	421	59%	160	56%
	Female	312	43%	109	45%	297	41%	124	44%
	Skipped			4	2%				
		718		241		718			
Are you on the SEN register? (Special Educational Needs). **Answer 'Yes' & 'don't know'.**		198	27%	64	24%	175	24%	54	19%
Do you usually speak English at home? **Answer 'No'**		86	12%	38	16%	90	13%	42	15%

Table 8.5 Student respondent characteristics compared to the characteristics of the whole KS3 student population and the Baseline respondents. [Student BL & FL Q1, 2, 3 & 4. Respondent numbers in tables].

8.9.1 Analysis of the progress of transferable learning at the Finalline point of data collection

At the Baseline point of data collection, transferable learning was used at least weekly by 36 out of 56 (64%) of teacher respondents (Teacher BL Q31). Since then, 3 cycles of intervention had sought to provide a learning language around transferable learning skills to facilitate a greater use in all lessons and promote the confidence to include transferable learning skills as a core element of enquiry learning. Analysis at Review Point 2 had recognised the strong foundations of this innovation with usage almost universal across KS3 and Intervention Cycle 3 had focused on further embedding the 7Cs by adapting them into specific subject areas and enquiry projects to increase their impact on learning.

By the Finalline, weekly usage of transferable learning had increased by 13 respondents to 49 out of 67 teacher respondents (73%) with increases across all of the methods of usage, including within enquiry learning (Figure 8.5). In addition, 98% of the teacher respondents had used the 7Cs specifically by the Finalline (Teacher FL Q45). This was accompanied by an increase of teachers who reported that they were very confident to use transferable learning within lessons (Teacher BL Q32, FL Q7) indicating that the above aims had been met. These high usage percentages were confirmed by student findings (Student FL Q26). However, familiarity was greatest with Year 7 students suggesting that the innovations should continue to build as these students progressed through the year groups.

In addition, the number of teacher respondents who believed that using the 7Cs would not be beneficial to students had fallen to 10 out of 66 respondents (Teacher FL Q44), with the teacher interview group indicating that potentially the 7Cs were not effective for very able students who could link learning themselves without the need for such obvious signposting (Teacher FL IG Q3). Another respondent indicated that they had heard some Year 9 students (the oldest in KS3) saying that they found the characters *'childish'* and that this might be a view held by some teaching staff. This fact was also potentially reflected by the student findings where levels of perceived usefulness were lower than for teacher respondents, especially in Year 9 (Students FL IG).

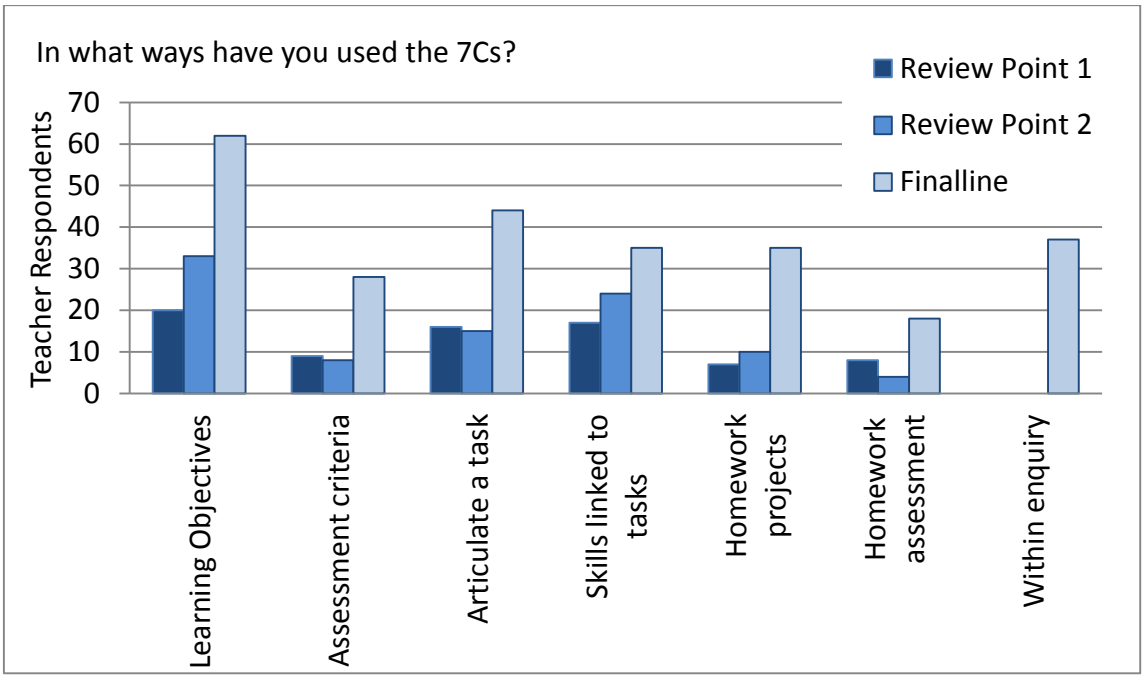


Figure 8.5 Graph to show teacher respondents use of the 7Cs. [Teacher RP1 Q24 (38) / RP2 Q23 (39) / FL Q45 (66). Respondent numbers in brackets].

In conclusion, therefore, the 7Cs were a common, if not guaranteed aspect of KS3 lessons with teachers confidently using them in a variety of ways to promote learning, particularly with younger students.

8.9.2 Analysis of the progress of group work roles at the Finalline point data collection

Group work had been the focus of previous professional development, thus 70% of teachers employed group work at least weekly at the Baseline (Teacher BL Q31) and were confident to do so (Teacher BL Q32). However, strategies to promote effective group work were inconsistent and it was here that the work of the Intervention Cycles was focused through the establishment of group work roles. By Review Point 2 there were some increase in the use of group work roles; however, Intervention Cycle 3 saw the greatest promotion of this pedagogy. Consequently a significant increase was seen in the use of group work roles by teachers increasing from 67% of respondents at Review Point 2 to 85% at the Finalline, particularly in the Expression zone (Teacher FL Q49). Generally, this increase was reflected in student figures indicating that they were

increasingly experiencing the use of group work roles, most pleasingly across all the zones rather than in just one as was represented at the Baseline point (Figure 8.6).

Of equal importance were the findings around the success of this innovation; however, these were more complex. Whilst most teachers and students respondents felt that group work roles were of benefit to some students, 20% felt they either made no difference to learning or made group work more complex (Teacher FL Q50, Student FL Q32). As these were disappointing findings, questions around this were included in the group interviews. Here teachers reported that they found using group work roles slowed the pace of learning as students were unsure about how to use them effectively and spent *"lots of time trying to sort out their role and not doing the group work task"* (Teacher FL IG Q6). Another respondent explained that for some roles, particularly 'Director', *"students didn't understand that they had to complete the role as well as doing the learning task"* and so one student would spend their time organising and not contributing. Teacher interviewees did feel that the roles had worth and *'will make students learn more effectively but they [the roles] need to be used with appropriate tasks as setting them up properly takes time and it's not worth it for short tasks'* (Teacher FL GI Q6). These findings were echoed by the student interviewees who reported that *'the ideas of roles are good but they're a bit complicated; they seem to mean there is more work to do'* (Student FL GI Q4). Overall, therefore, these findings could be seen to indicate that the development of this pedagogy required further support if group work roles were to be embraced fully and effectively.

Again, in conclusion, where group work roles were used they were consistent, however, their use was still developing with further focus required in order to alleviate barriers to their use such as their complexity.

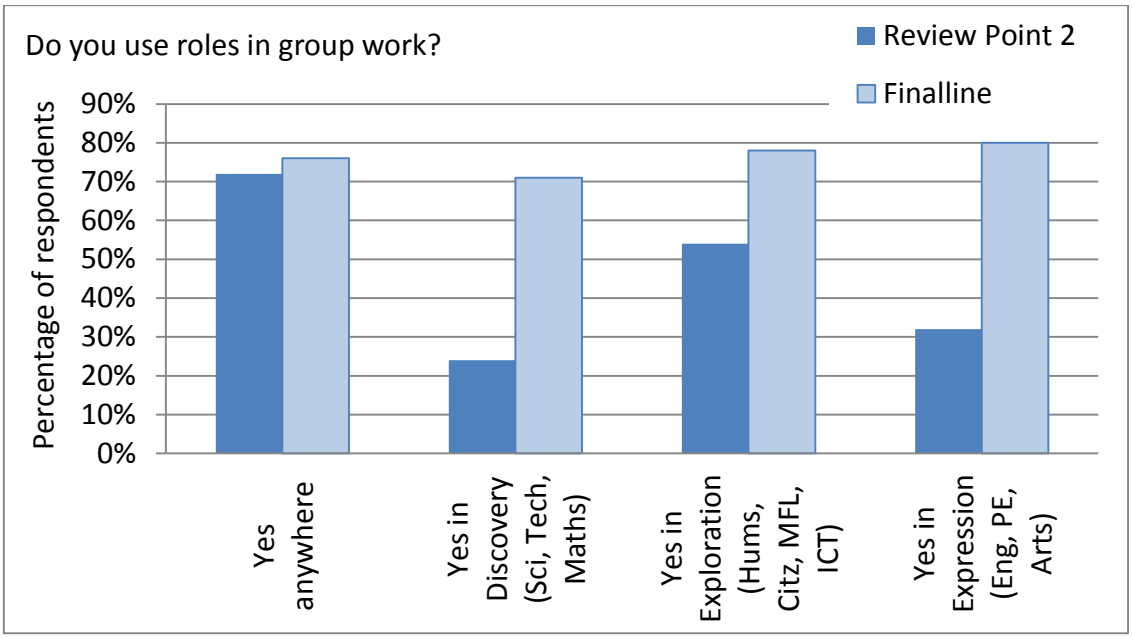


Figure 8.6 Graph to show percentage student respondents use of group work roles at Review Point 2 and Finalline. [Student RP1 Q17 (157) / FL Q31 (230). Respondent numbers in brackets].

8.9.3 Analysis of the progress of empowered learners at the Finalline point of data collection

The promotion of empowered learning within students was both an important skill in its own right, as well as being a key attribute required for enquiry learning. At the point of movement into the new building the 'C3B4ME' poster was displayed in every learning space which had caused a significant increase in teacher and student awareness (Teacher FL Q52, Student FL Q35). Teachers or students making reference to the strategies poster was, however, much lower as one third of student respondents had not used it (Student FL Q36), particularly within Year 9. Students also did not find the poster particularly helpful (Student FL Q37), a finding echoed by teachers (Teacher FL Q52). However, conversely, almost half of teacher respondents felt that since the move into the new school, students demonstrated increased levels of empowered learning than before the move (Teacher FL Q51). Therefore, it is possible that increasing the status of 'C3B4ME' had made students more willing to help themselves even if they

didn't directly refer to the poster to do so. Despite this, overall these findings indicate another area requiring continued support if 'C3B4ME' was to be fully implemented.

8.10 Analysis of the progress of enquiry learning at the Finalline data point

The facilitation of "*a curriculum experience that is creative, flexible and collaborative in both its design and delivery"* (Study School, 2008a) was the driving force behind both the design of the new building and the corresponding innovation of pedagogy. In addition, the findings at Review Point 2 had indicated that the contributing developments of collaborative planning, cross-curricular learning and team teaching had all increased. However, synergy of these elements into full enquiry projects was restricted. Therefore, questions around enquiry learning within the Finalline sought to establish both the occurrence of the constituent pedagogic tools as previously analysed, as well as opinions on its success with respect to creativity, flexibility and collaboration and the resources designed to support it. These findings would also support an analysis of the success of learning spaces in response to the final research question.

55 out of 68 teacher respondents (81%) had been involved in the delivery of enquiry learning in the new build, a significant increase from the Baseline position of 39% (Teacher BL Q31, FL Q5). However, the development of cross-zone enquiry projects appeared to have been at the expense of enquiry learning within lessons where delivery had fallen (Teacher FL Q7). Similarly, 92% of student respondents had experienced an enquiry in at least one of the zones (Figure 8.7). However, there were low student responders for this question. Follow-up interview questions around this also established that many students did not consider the projects they had completed as enquiries, despite this problem not being identified within the piloting of the questionnaires.

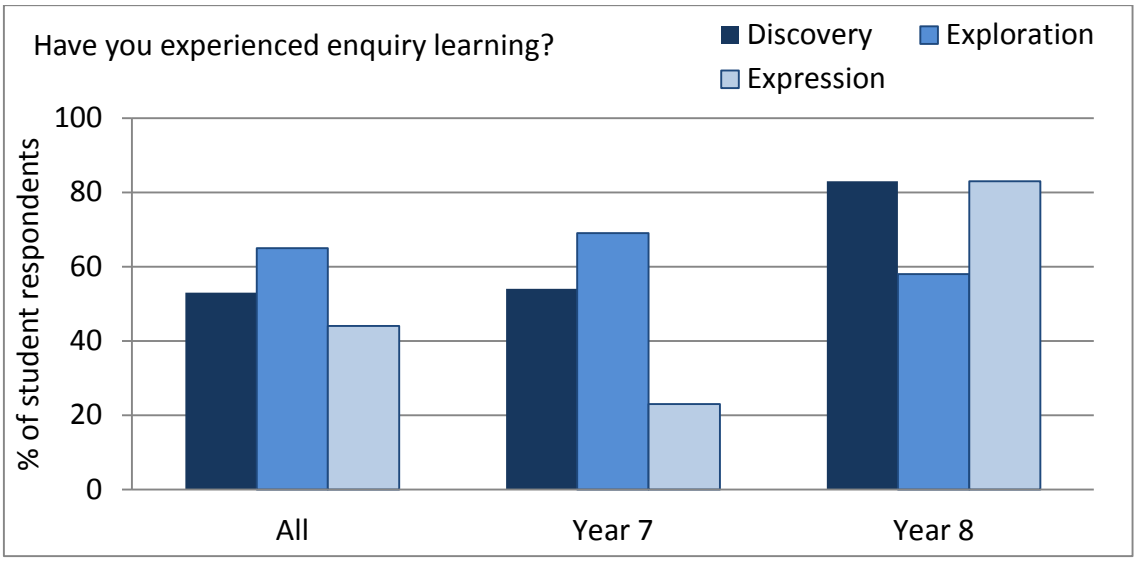


Figure 8.7 Graph to show student experience of enquiries analysed by year group. [Student FL Q18. 35 respondents].

Each teacher respondent had the opportunity to consider up to two enquiry projects where findings indicated that enquiry projects generally involved two classes working together for four lessons, though considerable variation occurred (Teacher FL Q35). Slightly more projects were completed with Year 7 students than with Year 8 (Teacher FL Q34 & 36).

62 out of 69 teacher respondents were clear about the aims of enquiry learning (Teacher FL Q23) and almost this many respondents felt at least partly prepared for enquiry learning (Teacher FL Q27), again demonstrating pleasing progress from the Baseline where only 55 professed some level of confidence (Teacher BL Q32). Teachers within Discovery were most familiar with the aims of enquiry learning. However, interestingly, they were also the zone which reported feeling least prepared.

The next set of questions sought to establish teachers' experiences of enquiry learning and their perceptions of how successful the initial projects had been. This data was collected on two separate occasions, due to external requirements of other research, with some respondents having answered the question on both occasions. Analysis of the two sets of data individually established that responses were not significantly different allowing the data to be amalgamated into one data set (Appendix 25).

The initial vision for enquiry learning within the study school involved students addressing an open question through teacher facilitated activities. Therefore, it was against these aims that the success of the final projects were analysed (Table 8.5). The percentage of teacher respondents who agreed or strongly agreed with these core principles were consistently positive at around two thirds. However, within zones some interesting variations can be seen. Enquiries within Discovery scored significantly lower with respect to open questions to facilitate learning, however, appeared to have balanced learning which represented all the faculties better than other zones, particularly Exploration. Expression, conversely, appeared to have generated the greatest freedom of enquiry demonstrated by their positive results against students taking ownership of their own learning. However, perhaps of most interest is that at least two thirds of teacher respondents enjoyed working in this way across all zones. Similarly, three quarters of student respondents agreed with the statement that enquiry learning was based on a 'big question' and that they also enjoyed learning in this way (Table 8.6).

Teacher % responses 'agree' and 'strongly agree'		Students % response 'agree' and 'strongly agree'	
Based on an open question	75%	Enquiry had a 'big question'	76%
Students discovered ideas for themselves	76%	We were able to plan how we completed the enquiry	55%
Students took ownership of their own learning	64%	We were able to plan how we completed the enquiry	55%
The teacher facilitated learning	69%	The teacher didn't tell us what we had to do	27%
Enjoyed learning in this way	71%	Enjoyed learning in this way	77%

Table 8.6 Table to show teacher and student percentage responses indicating the success of enquiry learning against the key aims. [Teacher FL Q40 (45) & Student FL Q22 (24). Repondent numbers in brackets].

Other categories, however, showed differences between students and teacher perceptions of enquiries. Teachers perceived that enquiry learning offered far more opportunities for students to discover learning and take ownership of their own learning

in line with the enquiry learning vision. However, within the group interviews students reported that *"we are still going through a series of tasks that the teachers tell us to do"* (Student FL IG Q5) whereas teachers felt that *"there is a good variety of activities and some options considering that students haven't had much experience of enquiry learning yet"* (Teacher FL IG Q7). TAs were also asked similar questions (TA FL Q21) within which all but one respondent indicated that the enquiry was based on an open question. With respect to questions around a consideration of whether teachers drove learning or students were self-directing, TA results indicated a middle ground with two thirds of respondents agreeing with both statements. Surprisingly, however, this group of respondents indicated far lower enjoyed in working with students in this way.

The other aspect of development around enquiry learning was the use of a specific front sheet to promote a consistent approach to enquiry learning; partly to ensure that the enquiry process included all the key aspects such as the 7Cs and an open question, but also to ensure that students were able to use this consistency of presentation to access the core enquiry question as easily as possible. 39 of the 55 teacher respondents who responded to this question (Teacher FL Q37) agreed that a consistent front sheet was important and 45 respondents agreed that their enquiry used one (Teacher Fl Q38). Closer analysis of these results across the three zones indicated that whilst at least 60% of respondents in every zone agreed a consistent format was important, only 3 out of 18 teacher respondents from the Discovery zone indicated that their enquiry definitely used a front sheet, significantly reducing the overall results in this area. This finding is particularly interesting as it was teachers from the Discovery zone who had formed the action research group to promote this resource.

That enquiry learning had begun within the study school was clear. However, areas identified by teacher respondents for further development included logistics such as lesson hand-over, timetable changes, sharing of schemes of work and more planning time (Figure 8.8). Required changes were also around the further development of the learning skills of students which were included within each enquiry project and so on-going intervention would be necessary.

It can be noted, however, that enquiry learning had also had an impact on curriculum lessons with the percentage of cross-curricular learning in lessons increasing from 59% (Teacher BL Q22) to 85% (Teacher FL Q33). In addition, 25 out of 53 teacher respondents indicated that they delivered more cross-curricular learning now than prior to the development of enquiry learning projects (Teacher FL Q42).

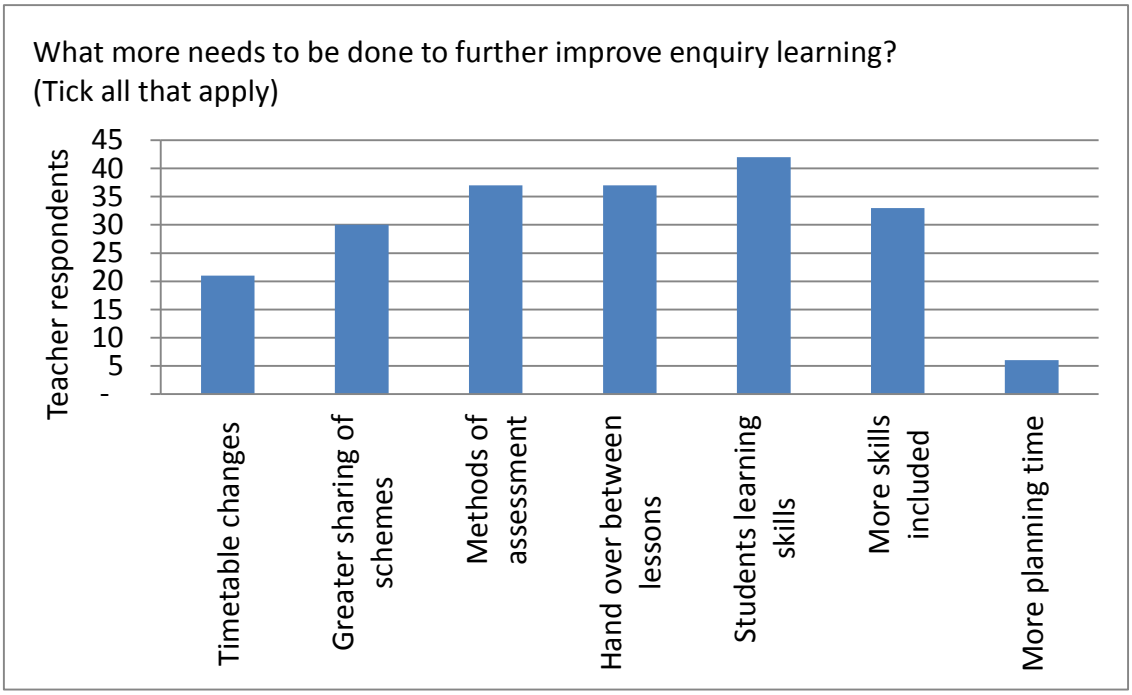


Figure 8.8 Graph to show teacher respondents suggestions around further improvements to enquiry learning. [Teacher FL Q43. 53 respondents].

8.11 Impact of innovations on general pedagogy

Also of interest is the impact of the Intervention Cycles on pedagogy within the study school as represented by the occurrence of the fifteen key pedagogies within the teaching and learning vision (Study School, 2008) (Table 8.7).

	Teacher responses			Student responses	
	Baseline occurrence	Finalline occurrence	'very confident' increase	Baseline occurrence	Finalline occurrence
Individual work	59 (98%)	69 (100%)	+ 13%	77%	74%
Paired work	56 (93%)	69 (99%)	+ 20%	75%	72%
Teachers using ICT	48 (81%)	62 (89%)	+ 18%	72%	68%
Group work	42 (70%)	54 (78%)	+ 11%	70%	60%
Transferable skills	36 (64%)	49 (73%)	+ 9%	60%	48%
Kinaesthetic learning	42 (71%)	44 (65%)	+ 6%	43%	37%
Students using ICT	16 (27%)	38 (55%)	+ 15%	58%	59%
Student leadership	27 (47%)	28 (42%)	+ 7%	22%	25%
Students as researchers	22 (37%)	23 (33%)	+ 5%	50%	48%
Creative teaching	17 (30%)	17 (26%)	+ 3%	29%	27%
Students doing enquiries	22 (39%)	18 (26%)	+ 7%	55%	14%
Student choice activities	11 (19%)	16 (24%)	+ 8%	22%	19%
Role play/Drama	6 (11%)	14 (21%)	+ 10%	23%	30%
Use of hand held devices	5 (9%)	14 (21%)	+ 17%	15%	16%
Student choice locations	3 (5%)	9 (14%)	+ 8%	22%	18%

*Table 8.7 The frequency of use of pedagogies by teacher and student respondents at the Baseline and Finalline points of data collection coupled with the increase in the percentage of teachers 'very confident' with the pedagogies use. Pedagogic increases highlighted green. [*Teacher BL Q31 / FL Q5 & 7, Student BL Q24 / FL Q6). *Respondent numbers in table].*

As has already been outlined, increases in teachers including transferable learning skills and group work occurred between the Baseline and Finalline. However, teachers also reported increases in student choosing learning activities or locations, completing role plays and using ICT. Not all of these pedagogies recorded increases by students. However, increases in students' leading learning and using hand-held devices were

reported by this respondent group. Where pedagogies had not recorded any increase in curriculum lessons, in kinaesthetic learning, researching, creative learning and enquiry learning itself, a link to common features of enquiry projects can be made suggesting that as investment in incorporating these activities into projects increased, a consequential reduction in curriculum lessons resulted. As a conclusion therefore, it can be suggested that the innovation towards enquiry learning has also had an impact on pedagogy across all lessons.

This perception was supported by an external verification of teaching where comments made indicated that the study school provided:

> *"an imaginative range of activities where students develop their ... investigative skills in a variety of contexts. It has been successfully adapted to better meet the needs and interests of students and in engendering an enthusiasm for learning through problem solving activities".*

(Challenge Partners, 2014:3)

Such an external verification of the success of the study schools innovation is very gratifying.

8.12 A summary of the pedagogic transformation made across the entire study period

Between the Baseline and the Finalline point of data collection, many of the fifteen key pedagogies included in the teaching and learning vision had seen increased use indicating that pedagogy was more varied. Of the three contributing aspects to enquiry learning, that of transferable learning realised through the introduction of the 7Cs can be seen to have made most progress. TLR 'change agents' (Fullan, 1993) had supported usage to above 90% and building from Year 7, indicating that this innovation had made significant progress towards self-sustainability. This was further encouraged by the

percentage of teachers and students who indicated that the 7Cs were of educational benefit; again with greatest support from Year 7 students.

The use of group work roles also saw increases across the study period, again appearing to be building through KS3. However, indications that the pedagogy had reached a point of being self-sustaining were not as clear (Fidler, 1996). 20% of teacher and student respondents felt that the use of roles did not contribute positively to the group work pedagogy with concerns mainly being around over-complexity. The final of the three contributing pedagogic strands, the promotion of empowered learning, had seen the least direct impact of innovation. Whilst the vision for usage was shared, the percentages of teacher and students directly utilising the 'C3B4ME' strategy was significantly lower; reflective of the fact that the percentages of teachers and students who felt the strategy would be useful had also significantly decreased. Despite this, teacher perceptions of students' self-learning skills had increased implying that, even if not directly used, the focusing of attention on students promoting their own learning had seen some indirect impacts.

However, it is the synergy of these three innovations within the development of enquiry learning that is most crucial to the consideration of success. That enquiry learning occurred across all zones with two year groups with the use of the common front sheet ensuring inclusion of the other key pedagogic developments is a significant achievement against the background of a school move. In addition, that over 80% of teachers felt at least partly prepared for this process (Hargreaves & Shirley, 2009) and a similar number were clear about the aims of the pedagogy (Knoster, 1991) would indicate that the investment of time, both in this innovation and its contributing elements, had been worth-while. Enquiries were varied in nature and scale; however, teachers in all zones indicated that they felt the pedagogy experience was true to the aims of open ended learning. Students were less positive about this indicating that they felt learning was still too teacher-led. However, the identification by teachers that students had still not fully developed the learning skills needed to facilitate this would indicate that movement towards this position was still on-going (Fidler, 1996). That over 70% of all

respondents enjoyed learning this way would indicate that this journey was likely to continue.

8.12.1 Summary of findings

Analysis of the teacher responses indicates very clearly that the pedagogic repertoire within the new building was greater than within the old building. Where pedagogies had decreased a clear link to inclusion within enquiry learning can be seen and it is perhaps unsurprising that, with such investment of time and energy in planning and running enquiry learning, the aspects of pedagogy incorporated within these are less commonly utilised in the classroom. The representation of this progress within the Challenge Partner feedback is a very positive confirmation of these developments.

That the student responses were less representative of these changes is more disappointing. However, the focused nature of enquiry learning into specific points within the curriculum and encompassing many of these aspects of learning goes some way to explaining this finding.

8.13 Finalline learning spaces

The other major change across the study period was the construction of innovation learning spaces which both drove, and facilitated, the pedagogic change. With the opening of the building occurring towards the start of Intervention Cycle 3, analysis of learning spaces had not been considered at Review Point 1 and 2. However, within the Finalline, investigation paralleling the Baseline looked at the characteristics of learning spaces before considering whether pedagogy was easier to facilitate within the new facilities.

8.13.1 Analysis of the new learning spaces

Of most significance within the new building was the addition of plaza and auditoria as 'innovative learning spaces'. As has been outlined within the context chapter, each main zone had a learning plaza; a triangular atrium incorporating adaptable furniture suitable for multiple classes where soft delimitations allowed the expansion of activities to adjoining rooms. Zones also contained an auditorium with retractable seating and presentation style ICT (Figure 8.9). Due to financial constraints, these spaces were not available to simply enhance learning when appropriate, they were timetabled spaces which required utilising for traditional lessons as well as meeting their main purpose; the facilitation of effective enquiry style projects. Therefore, questions around perceptions of the success of these spaces were essential.

Figure 8.9 Photograph of the Exploration learning plaza (left) and Auditorium (left)

The majority of teachers had taught in these environments (Teacher FL Q20); many by choice. Results from these respondents indicated that Plaza brought a range of pedagogic benefits such as multiple classes and teachers facilitating a range of pedagogies and successfully integrating ICT (Figure 8.10). Auditoria, however, had less perceived advantages. However, their ability to accommodate multiple classes more easily than Plazas was positively noted as was their enclosed nature which reduced the feeling of being 'on-show' and the disruption through the movement of other students between lessons.

Responses from TAs reported that students requiring support found these environments less easy to concentrate in (TA FL Q7), a fact echoed in the student findings. Students also identified that lessons in these spaces were less organised than in classrooms, which teachers attributed to concerns around the security of equipment (Teacher FL IG Q2). However, all student respondents supported the majority of advantages indicating that they enjoy these learning spaces and found they contributed to their learning.

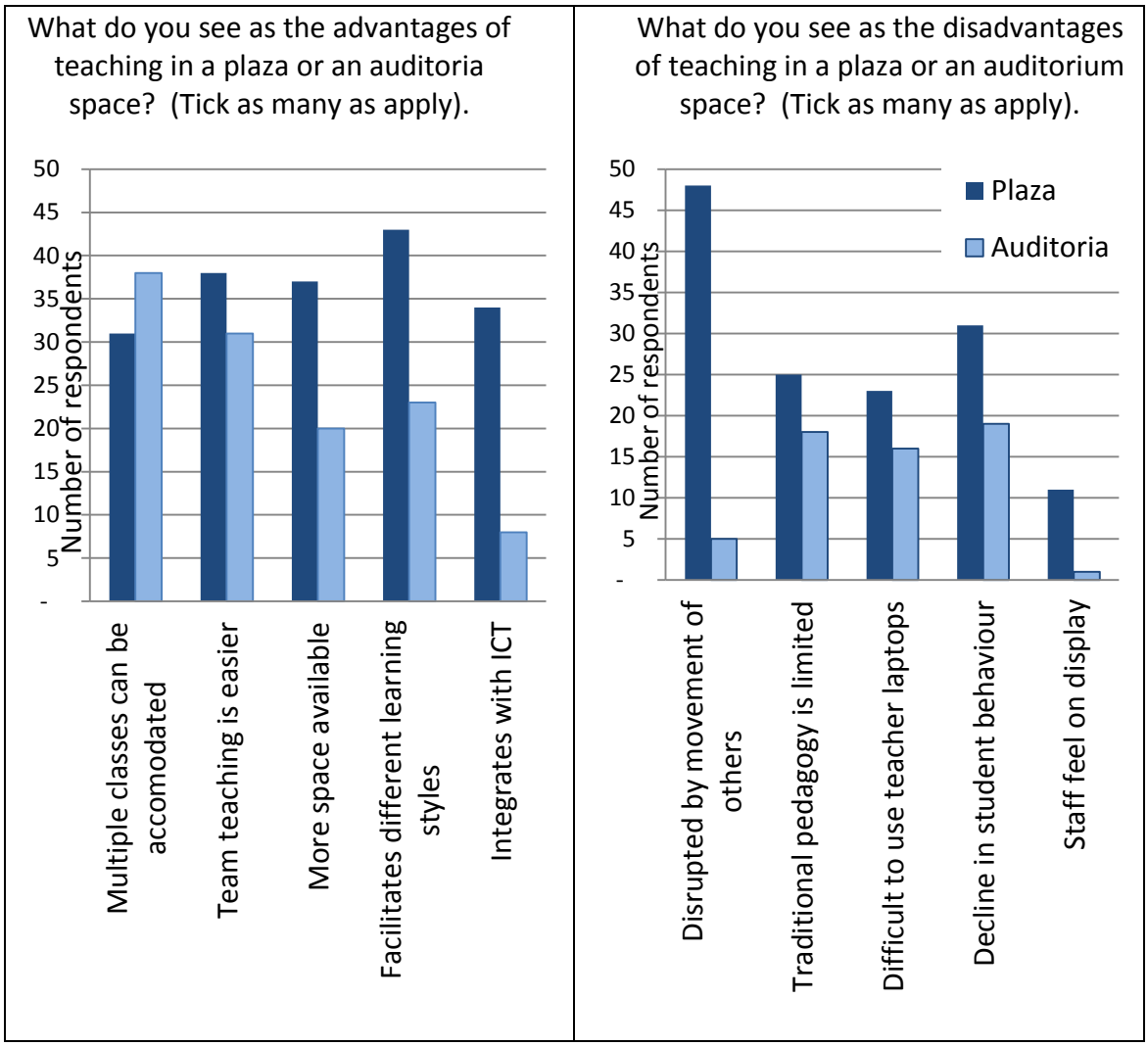


Figure 8.10 Graph to show teacher respondent perceived advantages and disadvantages of working in plaza and auditoria learning spaces. [Teacher FL Q19 / Q20. 60 respondents].

Whilst the facilitation of enquiry learning was the main design purpose of plaza and auditoria, it was hoped that the new school design would provide facilities which promoted high quality learning in all lessons. Analysis of the quality of learning spaces

at the point of Baseline had revealed some disappointing results from poor quality luminescence and heating to a lack of effective technology (Teacher BL Q14) with a clear indication that, as hypothesised by Nair & Fielding (2013), facilities could be a significant limiter to learning.

Figure 8.11 clearly demonstrates the significant increase in the quality of learning spaces generated by the school move. However, less than 100% responses around adequate lighting, heating etc. were a little surprising. Further investigation through interview groups indicated that *"because those things are all fine now, I didn't think to include them"* (Teacher FL GI Q4). Findings are also largely in line with the desires indicated at the Baseline where teachers wanted spacious, flexible spaces which were well lit, well-equipped and at appropriate temperatures (Figure 5.12).

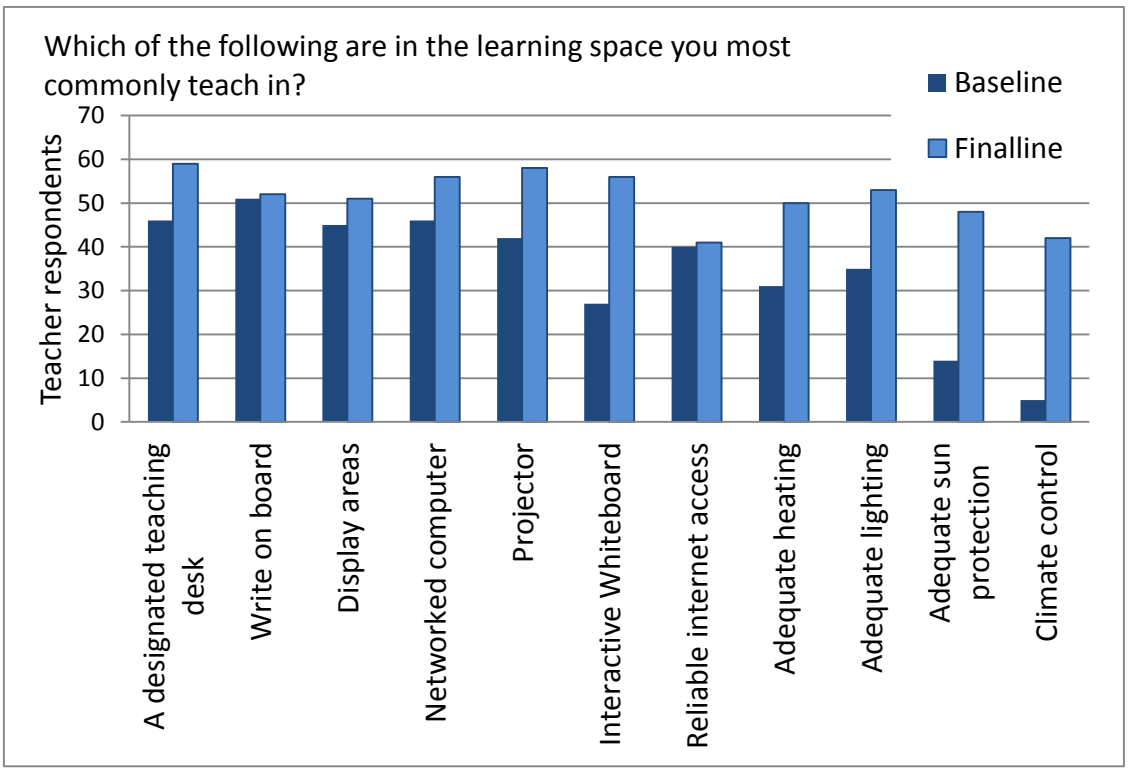


Figure 8.11 Graph to show the facilities available in learning spaces at Baseline and Finalline data collection points. [Teacher BL Q14 (62) / FL Q17 (60). Respondents numbers in brackets].

Nair (2002) also stated that delivering old pedagogies in new learning spaces could be just as unproductive as the using old spaces and so an analysis of the ease of pedagogic

delivery was also an important consideration. Results indicated that teachers felt that all the fifteen identified pedagogies were better facilitated in the new building (Figure 8.12) thus, not only had the aim of delivering innovative enquiry learning been met but the effectiveness of learning spaces for all pedagogies had been increased.

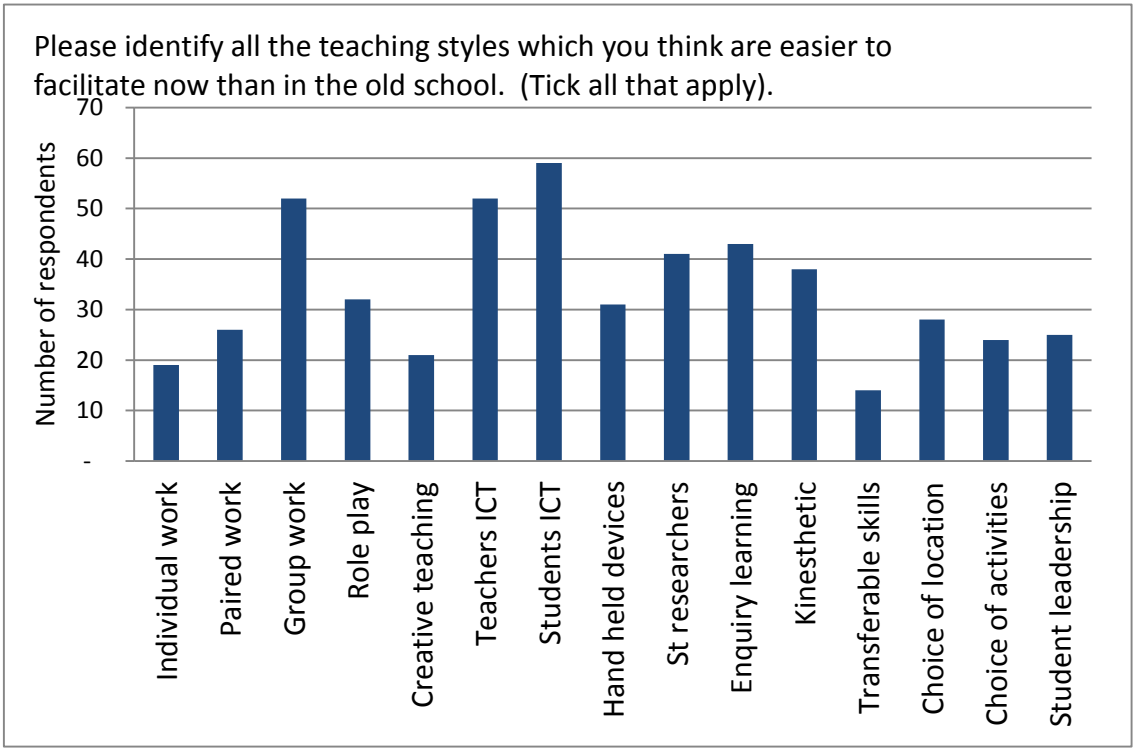


Figure 8.12 Graph to show teacher respondent perceptions of pedagogies which are easier to deliver in the new school than in the old building [Teacher FL Q6. 71 respondents].

One of the impacts of creating innovation learning spaces within the new build was the corresponding reduction in 'traditional classrooms' which increased the frequency with which teachers had to move learning spaces (Table 8.8). This was particularly noted by one group interview respondent from Exploration who commented that *"accommodation is really tight; staff are having to deliver normal lessons in plazas and auditoria and even in other zones"* (Teacher FL IG Q1). This also caused a decrease in perceived ownership.

However, that 27 respondents (Teacher FL Q19) indicated that they moved less due to the addition of mobile laptop and i-pad trolleys suggested that movement occurred by

choice when *'it suited the activity – like when I want to do large group work the plaza has more space'* (Teacher FL GI Q2) rather than due to resource needs. Another respondent indicated that students presenting work was also better in an auditorium as it added status to an event.

	Baseline (70 respondents)				Finalline (71 respondents)			
	Overall	Discovery	Exploration	Expression	Overall	Discovery	Exploration	Expression
Teachers having a main 'home' learning space	50	14	18	12	48	19	17	13
Teachers who don't feel they own their learning space	0	0	0	0	7	4	2	1
Teachers delivering one or more lessons outside their 'home learning space'	22	9	6	6	31	12	10	6
Rooms laid out in rows	13	1	7	4	9	2	3	4
Rooms laid out in groups	13	3	2	4	22	5	9	5
Purpose designed spaces	12	8	1	3	18	11	3	4
Spaces rearranged often	10	2	1	3	12	2	2	4

*Table 8.8 Teacher responses around learning space 'ownership' at the Baseline and Finalline [*Teacher BL Q5 / Q6 / 7, FL Q8 / 9 / 10 R*espondents numbers in table].*

The new building also allowed more flexibility within learning space layouts, a factor strongly desired by teachers during the Baseline data collection. However, change was still minimal, possibly due to more grouped seating arrangements. Where change in layouts did occur, it was mainly to facilitate group work, as at the Baseline point, though there was an increase in rearrangement to facilitate differentiation (Teacher FL Q14). Further investigation of these findings through the interview group indicated this was linked to the fact that *"I can direct my TAs more effectively if I sit all my SEN students in one area, particularly in tasks where we are doing longer pieces of work and the task itself is the differentiation* (Teacher FL IG Q3).

8.13.2 Summary of learning spaces within the new build

Traditional learning spaces within the new build had clearly improved through flexible furniture and superior physical characteristics. Layouts were changed less frequently than previously, but where changes did occur the inference was that these were more aligned to supporting pedagogy. Investigation into the new styles of learning spaces facilitated by the rebuild indicated that these were experiencing significant amounts of use, both through timetabled lessons and through choice. Working in these areas was presenting challenges for teachers, particularly around the open nature of learning plazas and the restrictive seating style of auditoria. However, these disadvantages were outweighed by the ability to team teach multiple classes and the facilitation of different styles of learning, especially those integrating ICT. As learning plazas, and auditoria to a lesser extent, were designed to be a key factor in the delivery of enquiry learning, these results would indicate that, whilst the possibilities they offer were not yet fully utilised, they had had the intended impact in facilitating more flexible pedagogies.

8.14 'Wordle' analysis reflecting the integration of new learning spaces and enhanced pedagogies.

Further investigation into the synergy of new learning spaces and pedagogy was assessed through a repeated 'Wordle' creation. At the Baseline, teachers and students had been asked to describe their aspirations for learning and learning spaces with analysis indicated that teachers aspired to well-equipped and physically adequate spaces. Student responses were also largely representative of these desires whilst also putting an emphasis on group working.

A repeat of this data collection at the Finalline (Figure 8.13) again indicated that many of the Baseline aspirations had been realised. Physically, indications were that the building was more amenable to learning with a high quality of space available. However, other words are of far more significance to this study. New technology featured highly

in the attributes, though the presence of 'poor technology' also indicates that ICT was not fully effective so soon after moving in. 'New learning areas', 'great learning facilities' and 'enhances learning' all implied that the desire to use new learning spaces to promote a new pedagogy was at least in part successful. The presence of words such as calm, improved behaviour and positive also implied that many of the teachers' concerns about such as significant change and its potentially negative impact on student learning had not occurred. Here analysis of the study schools behaviour data would support this fact with incidences of students being removed from lessons falling from 177 in the summer term prior to the move to 129 in the equivalent time period post-move (Appendix 29). Finally, the reference to the creation of better communication, friendly and closer teams would indicate that bringing staff together into zones had ultimately also been well received.

Figure 8.13 'Wordle' to show teachers' opinions of the new pedagogies and learning spaces

A similar 'Wordle' created of student opinions also demonstrates many pleasing findings (Figure 8.14). Whilst there is repetition of the physical improvements, there are also a number of references specific to the new facilities and learning spaces and their impact in creating 'better learning', 'better teaching' and new activities, particularly 'outdoor

learning'. In addition, a significant number of students acknowledged the fact that the new building was 'funner' as a result. These were largely representative of the desires expressed at the Baseline point where computers were much desired. However, the references to group work within the initial data collection were not represented in the Finalline outcomes.

Figure 8.14 Wordle to show students' opinions of the new pedagogies and learning spaces

8.15 Summary pedagogy and learning spaces

It was within Intervention Cycle 3 that the move to the new school building occurred allowing all the previous work around pedagogies to finally be realised as it synergised within the innovative learning spaces. Ultimately, this comprised the delivery of enquiry learning to students in years 7 and 8 driven through a process of collaborative planning and incorporating the aspects of team teaching, cross-curricular learning, transferable

skills, group work roles and empowered learning. The Finalline analysis to investigate the success of this innovation was completed 6 months after the move.

Consideration of the various elements contributing to enquiry learning was the main consideration of success within the pedagogic innovation as this was the core aim encapsulated within the educational vision for the new building. Here indications of initial success were very good as teachers and TAs perceived the aims of enquiry learning to have been realised through open questions and student driven and owned learning; though the student impressions of the latter of these attributes lagged a little behind. Despite these differences, that enjoyment of enquiry learning was high amongst teachers and students indicated that, whilst development continued, the will to carry on innovating in this area was likely to be present.

In addition the contributing elements of 7Cs, group work roles and empowered learning had all seen progress, particularly with Year 7 students indicating that innovation was potentially building through the key stage. The 7Cs of transferable learning were most embedded and being used by practically all staff, both within enquiry learning and beyond, whereas group work roles were more focused in enquiry learning though there were still some constraints on use around the complexity of the roles themselves. The promotion of self-learning skills had seen the most disappointing progress directly with usage of the poster, and acknowledgement of its potential, both remaining low. However, both teachers and students indicated a perceived improvement in these skills and so potentially an indirect impact had been realised.

The development of enquiry learning had also impacted on pedagogy beyond the core focus of enquiry learning with increased occurrence of ten of the fifteen key pedagogies noted by teachers with, in addition, student leadership perceived to have increased by students. Where pedagogies had not increased, many showed a direct or indirect link to enquiry learning indicating that the introduction of enquiry projects had encapsulated the delivery of some pedagogies within these experiences at the expense of curriculum lessons. However, whilst some of these aspects of teaching and learning could be considered to be more established within the new building it was also appropriate to acknowledge that significant further embedding was still required.

The realisation of enquiry learning within the vision was also very closely linked to the effective utilisation of the innovation learning plaza and auditoria. Here the plethora of positive attributes of plaza and auditoria, both in their contents, physical characteristics and their pedagogic potential, meant these spaces were well utilised. Whilst this use was most significantly within enquiry projects, teachers also showed a significant movement of learning to innovative spaces for the benefit of pedagogy. Finally, analysis of the Finalline findings against the attributes of learning and spaces desired at the Baseline point of data collection would indicate that the majority of these desires had been met within the design and the resulting pedagogic change.

Chapter 9 Discussion

Within this chapter the research questions will be considered through an assessment of the previous findings against the ideas promoted within the literature review.

9.1 To what extent were the opportunities presented by BSF to facilitate effective and innovative learning spaces utilised at the study school?

The design brief for the new school building encapsulated many of the ideas promoted within the BSF programme through its vision for:

> "*optimum learning conditions* for *progressive and innovative learning and teaching"* through "*flexible and responsive educational services"* inside a building that *"should inspire a sense of awe and promote a love of learning"*
>
> (LCC, 2008:7).

Research supports the importance of the physical environment for learning such as the need for natural light (Feilden, 2004), good quality air (Earthman, 2004), appropriate temperatures (Schneider, 2002) and the effective management of the physical environment to maximise learning opportunities (Higgins et al, 2005). Nicholson (2004) and Durbin & Yeshanew (2011) also conclude that there is a dependent relationship between the physical quality of learning spaces and attitudes to learning facilitated by investment in learning spaces generating a feeling of worth in a student's own education. This work is also supplemented by research which acknowledges the importance of the more intangible benefits of rebuilt schools, for example Banning's (1990) assertion that school buildings make a difference in the lives of children, and Taylor's statement that *"you can't learn in ugly"* (2009:109).

That there is emphasis on both the tangible and intangible impacts of a new build contained within the study school's Design Brief (LCC, 2008) would indicate its alignment

with the aspirations of BSF (Department for Education and Schools (DfES), 2002) and the research existing in this field (PfS, 2009; CABE, 2005; Owens & Valesky, 2007). That these aims were also largely echoed, albeit not equally, within the desires of teachers, TAs and students prior to the move into the new build was also a positive aspect. These desires included spacious environments with good-quality lighting and heating which were colourful and clean; flexible, well-equipped spaces with integrated ICT; and an inspiring, inviting and safe environment. From this it appears that the aims of BSF, the research, the study school design, and stakeholders' wishes were all well-aligned; the challenge, therefore, was in realising the vision.

So to what extent has the study school design achieved these aims? Considering the design 'in the round' first, the new building clearly encapsulated a sense of awe. Analysis of the Finalline 'Wordles' produced by teachers and students (Figures 8.14 & 8.15) indicated clearly the achievement of a bright, light, spacious, colourful, modern and, ultimately, inspiring place to learn. Indeed the greatest gains between the Baseline desires of stakeholders and the Finalline perceptions is in concepts such as inspirational, engaging and exciting learning spaces. Also the increased teacher responses around the environment being 'safe' and 'calm' as well as 'improved-behaviour' also indicated that Building Bulletin 95's assertion about buildings having the power to bring about changes in behaviour has been replicated in the study school (DfES, 2002).

Conversely, of interest is the decrease in responses around the physical attributes of the new building such as effective lighting and heating. Follow-up interviews indicated that this reflected the fact that once these features were appropriate for use, people stopped noticing them (Teacher FL IG). It would appear, therefore, that the new build achieved the sense of awe it aimed to generate and placed teachers and students into a welcoming, inspiring and comfortable environment for learning with the opportunity to motivate learners (Benito, 2010).

The ability to design a school for a current curriculum had also offered the opportunity to increase the organisation of learning spaces and create "*a clear diagram for the building"* as advocated by Partnerships of Schools (2009b:7); a fact perhaps reflected in the 'purposeful' and 'practical' notations within the teacher Wordle. In addition, the

grouping of faculties geographically, and the provision of purpose built facilities where appropriate (Figure 8.11), had created the *"internal spaces that are well-proportioned, fit for purpose and meet the needs of the curriculum"* (CABE, 2007:2).

Analysis of the change in the contents of learning spaces indicated that the facilities and resources available were vastly improved (Figure 8.13) where the addition of interactive whiteboards into every learning space, including those not recognised as 'traditional classrooms', had resulted in the effective integration of ICT as advocated by Hurst (2008) amongst others. The provision of laptop and i-pad trolleys had also promoted flexibility of learning within the spaces provided, rather than through time-consuming and inconvenient movement of classes. That movement has remained high, therefore, indicated that the relocation of learning was driven by a desire to access more effective learning spaces to facilitate learning activities and not logistical access to resources.

Another change reflected in the new learning spaces was the provision of re-arrangeable furniture to facilitate the desire to change classroom layouts; also identified as a key aspect of successful learning spaces by Nicholson (2004) amongst others. Findings here indicated that this provision had encouraged an increase in groupings of tables. However, the frequency with which learning spaces were rearranged had only increased slightly, a fact at odds with the identified desires from teachers.

In summary, therefore, the design of the 'classrooms' within the new build had delivered an organised sequence of well-equipped learning spaces which allowed the effective integration of technology. However, a recreation of the tradition (Burke & Grosvenor, 2008) in an aesthetically beautiful study school rebuild was one of the pitfalls of many initial BSF projects. Therefore, the facilitation of inspirational learning spaces (LCC, 2008), as well as the study school's vision for learning environments "*that will enable and inspire all people to be active participants of their learning journey"* (Study School, 2008:2) required more than a recreation of the previous learning spaces in an improved version.

The design features envisaged to provide inspirational learning spaces within the new building were learning plazas where a variety of furniture styles offered informal,

spacious group learning venues for multiple classes. They were also designed to be the focal point of the school build; generating a sense of awe (DfES, 2002) with their three storey high atriums and abundance of natural light creating Tanner's positive aesthetic environment not seen in many secondary schools (2000). The three main learning zones, Discovery, Exploration and Expression, also had auditoria, similar in style to a lecture theatre, with some variations in size and style.

Plaza and auditorium spaces were designed to be innovative in two ways. Firstly, through facilitating the movement of learning to different spaces when teachers wanted to effectively utilise a different pedagogy which benefited from alternative accommodation. Half of teacher respondents had taught in a plaza or auditoria as a result of timetabled lessons or enquiry delivery. However, 12 teacher respondents had chosen to take classes to these spaces for the learning opportunities they offered (Teacher FL Q20). Findings around the reasons for utilising these spaces indicated that the aims around combining classes were influential with the ability to team teach multiple classes scoring highly for both learning spaces. In addition, the openness of plazas particularly, was recognised through the acknowledgement of space and its facilitation of different styles of learning. This openness did, however, appear to make plaza less easily integrated with ICT, where the enclosed nature of auditoria appeared to be more successful. Plazas were also vulnerable to disruption, as they were not enclosed and put teachers 'on-show' with several respondents identifying the advantages of auditoria in these areas. Despite these reservations, however, the addition of flexible, informal, spacious learning environments was overwhelmingly welcomed as a positive contributing factor to high quality and appropriate learning spaces.

The second measure of the success of the new learning spaces comes, indirectly, from the teacher engagement with the fifteen pedagogies identified as key to initial teaching and learning vision. Here, the increased frequency of delivery of all the identified pedagogies not encapsulated within enquiry learning, coupled with the finding that teacher respondents considered all fifteen to be easier to deliver in the new buildings (Teacher FL Q6), would indicate that the new learning spaces were indeed effective and

provided a background against which teachers had broadened their pedagogic repertoire. In addition, that one of the pedagogies demonstrating an increased frequency was enquiry learning was a pleasing acknowledgement that the learning spaces had indeed delivered their aim; the large scale realisation of multiple group self-learning experiences.

So did the new school design maximise the opportunities presented by BSF to facilitate effective and innovative learning spaces through school design? Within the literature review, an analysis of the key features of innovative learning spaces identified a number of essential attributes: a freedom of student movement (Tanner, 2000); informal learning opportunities (Nicholson, 2004); a long life, loose fit adaptable approach (CABE, 2004); the utilisation of traditional non-learning spaces (DfES, 2003) and a 'learning studio' approach where multiple classes could work collaboratively (BCSE, 2008). Consideration of the evidence presented within this study would conclude that these aims were indeed largely met, both by the building generally and through the inclusion of plaza and auditoria within the design specifically. That Nicholson's additional assertion that learning spaces should also be 'fun' (2004) is also reflected in the 'Wordle' of students' opinion of the new facilities is a very pleasing confirmation of this success. Students at the study school are certainly not *"learning in ugly"* (Taylor, 2009:109), but nor are they simply learning in a nice, warm, safe space. Instead, they have been given a huge range of effective and innovative learning spaces within which the potential for pedagogic innovation and on-going growth is clear.

9.2 How can pedagogy be most effectively innovated?

Having concluded that the design of the study school was successful in keeping with both the aims of the BSF vision and those contained within its design brief, consideration must now turn to the achievement of the subsequent aim; that of innovating pedagogy to effectively fill the learning spaces created.

Innovating education has long been recognised as a challenge (Senge, 2012). Schools are large, highly complex organisations with a multitude of stakeholders (Hargreaves & Shirley, 2009) who are increasingly expected to be masters of a plethora of skills for which they were never specifically trained (Stacey, 2003 in Fidler, 1996). At the time of conceptualisation of BSF, innovation of education had historically proved a challenge. Following public disquiet over the autonomy of teachers during the 'first way', and teacher concern over the lack of professional recognition during the 'second way' (Hargreaves & Shirley, 2009), the Labour government of 1997 sought to rebalance these two opposing views by offering school leaders a combination of 'rights and responsibilities' (Gilland, 2011) as part of their 'standards not structures' educational focus (Blair, 2004).

It was as an aspect of balancing rights and responsibilities that the Personalised Learning agenda was created (Miliband, 2004). Designed to "*ensure that every pupil achieves and reaches [their] highest standards possible"* (Hargreaves, 2009:13), Personalised Learning encouraged schools to adapt their curricula and pedagogy so that delivery of learning was increasingly centred on students' needs (Johnson, 2004). Facilitating Personalised Learning within the existing, often poorly designed, school buildings, however, created significant challenges (Bragg, 2009). Therefore, in 2004, the Labour government announced the Building Schools for the Future (BSF) initiative under which every secondary school in England would be rebuilt or refurbished at a cost of £45billion (Mahone et al, 2011). History had indicated, however, that changing school buildings without changing pedagogy was not necessarily successful (Bennett & Hyland, 1979) as exemplified by the failure of 1907s open plan learning. Therefore, education would need to innovate if the opportunities to rethink pedagogy and how it could develop to maximise new learning spaces were to be seized.

A number of authors have considered the successful attributes of educational innovation, namely Senge (2012), Knoster (1991), Fullan (1993), Fidler (1996) and Hargreaves & Shirley (2009), and ultimately considered there to be a number of facets of successful processes (Figure 9.1). These included: personal mastery acquired by individuals that Fullan (1993) identified as 'change agents'; the ability to generate a

personal vision with teaching and learning at the heart (Senge, 2012); the sharing of the vision in an inspiring and inclusive way (Hargreaves & Shirley, 2009) and the ability to generate team working in pursuit of the innovation (Knoster, 1991). They also collectively acknowledged that change was not linear and could not be over-planned; that the journey with its frequent detours through reflective feedback loops was an essential element in successful innovation (Fidler, 1996).

Figure 9.1 Features of successful innovation as summarised from Table 2.2

9.2.1 The success of the study school's institutional level innovation strategies

In consideration of the above, the success of the overall pedagogic innovation 'process' within the study school will be considered, before the relative successes of the four aspects of pedagogic innovation are also evaluated. From the start, the rebuilding of the study school was a project within which all stakeholders were engaged and this was also evidenced within the innovation of pedagogy. The focus on a strategic vision of pedagogy was key at all times. However, whilst some features of this vision were constant, the relationships between the elements included within constantly adjusted to keep the vision effective against a background of educational and political change

(Fidler, 1996). As the pace of innovation began to gather, sharing this vision in a consistent way became a regular feature of training so that all staff were included within it (Hargreaves & Shirley, 2009).

Disseminating the leadership of different strands of innovation to key personnel within the study school's teaching and learning team allowed the generation of a number of key 'change agents', (Fullan, 1993), with the 'personal mastery' (Senge, 2012) to lead teams and disseminate ideas whilst also keeping professionalism around teaching and learning at the heart of the change process (Hargreaves & Shirley, 2009). This also facilitated a greater collaborative scrutiny of change than could be achieved by one individual, in reference to Fidler's (1996) assertion that everyone should be involved. That this leadership of pedagogic strands was then further disseminated through, initially, research group members and then zone based TLR holders, allowed the inclusion of more change agents and thus the momentum of the innovation journey to become self-sustaining (Fullen, 1993). This was further supported by the steady addition of resources, such as posters promoting common pedagogic tools and a teaching and learning section within teachers' planners, designed to reinforce the pedagogic vision without overawing the participants (Knoster, 1991). Finally, the use of an Action Research approach within the assessment of the innovation ensured that, whilst the vision might remain reasonably constant, the journey could be reflective and sensitive to more complex change in order to ensure a more successful transition (McNiff & Whitehead, 2002). Overall, therefore, the study school can be seen to have adopted an appropriate over-arching route to innovation which incorporated a number of key factors identified by authors working in this field, the success of which will be analysed following consideration of the individual pedagogic aspects.

9.2.2 The relative success of the innovation of pedagogic aspects

Four pedagogic aspects contributed to the realisation of the teaching and learning vision for the new school, and all were approached in different ways with respect to their innovation. This was partly a pragmatic decision, for example through not wishing to start four innovations simultaneously, coupled with a realisation that a whole school

approach to four concurrent innovations would not be possible. In addition, however, it presented opportunities to explore innovation strategies within education which were too important and unique to be overlooked. Therefore, the innovation approach used for each strand will be compared to the features of successful innovation (Figure 9.1).

A consideration of success will then be made based on the indications of successful adoption of the pedagogic tools identified through an analysis of the Finalline evidence (Figure 9.2).

9.2.3 The innovation of transferable learning.

The innovation of transferable learning demonstrated the greatest involvement of staff whilst also incorporating the most organic style of development. Following the identification of a 'learning hook' as a desirable attribute of pedagogy, the involvement of the whole teaching staff within the development of the pedagogic tool was facilitated incorporating the key attribute of collaboration within innovation (Fullan, 1993). In addition, the development of a demonstration idea, CLICK (Figure 6.2), ensured that a shared vision was created (Senge, 2012), albeit not necessarily clearly located within a 'big picture' of innovation at this point.

Whilst the benefits of continuing with a whole staff involvement in a development can be seen to align well with the attributes of successful innovation, the practicalities around this were restrictive. Therefore, pragmatically, the generation of a research group with an identified leader facilitated personal mastery (Senge, 2012), whist simultaneously acknowledging the professionalism of those involved by not micro-managing developments (Hargreaves & Shirley, 2009). That this team was also significant in size allowed many of the advantages around collaboration and the involvement of a range of stakeholders to be largely maintained.

	Transferable learning (7Cs)	Group work roles	Empowered learners	Enquiry learning
	Ensuring students had the ability to carry learning skills across curriculum areas	Providing students with the ability to work in groups effectively and collaboratively	Promoting strategies which allow students to help themselves	Making students into enquiring learners who are able to break down a problem and use a range of strategies and skills to solve it
	Baseline data collection and influence on next cycle			
Action Research Cycle 1	Conceptualised by SLT. Shared / developed with all staff. Focus group created with disseminated leadership. Idea shared with 1 other staff member.	Developed within Expression zone. 3 teacher researchers selected pragmatically. Resources developed from existing.	NA	Time provided to all for collaborative planning. Specific resources developed within Discovery. 3 teacher researchers selected pragmatically. Resources collaboratively developed and trialled
	Review Point 1 data collection, reflection and influence on next cycle			
Action Research Cycle 2	Organic growth promoted with all involved sharing with one other member of staff. TLR focus group created to conceptulise visual resources. Innovation adapted following feedback.	Whole staff training deliberately avoided. Ideas disseminated via zone TLR links then revisited in training. Resources introduced later.	Developed by Exploration from significant input from other schools. Trialling and design work completed before sharing.	Focus on collaborative planning through the provision of directed time. Outline documents shared in staff training and use encouraged.
	Review Point 2 data collection, reflection and influence on next cycle Move to new build			
Action Research Cycle 3	Concept introduced to students and promoted via visual resources in all areas. Adaptations to SEN, EAL and curriculum areas included. Clear expectations of use established.	Visual resources displayed in larger learning spaces. Resources for use shared with all staff. Expectations for use shared with all teaching staff.	Displayed in every learning space and adapted for SEN learners.	Enquiry projects delivered to Y7 & Y8 in all zones through use of plaza and auditoria. Extensive quality assurance work completed to analyse success and routes forward.
	Repeated Baseline (Finalline) data collection & reflection			

Figure 9.2 Summary of innovation style for the four pedagogic aspects

In addition, members of the research group became the key change agents within this innovation (Fullan, 1003) as, once conceptualised, these individuals shared the innovation with others through an organic sharing which promoted practical application in a self-sustaining way, and again placed teaching and learning at the heart of the innovation. As a result, 98% of teacher and 92% of student respondents were using the 7Cs by the Finalline data collection and teacher confidence around the inclusion of transferable learning skills in lessons had risen.

Whilst these findings indicate very pleasing levels of use, it is the impact of this use that is most important. Here, the involvement of the range of stakeholders was also key in facilitating regular feedback on the innovation (Fidler, 1996) which allowed for complex patterns of growth. For example, that the initial aim of formally rewarding the 7Cs was dropped as a response to the Review Point findings indicated that utilising information to reflect on the impact of innovations during their development can increase their effectiveness. The resultant high level of effectiveness is evidenced by the 85% of teachers who indicated that they felt the 7Cs were of benefit to at least some students coupled with 70% of students who also agreed that they were, or had the potential to be, helpful in their learning. The student figures were, however, higher for Year 7 and 8 students than Year 9, perhaps indicative that the introduction of pedagogies is more easily 'grown' through academic years.

Overall, these findings would indicate that this innovation, whilst not fully embedded, was a reasonably well established attribute of pedagogy within the study school, and was perceived to be largely beneficial to student learning. On reflection, therefore, this style of innovation could be considered to be successful with the collaboration of all stakeholders working strategically and reflectively towards a shared vision, driven by key change agents with a high level of personal mastery resulting in success.

9.2.4 The innovation of group work roles

Whilst the study school was well aware of the benefits that the inclusive innovation of the 7Cs appeared to be reaping within Intervention Cycle 1, it was also clear that,

pragmatically, this level of time could not be invested in all the pedagogic aspects. In addition, whilst the innovation of the 7Cs was occurring on a blank canvas, the innovation around group work roles involved the development of pre-existing ideas so the large scale generation of ideas by the whole staff was less appropriate.

Despite these differences, some key attributes of the innovative style used with the 7Cs were utilised within this pedagogic strand. An element of team learning was again incorporated by identifying a number of change agents (Fullan, 1993) to work together, whilst the developing of the innovation in an area of the school with higher levels of established practice ensured that these were operating at a level of mastery (Senge, 2012). Other similarities included the dissemination of leadership of this pedagogic aspect to initially members of the research group and then TLR holders within zones ensuring that the vision was inclusive and not 'top-down' (Fullan, 1993). The innovation also ran on an Action Research basis allowing feedback following experimentation on a small scale to shape the final solution through a non-linear innovation route (McNiff & Whitehead, 2002), though this was limited to the actions of the change agents. Once finalised, the introduction of the innovation to staff also tried to replicate some aspects of the organic growth demonstrated by the 7Cs with training being delivered in learning zones rather than a whole school situation, allowing a more informal style to be used to shape the strategic journey of the innovation (Fullan, 1993) and increase the chances of the change becoming self-sustaining.

Analysis of the findings around group work roles identified that this innovation showed less clear indications of success that that of transferable learning. Whilst group work *per* se showed a small positive gain overall, after an initial decrease in frequency of use, the use of roles within group work showed a significant increase, both from a teacher and student perspective. However, teacher and student perceptions of the effectiveness of the roles were less positive with 1 in 5 of all respondents indicating that they found the roles unfamiliar or over-complex and consequently found that they impacted negatively on the pace of learning and the levels of student engagement.

The innovation of group work roles can, therefore, be seen to have a mixed level of success. The drop in group work at the start of the innovation is an interesting finding

and one not paralleled in the innovation of transferable learning. Teaching staff as a whole were aware that group work roles were being innovated, as they were with the 7Cs. However, unlike with transferable learning, far fewer staff were involved in the innovation, something which possibly discouraged teachers from engaging with a pedagogy they knew was changing when they did not know the form those changes would take. This would indicate that the decision to reduce the number of stakeholders involved in an innovation had potentially limited its impact.

Other attributes of the innovation style, however, showed successes. That student noted such significant increases of the use of group work roles in all three main zones could indicate that the use of the change agents operating with personal mastery to disseminate information about the innovation to other zones had worked almost as well as the organic one-to-one style used with transferable learning. In addition, the ability for change agents to trial and reflect on the pedagogic innovation as part of their strategic Action Research journey had ensured that improvements such as adaptation for less able learners could be included improving the opportunities for self-sustaining development.

9.2.5 The innovation of empowered learners

The innovation around empowered learning started at the beginning of Intervention Cycle 2 in order that developments were staggered. Unlike other innovations, the 'C3B4ME' strategy used to empower students to be increasingly able to support their own learning was in part adopted from other schools, rather than being conceptualised within the study school. This limited the extent of personally mastery around the pedagogy (Senge, 2012), and also minimised the opportunities for true collaboration of ideas (Hargreaves & Shirley, 2009) with much work having already been completed. As with group work roles, a small team of change agents (Fullan, 1993) from one zone were utilised to adapt the strategy to the needs of the learners within the study school. Once the design was finalised and very briefly trialled, this innovation was launched by the researcher during a whole staff training session, putting the emphasis of the innovation

on the end result rather than the strategic journey to that point. The resources to support the strategy were also presented at the same point whilst being simultaneously placed into learning spaces, again minimising any potential to reflect on the innovation in order to ensure its ability to be self-sustaining.

With respect to the features of successful innovation, empowering learners experienced the lowest level of engagement. Whilst there were some elements of shared vision and team learning amongst the small team of researchers, this did not encompass the attributes of collaboration or mastery seen in previous innovations. In addition, the ability to be effective change agents was minimised as, despite involvement in the development, the sharing of the outcomes was completed by someone else.

Analysis of the impact of this pedagogic innovation via the Finalline data demonstrates the impact of this superficial innovation style. Whilst awareness was high at 100% for teachers and 96% for students, usage of the strategy was low at around 60% for teachers and students echoing, significantly, the proportion of respondents who felt the strategy was not useful; over 20% for both groups. Disappointingly, student findings also indicated a small fall in the percentage of students who rated themselves as being 'good' at trying to work things out for themselves, perhaps in reflection of the increased emphasis on them to use these skills. However, nearly half of teachers reported some improvement in students' self-learning skills raising the potential of an indirect impact on learning.

9.2.6 The innovation of enquiry learning

The innovation of enquiry learning was the most complex of the four pedagogic strands; both due to it incorporating the other three pedagogic innovations and the work of a research group focused on resource development, but also due to the restrictions on its holistic realisation created by special and temporal limitations before the move to the new building. The innovation strategy utilised here involved many different attributes of successful innovations, such as time provided to all staff to invest in collaboratively planning enquiries (Knoster, 1991), three key change agents involved in the innovation

of the resources to support delivery (Fullan, 1993) and a frequently and consistently shared vision (Hargreaves & Shirley, 2009). Within this work, change agents also had opportunities to collaboratively trial the materials they were developing allowing them to develop some elements of personal mastery (Senge, 2012), though the principles behind enquiry learning were to some extent set. Once the tools to support enquiry learning were established, a number of additional staff were then able to be involved in trialling enquiry learning on a range of scales, increasing both the feedback opportunities and the ability of the pedagogy to be self-sustaining (Fullan, 1993). That these were also supported by initially a member of the teaching and learning team and subsequently, Teaching and Learning responsibility holders supporting the pedagogic development is another indication of effective delegation of change agents. This also meant that the journey towards the final product could be strategic with the pedagogy being finally presented within the holistic vision of teaching and learning, albeit not from the start of the innovation (Fidler, 1996).

Initial indications of the success of this pedagogy were made against respondents' engagement with team teaching, cross-curricular learning and collaborative planning, with some exceptions around trialling of projects towards the end of Intervention Cycle 2. Whilst these attributes recorded steady improvements throughout the first two Intervention Cycles, analysis of the effectiveness of this pedagogy overall will be made through consideration of the Finalline results.

Engagement in enquiry learning at the point of Finalline was high; over 80% for both teachers and students, with findings also indicating that 70% of teacher respondents and 77% of student respondents enjoyed learning in this way. Teachers' collective reflections on the success of enquiry learning were also positive in a number of other areas such as allowing students to discover ideas coupled with their engagement in open questions. Analysis of these findings by zone indicated some difference of opinions, with those in the Discovery zone feeling that their subject areas were best represented yet also indicating that, perhaps as a consequence, opportunities to have open questions facilitating learning were reduced. Conversely, teachers in the Exploration zone were

more positive about the opportunities to facilitate learning through open questions yet 40% felt that their subject was less well represented.

These indications that enquiry learning was not a finished product were also supported by student opinions of the opportunities enquiries offered to learn without teacher input which were particularly low at only 27%. Students also felt that their choices within projects were still not especially high (Table 9.7). These could possibly be linked to the teacher findings indicating that the biggest constraint to the success of enquiry learning was the students' learning skill levels, reported by over half of teachers; though other constraints around the logistics of actual delivery and assessment were also strongly indicated.

Whilst it was clear that enquiry learning was not a finished pedagogy at the Finalline, the indications were of a firm foundation from which further developments could be made. High levels of engagement from teachers during the innovation process appeared to have generated similarly high levels of engagement after the school move, whilst investment in planning time and supporting resources meant that the necessary pedagogical tools were present. Identification of further improvements centred around the practicalities of delivery and the utilisation of transferable learning, group work roles and empowerment. This indicated that teachers were also aware of the holistic vision towards which they were working and innovation of this pedagogy should be on-going. Overall, therefore, both the innovation methodology and the progress through delivery of enquiry projects could be considered to be successful.

9.2.7 Summarising learning around effective innovation

If we consider the four different innovations outlined above, it is possible to rank them in order of the extent to which progress was made through an analysis of Finalline findings.

The 7Cs did not exist at the point of Baseline yet were a key attribute of KS3 learning at the Finalline with 98% of teachers and 92% of students regularly using them. Coupled

with the fact that 70% of both groups would consider this development to be of at least some use would indicate that this area had seen significant innovation which had been reasonably successful. Conversely, whilst empowered learning was also not implicitly present at the start of the study it was visible in all zones at the Finalline, though use and impact were still sporadic at best. Only 60% of teachers and 64% of students refer to the strategies on at least a weekly basis and, more importantly, less than half of teachers and a quarter of students felt the strategy was universally successful. Group work *per se* had been a constant aspect of learning throughout the study; however, the specific addition of roles to this pedagogy was innovative. Only 36% of teachers regularly assigned group work roles to students and 20% of teacher respondents felt that there was no benefit to doing so. However, student exposure to group work roles was greater, as was the perceived benefit of roles, with 80% of students recognising some advantages. Finally, enquiry learning had seen significant changes around occurrence from having been consigned to theme days at the start of the study yet being experienced by all Year 7 and 8 student respondents and 81% of teachers by the end. Whilst enjoyment of enquiry learning was high at 77% for students and the logistics of team teaching and collaborative planning were well established, the quality of the enquiries still required some development with 79% of teachers still feeling that learning skills needed further inclusion.

At a superficial level of analysis, innovation of the 7Cs would, therefore, appear to be most 'successful' followed by enquiry learning. The least successful innovation would appear to be that of empowered learning where, despite higher levels of usage than group work, there is a lower perception of value whereas the potential benefits of group work roles are recognised by 80% of students and teachers, with an acknowledgement that lower familiarity is a potential limitation to their impact. These pedagogies are ranked as such within Table 9.1.

Summary	7Cs	Group work roles	Empowered learners	Enquiry Learning
Change agents	Yes	Yes	Yes	Yes
Personal Mastery	Yes	Yes	No	Some
Collaboration	Yes	Some	No	Some
Shared vision (all staff)	Yes	No	No	Some
Reflective of feedback	Yes	Some	Some	Yes
Strategic journey	Yes	Yes	No	Yes
Self-sustaining	Yes	Yes	No	Yes
Rank of improvements demonstrated	1	3	4	2

Table 9.1 A ranked perception of the success of pedagogic innovation against the included aspects of successful innovation strategies (Table 2.2).

As well as ranking the perceived impact of innovations, the inclusion of the aspects of successful innovation within each pedagogic strand can also be considered. Transferable learning demonstrated the most inclusive nature of innovation with the initial involvement of all stakeholders ensuring that a shared and reflective journey towards a strategic vision through collaboration was assured. In addition, the refining of this approach facilitated the development of change agents developing a personal mastery of the innovation which, through its organic sharing model allowed a steady growth more encouraging of self-sustainment.

Enquiry learning also demonstrated many of the elements included in the development of transferable learning, though critically lacked the inclusion of a shared vision or collaboration at a whole school level. Instead, the proforma identifying the core and consistent elements of enquiry learning was developed by a zone based team whilst the

simultaneous development of projects, albeit through collaborative planning, was also a small group activity. Thus the level of collaboration and a shared vision are considered to be less than for the development of transferable learning. This model of innovation did create a number of change agents working to innovate enquiry learning. However, the limited ability of these agents to collaborate with numerous other staff or trial their developments as fully as had been facilitated within the 7C development meant their personal mastery of the holistic innovation was also less. Other important aspects of innovation, however, were represented, for example the use of targets to ensure that completion matched a strategic journey to success and the use of this study to ensure progress of what was initially a largely theoretically based development due to space constraints, was a reflective process allowed future innovations that were responsive and targeted.

Within the development of group work roles, the opportunity to trial the pedagogy meant that personal mastery was increased. However, the slightly shorter development period meant that the opportunities to gather reflective feedback were less. Of potentially most significance, however, is the lack of sharing of this innovation with teachers outside the research group during the development with, instead, the pedagogy being presented as a *fait-accompli*, albeit within smaller groups.

It is within the innovation of empowered learning strategies that the least evidence of inclusion of the core elements of successful innovation was seen. The development of this innovation from work completed in other institutions meant that, whilst change agents were in place, their opportunity for personal mastery and collaboration were limited, leading to a less self-sustaining outcome. The collaboration around this development was also affected by the shorter period of time available for its innovation which, in turn, meant that reflective feedback was severely limited and the innovation had less opportunity to be strategically designed or widely shared.

If we combine the analysis of the relative success of the pedagogic strands with the components integrated into the innovation of each element then a confirmation of the necessity of these core features of successful innovation can be hinted at (Table 10.1). Innovation of the 7Cs involved every identified aspect of effective innovation and also

demonstrated the highest levels of embedded use whereas the development of empowered learners demonstrated only minimal levels of embedded use and referenced only change agents and minimal reflective feedback within its development. Similarly enquiry learning demonstrated some engagement with all seven features of successful innovation yet demonstrated neither the high levels of engagement with personal mastery nor collaboration or a shared vision facilitated so effectively by the whole staff development of the 7Cs. Consequently, the innovation of enquiry learning could be seen as secondary in success to the 7C development.

Similarly, the development of empowered learning contained very limited reference to the attributes of successful innovation with only the involvement of 'change agents' restricted to the adaption of a previously developed pedagogic tool and the limited development time severely restricting the opportunities for reflective feedback. This limited inclusive nature of the innovation strategy is linked to a similarly low level of success of the pedagogic tool. Group work roles whilst having more ingredients for successful innovation included in their innovations similarly suffered from a lack of collaboration and reflection in their development towards a vision which was not fully shared.

Broadly speaking, therefore, where the key elements of successful innovation are included in the developmental process the chances of a successful embedded innovation are increased.

9.3 To what extent can changing pedagogy maximise the opportunities created through innovative learning spaces?

Analysis of the first and second research questions would indicate that the opportunities offered by BSF to create an effective design at the study school had been taken, and that pedagogy had been innovated with reasonable effectiveness; so to what extent were these two attributes being combined? Driven, albeit indirectly, by a Labour government

vision of personalised learning (Blair, 2004), yet set within a period of Conservative government promoting a more traditional and austere educational vision (TES, 2010), the school design had the potential to recreate all the failings of the open plan initiatives of the 1970s (Bennett & Hyland, 1979), where facilities were innovated in isolation from pedagogy (Adelman & Walker, 1974), and therefore fulfil Nair's (2002) hypothesis that delivering old style learning in new style spaces is actually a regressive approach for the students involved. This last question will seek to establish the extent to which the vision of innovative pedagogy has maximised the opportunities offered by the inspirational learning spaces.

The new school design featured a significant percentage of traditional style learning spaces but also included a range of innovative additions, particularly plazas and auditoria specifically designed to facilitate enquiry style learning yet also offering opportunities for pedagogies not effectively facilitated by previous learning spaces. As has already been discussed in response to the first research question, teachers reflected positively on the ability of these spaces to facilitate multiple classes and team teaching. They also noted their ability to accommodate different learning activities through reported increases in the frequency of the fifteen pedagogies contained within the teaching and learning vision which were not recognised as attributes of enquiry learning. Improved learning spaces were also well reflected in the 'Wordle' findings where a range of positive reflections included better resources, new learning areas and great learning facilities. The improved features were also doubtless significant contributors to the reflection on the attributes of light, space and colour present in the new build.

The greatest reflection on their success, however, comes through analysis of the success of enquiry learning, the pedagogy plazas and auditoria were ultimately conceptualised to facilitate. The original vision was to:

> *"deliver a curriculum experience that is creative, flexible and collaborative in both its design and delivery"* within *"a learning environment that will allow all people to be active participants of their learning journey".*
>
> (Study School, 2008:5)

The recognition of 'great' and 'new' learning spaces within the 'Wordle' responses is an immediate confirmation that the innovative learning spaces were seen as beneficial to both teachers and students alike. In addition, the inclusion of words promoting aspiration such as 'amazing', 'positive' and 'inspirational' further reinforce the idea that the innovative learning spaces had created the sense of investment in students' learning that was hoped for. This is further supported by the Finalline data which identified the facilitation of different learning activities as a major advantage of plaza, coupled with the fact that they offered larger spaces in which to learn, whilst auditoria brought benefits around larger scale presentation by both adults and students and appropriate facilities for integration of ICT.

In addition, the completion of enquiry learning projects by every student in years 7 and 8 across all three learning zones is an achievement which would not have been possible in the old building, at least in part due to a lack of appropriate facilities. The innovative learning spaces within the new building ensured that these projects could be run over extended periods of time with multiple groups engaged simultaneously in a wide range of learning activities. That these projects also largely encompassed the attributes of 'big questions', 'group learning' and an element of student choice, all seen as being key within enquiry learning, demonstrates that the opportunities to create a new style of learning had been taken, both spatially and pedagogically. In addition, such positive indications that both teachers and students appreciated the opportunities offered by the new style learning spaces would confirm that they are being actively utilised in the manner intended.

9.4 A summary of the findings

At the heart of this study lies a synergy between innovation, pedagogy and space. Ultimately, therefore, it is this synergy which must be addressed within this conclusion. The ability to apply a variety of approaches to innovation to the different pedagogic aspects being developed facilitated an exploration around innovation within education.

Here, a comparison of the progress made within the four strands of pedagogic development against a framework for successful innovation as indicated within the literature review demonstrated that where an innovative process is conceptually well planned the potential for successful innovation is elevated. This point is well illustrated by the significantly more embedded transferable learning skills which were developed through a process inclusive of all seven aspects of successful innovation compared to the relatively unsuccessful innovation of empowered learning where only two of these aspects were integrated into the process.

Whilst the innovation of space *per se* lay outside the remit of this study, the design being already set at the studies conception, the ability of new learning spaces to maximise the potential of pedagogies was fundamental to the success of the building overall. Therefore an assessment of the success of innovated learning spaces was included. Physically, spaces were far superior than those contained within the old building and, as such, ensured that previously identified barriers to learning such as poor luminescence and badly integrated technology were removed. In addition, a chance to rethink learning layouts had facilitated a far greater shift to students seated in groups even if the opportunities for frequent rearrangement of facilities were still rarely utilised. Of most significance, however, are the findings which indicate the increased facilitation of a range of pedagogies identified within the original design brief such as group work, the use of ICT and kinaesthetic learning which have resulted in a greater pedagogic range than was previously seen; a fact inevitably beneficial to student learning and again in line with the study school's desire to move away from didactic learning in order to create students who are able to *"acquire skills so that they are able to make informed and sensible decisions in all aspects of their lives"* (Study School, 2010:1).

The most significant of these gains is inevitably around enquiry learning and other pedagogies which are subsumed within this such as students as researchers and student leadership. It is here that the real vindication for the success of the design lies through the realisation of enquiry learning projects involving multiple classes simultaneously investigating open questions in an anytime, anywhere approach to learning. It is also at such times within the study school that the delivery of the desire for bright, clean, calm,

modern spaces facilitated the integration of technology and improved facilities for learning can most clearly be seen.

In conclusion, therefore, the findings would indicate that, whilst in no way a completed and embedded process, significant strides towards an innovated pedagogy which successfully utilised the attributes of well-designed and innovative learning spaces had been made. Findings indicated that a greater variety of pedagogy had been experienced within curriculum lessons demonstrated by increases in the frequency of use of all the fifteen pedagogies identified as desirable in the vision for learning yet not encapsulated within enquiry learning. In addition, the realisation of enquiry learning which was specifically developed to maximise the opportunity of new spaces to house multiple classes engaging in varied and selected pedagogies had also been achieved. Finally, the increase in moving learning into these spaces driven by teacher choice would indicate that the design had achieved the desirable attributes identified at the Baseline data collection of flexible, bright and spacious areas and become an effective space for a variety of learning activities.

Anecdotally, as an internal researcher, the opportunity to see 90 students collaborating in the engaging and challenging activities which filled such spaces was an absolute delight. It served as a confirmation that, despite the changing educational background and the whims of educational policy, the vision was right and the realisation successful for both the students and the study school.

Chapter 10 Conclusion

The initial research questions for this study were:

- To what extent were the opportunities presented by BSF to facilitate effective and innovative learning spaces through school design utilised at the study school?
- How can pedagogy be most effectively innovated?
- To what extent can changing pedagogy realise the potential of innovative learning spaces?

The results and discussions previously presented can be used to conclude that the extent to which these questions have been answered is varied though, overall, successful.

10.1 Responses to the research questions

With respect to the first question, the opportunities which were presented by a BSF rebuild to facilitate innovative learning spaces can be considered to have been well utilised. The aims of BSF to provide attractive environments that should inspire learning were holistically incorporated into the design brief of the new school build which sought to:

> *"Deliver a curriculum experience that is creative, flexible and collaborative in both its design and delivery and clearly applicable to the world outside school"* and *"Provide a learning environment that will enable and inspire all people to be active participants of their learning journey"*
>
> (Study School, 2008:2)

One impact of such investment was inevitably the provision of higher quality facilities for learning and evidence contained within this study would indicate that this was successfully met. Learning spaces contained significantly more resources than previously with the integration of ICT being a particularly welcome addition appreciated by both staff and students alike. The extension of this integration into spaces previously not recognised as being explicitly used for learning would also indicate that the 'anywhere, anytime' attributes of the learning vision had also been facilitated. That the physical qualities of learning spaces were far superior to those in the old building was also an unquestionable gain within the new building in part indicated through a lack of responses around heating and lighting concerns represented in the 'Wordle' responses and indicating that the improvements in the physical features of the learning spaces meant that they were no longer noticed. Finally, the increased pedagogic repertoire resulting from the focus on pedagogy and availability of new spaces for learning cannot be overlooked. However, offering the greatest capacity for success through a high risk, high investment strategy, and therefore also the greatest potential for failure, were the inclusion of auditoria and plazas within the study school.

The inclusion of spacious plazas and auditoria within the design meant that the study school had the potential to deliver on the aim of spaces being innovative because these extended the scale of learning spaces from those previously available. However, building them alone did not guarantee innovation and enhancement. The open plan schools created in the 1970s had failed to realise a similar potential for a change in design allowing for a more informal teaching style (Bennett & Hyland, 1980 in Brogden, 2007). This occurrence of "*innovation without change*" (Adelman & Walker, 1974 in Brogden, 2007:61) was largely attributed to a lack of training and development around the new pedagogies required to effectively fill these spaces (Brogden, 2007). Therefore, the challenge within the study school was to ensure that these learning spaces were effectively filled with an innovated and shared pedagogy that maximised their potential and were not simply used to deliver lessons that couldn't be accommodated in the more traditional style learning spaces.

That the spaces came to be built at all is in itself an indication of success. Designed against an educational backdrop of Personalised Learning promoted by a Labour government the change to a 'Conservative' approach to education, in both name and nature, opened the door to these spaces becoming white elephants. That the study school decided to pursue what was right for its students, even when significant funding cuts would have been most easily met by the removal of these areas, could be considered a brave decision. More importantly, this study has provided some evidence that the decision could also be considered to be the right one. Findings presented in the discussion indicate that the new learning spaces created were effectively utilised in delivering those of the fifteen key pedagogies identified in the vision yet not recognised as attributes of enquiry learning, particularly group work, transferable learning skills, creative learning activities such as role play and student choice around learning locations and activities. They also facilitated the innovative enquiry learning designed to promote students' learning skills (Study School, 2008) and within which pedagogies not identified as increased individually could be seen to be subsumed. Teachers leading learning within plazas and auditoria indicated that these learning spaces were flexible, able to accommodate multiple groups, able to facilitate team teaching and also offered opportunities for a range of different styles of learning whilst also promoting a sense of space and openness; thus meeting the aims of BSF. In addition, students were consequently able to learn in ways that could not have been facilitated in the old building's learning spaces, both within curriculum lessons and in lessons where they were withdrawn for small group support. Finally, in perhaps the greatest degree of endorsement of the success of these spaces, a significant number of teachers were choosing to utilise these learning spaces to engage in activities that were less well supported in traditional classroom environments.

The second research question, investigating the effective features of educational innovation, can also be seen to have a positive outcome. The opportunities presented by the BSF build to innovate a complex entity such as pedagogy, through the utilisation of different innovative strategies had the potential to offer a unique insight into the key contributing factors for the successful leadership of change. Thus development of the four main contributing pedagogic strands, by default and design all conducted in slightly

different ways, were analysed against a potential framework for success derived from a study of the literature. Within this **strategic journey** towards a **shared vision**, **personal mastery** through **change agents**, **collaboration** and **self-reflection** to facilitate **sustainable change** can all be seen to be key (Table 2.2). Where the inclusion of elements proposed as necessary for successful innovation were high, the outcomes of the innovation process were more positive than for those pedagogic aspects where inclusion of key innovative aspects were incomplete. For example, the innovation of the 7C pedagogy can be shown to have included all the key aspects identified for successful innovation and, as a result, would be considered to be the most successfully innovated pedagogy whilst the C3B4ME pedagogy, lacking five of the seven elements, was least successful. An educational change proposal which encompasses these seven key elements of innovation can therefore be hypothesised as a strategy for effective innovation in institutions like schools where change is acknowledged to present challenges (Senge, 2012).

The final research question, maximising the pedagogic opportunities created by innovation learning spaces, could effectively be rewritten as 'how to avoid the failings of open plan education in the 1970s'. From the very beginning of the BSF political journey, the intertwining of rebuilding schools with implementing Personalised Learning was destined to need a synergy of ideas that required vision and commitment to implement. It is within this question that the most holistic consideration of the findings is necessary, yet also where the most intangible measures of success are at play.

The delivery of enquiry learning projects involving significant numbers of students and teachers within the last Intervention Cycle of the study would indicate that, on the surface at least, effective application of a developed pedagogy to innovative learning spaces had been achieved. However, we can all fit square pegs into round holes if we hit them hard enough. This study was about the effective synthesis of pedagogy and space and here the findings are more complex.

Holistic enquiry learning projects could not have occurred in the old school buildings due to a lack of appropriate learning spaces. Further, at the commencement of this study, teachers neither had the familiarity or confidence with an appropriate overarching

pedagogy nor the tools required for effective enquiry learning. Therefore, in this regard, the opportunity presented by the design of the new building was effectively filled by the innovation of a whole-school enquiry learning pedagogical approach, which required substantial staff development. At a deeper level, it was the effective innovation of a number of pedagogic aspects, coupled with the development of teacher skills such as team teaching and collaborative planning, which required synthesis to allow the creation of effective enquiry learning experiences and thus seize the opportunities presented by the learning spaces. Whilst any particular enquiries were not, by the end of the study, a finished product and further innovation and refinement are still needed, the huge strides made towards this aim of inspiring teaching based on creativity must be seen as a success. Further, the vision and staff engagement are in place to sustain further developments.

In conclusion, therefore, the study school can be considered to have successfully utilised the opportunities offered by Building Schools for the Future, coupled with effective and yet pragmatically strategised pedagogic innovation to go some way towards maximising the opportunities of innovative learning spaces.

10.2 Limitations of the study

Being a practitioner researcher working within the environment being studied was always going to bring potential limitations to the study processes and findings. The research methodology for this study sought to minimise these limitations, whilst acknowledging that the realisation of the study also benefitted from an intimate knowledge of the organisation that was only truly available to those operating within it.

The use of anonymous quantitative data collected via an online platform went a significant way to ensuring that respondents were able to be open and honest about their opinions. That data collection was also at a large scale was important in this regard as it decreased the possibility of any individual being identifiable within a category (Bell,

2010). The collection of qualitative data, both with respect to research and interview groups, presented more challenges to an internal researcher, particularly with respect to teacher respondents well-known to the researcher (Opie, 2004). Here, assurances of confidentiality and a complete transparency over the notes taken within meetings reassured participants significantly, and therefore the researcher would consider that respondents were open and honest about their opinions. In addition, student research groups were created outside the researcher's presence and contained students not taught by the researcher who were not asked to give their names. The reduced ability of the researcher to identify these students amongst such a large total student body therefore offered a greater chance of anonymity than was afforded to teachers, and again the researcher would consider that students were offered conditions which were conducive to them being honest and open about their opinions. Another significant limitation was the collection of qualitative data only at the start and end point of the study. As a part-time researcher this was an entirely pragmatic decision based on the time available to conduct research which, by default, had to be within working hours.

In addition, whilst including reasonably significant numbers of respondents from the different groups considered, data collection was not representative of every stakeholder within the identified groups at the study school. The student data collection was based on convenience sampling specific form groups in order to make it of a manageable scale yet included significant numbers to make it representative, whilst the assurance of anonymity for teacher and TA respondents made it impossible to chase up non-respondents as they could not be identified. Despite this, the number and characteristics of responses gained at all the data collection points would indicate that this study is representative of the opinions within the study school.

Finally, the study was based on one example of an institution undergoing a complex change against reasonably unique circumstances. Whilst significant efforts have been made within this study to identify links between actions and impacts, these are limited in their rigour as they are based on singular instances and, as such, may not be considered to be applicable to other institutions or situations.

10.3 Potential applications of the research

As alluded to above, this study is unique; a perfect storm of opportunity, vision and drive. However, its unique nature should not be seen as a limiter to its usefulness. The premise of striving to improve pedagogy for the benefit of learning is a familiar one in most schools and this study demonstrates the innovation of a range of individual aspects which have been shown to be beneficial beyond the vision of enquiry learning. This includes a particular focus on pedagogic tools with students developing the strategies required to link learning across curriculum areas, increase their effectiveness in group work through the use of roles and consider more effectively strategies to empower learners to remove their own learning barriers regardless of whether they are participating in an enquiry learning project or not. All of these aspects should be considered to be transferable to other institutions.

Of course, the development of these attributes has not occurred by chance and perhaps the greatest application of the research contained within this study is within educational innovation. Through an opportunity to apply different aspects of an innovation framework to a variety of pedagogies a clear illustration of the features of effective innovation has been generated. Where innovation is well strategised, clearly communicated and reflectively driven by a combination of inspired individuals and collaborative partnerships, then organisations can achieve embedded and effective innovation given an appropriate time frame. However, the dangers of skipping steps or rushing through this process are well illustrated by the outcomes of less considered innovations such as student self-learning skills in a reflection similar to those made around the failure of 1970s open plan learning identified as "*innovation without change*" (Brogden, 2007:61). In an educational climate where the drive towards academic achievement is more relentless than ever all schools can benefit from both innovating pedagogy to support learning skills but also doing it in an effective, timely and financially astute manner. This study has the potential to short-cut facilitation of such achievements.

In addition, whilst the conceptualisation of enquiry learning within the study school undoubtedly benefitted from the opportunities created by innovative learning spaces,

the potential behind such a development is not similarly limited. Within many schools, large potential learning spaces, like dining areas, sit empty for significant periods of time and could be brought alive through innovative teaching and learning. This study demonstrates that where a clear vision around learning in different spaces exists then the realisation of this aim is possible if a combination of an appropriate supportive framework and autonomy are created.

Much of the success of these developments is rooted in the inclusive nature of the innovation process facilitated by this study. However, practitioners don't need to embark on formally accredited research to engage in such a process. Indeed, it could be argued that good practitioners are continually reflecting on their work and refining their strategies for the benefits of students. However, the identification of this process as Action Research creates the opportunity to reflect more strategically on progress being made and facilitates the potential to use analysed data to direct the 'next steps' of intervention accordingly. For example, the removal of the assessment aspects of the 7Cs of learning could be seen as pivotal to its final adoption, due to the removal of an identified barrier of over-complication. Also, the refining of the vision for enquiry learning to be focused on a smaller number of year groups was made in response to the concerns expressed over finding time for collaborative planning. Therefore, the benefits of this approach to innovations at a range of scales cannot be overstated; especially when the development of internet based data collection tools allows such quick collection and easy analysis of a multitude of stakeholder opinions as again has been demonstrated within.

10.4 Aspects of originality

As a researcher, the opportunities offered by the rebuilding of a school will always be significant. That this rebuild necessitated such a significant shift in pedagogy to be effectively utilised presented a unique opportunity to combine theories around learning spaces, pedagogy and innovation. With England's school rebuild programme being such

a brief entity in its formal realisation through BSF, coupled with a changing educational rhetoric at a time of austerity, the number of schools that made the, perhaps brave, decision to embrace the opportunities of BSF in their purest form were limited. Thus this research opportunity can be considered to be original in nature.

The scale of pedagogic change was also significant to the rationale for this study. Whilst many educational institutions will consider changing individual aspects of pedagogy, few may look to generate such a whole scale change resulting, in this study's case, in 240 students and 22 teachers doing something completely new for a week of curriculum time. However, this study demonstrates that where innovation is well strategised and inclusive of a variety of stakeholders, significant changes can be achieved; without necessarily a need for change. If the new school building had never been realised, the old school would still be benefitting from the 7Cs linking learning skills and students' abilities to both work more effectively in groups and by themselves. Therefore this study was about more than effective change; it was about transforming learning to facilitate an inclusive vision through the effective development of teachers and students.

Whilst the focus of this study was around innovation and pedagogy, the opportunity to use mixed methods Action Research on a reasonably large scale also presented itself. Action Research is increasing seen as applicable to education due to the complexities that exist within the workings of a school (Groundwater-Smith, 2013) meaning that the opportunity to systematically reflect upon innovations whose impacts cannot always be anticipated can be crucial to a successful outcome. In addition, mixed methods approaches within social sciences Action Research have also seen an increase as the ability to develop breadth and depth of understanding is advantageous in the dissemination of findings (Johnson et al, 2007). Within this study, mixed methods Action Research was utilised as the systematic process by which innovation itself was driven, and reflectively critiqued, at an organisational level. The Review Points following Intervention Cycles created reflection opportunities from which further interventions could be envisioned or refined as appropriate in light of the breadth and depth of opinions collected. They also offered opportunities for significant amounts of teacher voice to be collected, particularly at the Baseline and Finalline data collection points

where the generation of quantitative data followed up and explored further through qualitative methods facilitated detailed analysis of stakeholders' views. Hopefully, this study goes some way to establishing the rational and strategies by which this methodology can be effectively utilised in this way.

10.5 Recommendations for future study

This study is a story only part-told; it is a tale of innovation delimited by a Baseline and Finalline placed arbitrarily in time. Innovation does not stop. Change self-perpetuates change, whether it be planned or accidental, and as such the potential for further study at this institution is immense.

At the Finalline data collection point enquiry learning was still very embryonic. Enquiry projects had happened, yet the true holistic concept of an enquiry had not been realised. Instead a focus on hurdling a series of logistical challenges had been effective in ensuring that large numbers of students and teachers had simultaneously completed activities structured in order that a big question might be answered. Ensuring that students used each of these learning experiences to develop a skill set which would allow them to find their own way through such a project was inevitably a longer term aim and thus one potential area for future investigation. Another consideration for future investigation would be one driven by the original aspects of the study school vision; that of producing students equipped with the skills to be effective learners and employees which by default will take five years for exam results to be acquired by students fully influenced by the changes to pedagogy.

Other potential areas for development focus on the pedagogies themselves; either the effectiveness of varying styles of staff development used to promote pedagogic change or the effectiveness of individual aspects of pedagogies. That this study serves as a pen portrait of pedagogy and learning spaces at points in time facilitates these and a number of other research opportunities.

Whatever and whenever the focus of future research within this institution or others, guidance around research into the synergy of pedagogy, spaces and innovation can also be drawn from this study. The development of a vision early on, albeit one not yet fully refined or holistically shared, was crucial in keeping the momentum and direction of innovation true. That the vision encompassed all the areas for study and the tentative relationships between them would also be considered a powerful attribute. A consistency of language use around the vision was also highly important, particularly if extensive data collection outside the researcher's presence means that complex ideas need to be communicated succinctly and accurately if findings were to be reliable. Finally, the success or otherwise of studies of this nature hangs on inclusion. Significant numbers of teachers, TAs and students contributed to this study either directly by developing pedagogies or indirectly by sharing their opinions on them; only through such inclusion can change be holistic as has been evidenced by these findings.

It is an enormous privilege to have the opportunity to be an integral part of such a dynamic project. Pedagogy at the study school would doubtless have changed within the duration of this study. However, it is unlikely that such profound and sustained change would have been realised without the vision of the school leadership and a considered process of innovation. It is therefore enormously gratifying to know that students choosing to complete their education here are benefitting from the results of this work and will continue to do so for considerable periods of time.

10.6 Outline of additional work

This supplementary writing seeks to explicate the conceptual significance of the study through the generation of a conceptual framework for the climate necessary for effective innovation. This work will commence by placing this writing into the context of the study. The concepts behind professional learning will then be developed through an examination of collaboration within education within which particular attention will be paid to the work around Communities of Practice and Professional Capital. The findings of the study will then be reconsidered with respect to the attributes of effective

professional learning and a revision to the proposed model for innovation re-presented in light of these findings.

10.7 The synergy of Personalised Learning and Building Schools for the Future (BSF)

As previously discussed, the study school commenced designing it's rebuild at a time when an agenda of Personalising Learning was driving the educational rhetoric. Defined broadly as education tailored to individual needs (Hargreaves, 2009), Personalised Learning was an undefined vision of achievement for all students regardless of background or circumstance (DfES, 2008). Despite such altruistic aims, a number of major concerns existed around Personalised Learning: academically perhaps most coherently articulated by Fielding (2012) who labelled the concept ahistoric, superficial and individualistic amongst other terms. In addition a number of logistical concerns around the implementation of Personalised Learning abounded such as a lack of flexibility in the secondary curriculum (Campbell et al, 2007); a shortage of funding (Johnson, 2004) and, most importantly to the situation under consideration herewith, a concern that delivering Personalised Learning required flexible teaching approaches, variable group sizes (Breunlin *et al*, 2005) and effectively integrated technology (Leadbetter, 2005) which were not possible in the facilities of existing education establishments.

It was against this background of inappropriate school buildings that the Labour government announced the *"greatest school renewal programme in British history"* (Blair, 2004: n.p.). Building Schools for the Future was implemented to rebuild or refurbish every secondary school in the country within 15 years to create *"flexible, inclusive, attractive learning environments"* (Miliband in Smithers & Hall, 2004: paragraph 5) that would transform education for young people. Whilst no blue print for such facilities was produced, Building Bulletin 95 (DfES, 2002) articulated the features of successful designs; spaces for a varied number of students and activities; resource spaces where independent work could be facilitated; social and movement spaces which

could be effectively utilised for learning and external spaces which could facilitate curriculum delivery (DfES, 2002); a broad reflection of the requirements for Personalised Learning.

Thus the design of the study school reflected these two intertwined government visions; an inventive yet effective school building incorporating a variety of traditional and innovative spaces, with the latter encapsulating the flexibility necessary to facilitate varied learning activities which successfully integrated technology. The design envisioned three learning zones each incorporating both a large open learning plaza and an auditorium within which students could access a broad pedagogic repertoire. Included within this repertoire would be the vehicle to primarily support students to become the effective life-long independent learners desired by employers (Cassidy, 2014); a cross-curricular enquiry based learning approach to KS3 (Study School, 2008).

10.7.1 The need for pedagogic change

Such a shift, whilst highly commendable in both its adherence to the visions of BSF and Personalised Learning and through its desire to support students progressing into employment, presented significant challenges as demonstrated by the baseline data collection. The pedagogic approaches and the use of space within the study school at the initiation of the study were both far more traditional than the vision of enquiry learning required. Teachers largely delivered lessons in their 'own' room with furniture layouts which were not overly synonymous with students interacting during learning. Similarly, whilst identifying the skills needed within student learning was occurring in some lessons, it was not widespread, thus skills such as student leadership or effective research were significantly underdeveloped. The integration of ICT was also very limited largely through both physical and technical limitations.

Whilst the physical environment could be seen as limiting factor dictating an alternative approach to pedagogy; a more significant barrier lay within teachers' attitudes to change. Low teacher confidence levels paralleled the lesser usage of more marginalised pedagogies, for example around students as researchers or facilitating a choice of

learning activities (Table 5.5). Similarly, engagement in the professional development activities that would potentially address these restricting factors such as collaborative planning and team teaching, was also limited, particularly when examined as a process outside faculty units. Due to a lack of investment in resources, time and possible finance in the continuing development of professionals in the study school, teachers were largely teaching in the ways they had always taught and demonstrating a reluctance to explore the potential of different pedagogies.

Whilst, therefore, the provision of innovative learning spaces at the study school had the potential to remove some of the identified barriers to pedagogic innovation it was also important to acknowledge that such opportunities also create challenges. Experimentation with the significant change of learning spaces in the 1970s through the creation of open-plan schools had been less than successful. A lack of associated pedagogic innovation had meant that many teachers repartitioned learning spaces with cupboards (Prohansky & Wolfe, 1974 in Bennett & Hyland, 1979) resulting in a learning space that was less flexible than that previously available. Within the study school the creation of innovative learning spaces was a bolder change than that of simply opening up spaces; it was a dominant feature of the school design and so the necessity of making the change successful was even greater.

Thus work was undertaken to innovate pedagogy within the study school towards a vision of student enquiry based learning where students worked through a range of self-chosen activities to problem-solve a solution to an open-ended question. However, effective enquiry learning requires the amalgamation of a number of contributing skills and so a number of innovation strands were identified. Primarily, students needed to carry transferable learning skills across subject areas. To this end a system by which cross-curricular skills were commonly identified was the first contributing skill set identified within a re-orientated pedagogic approach occurring throughout the school. In addition, consideration was made to the extent which students would need to work both independently and in groups during enquiry learning. Significant teacher development had already been completed to develop skills around facilitating effective group work; however, it was felt that this solid foundation could now be further

developed to establish roles within group work that would allow students to increase the purposefulness of collaboration. Conversely, very limited work had been completed around promoting strategies to empower students to be independent; indeed one of the largest frustrations for teachers working with KS4 students was their lack of learning resilience. As autonomous learners are also an over-riding desire for employers, this was another area where significant strides were required both for improved student learning habits but also for increased future employability (Cassidy, 2014). Finally, the amalgamation of these skills within periodic enquiry projects was going to be challenging and so a consistent framework within which enquiry learning could occur was seen to be advantageous.

Within the study school, whilst teachers were beginning to recognise the benefits of planning lessons in conjunction with others and appreciate that investments of time in this way were productive (Hargreaves *et al*, 2007), this quick-win activity was very much focussed within faculties and findings indicated that the connection of subjects across the zones were still tentative, particularly where externally driven links, like those generated by the STEM initiative, were not established. There was also very limited realisation of collaborative planning with team teaching being rarely utilised outside education with Special Needs students. Consequentially, if students were to be developed into independent and self-sustaining enquiry learners; it was clear that a similar development also needed to be facilitated amongst teachers if innovation was to be successful.

It was the challenge of ensuring that innovative learning spaces and refined pedagogy were synergised to facilitate high quality Personalised Learning in effective learning spaces that presents the core principle under consideration within this study. However, behind this lies a more fundamental concept. If changing pedagogy is about *"teachers as the ultimate arbiters of educational change*" (Hargreaves & Shirley, 2009: Three Principles of Professionalism); how do schools generate the right climate to support their teachers to innovation education? It is this concept that this additional writing seeks to explore in more depth.

10.8 Strategies for school improvement

Analysis of the educational improvement landscape demonstrates that there has been a steady shift in the focus of school improvement strategies in the last 30 years (Hargreaves & Shirley, 2009). Characterised initially by teachers as action researchers, educationalist strove to find successful methods of implementing lasting change yet, *"educational change is rarely easy, always hard to justify and almost impossible to sustain" (*Hargreaves & Fink, 2003:693). Even where successes were recorded such as the rise in standards driven by the implementation of the literacy and numeracy hours into primary education in England, the lack of development of the professionals delivering these formal strategies meant that four years into the innovation, the improvements in results had plateaued (Harris, 2011). As a result, *"most change victories [were] fleeting and their celebration [was] premature"* (Hargreaves*,* 2007: n.p.), particularly where institutional change was politically driven and centrally implemented (Moreno, 2009). Therefore, the school improvement landscape needed to shift once again and thus required an effective model for collaborative practices around which such innovation could be generated.

10.8.1 Models for collaborative innovation

A number of different approaches to institutions learning together have been identified to promote sustainable change by capitalising on the vertical connections between levels of hierarchical school leadership and the lateral connections that facilitate school to school collaboration (Harris & Chrispeels, 2006). These have been noted to take a variety of forms such as networks containing anywhere from 3 or 4 practitioners, either intra or inter-institutional in nature, to research groups running across nations (De Lima, 2008). However, it is the nature of these collaborations, rather than the logistics, within which the true facilitation of school innovation can be found.

It was the work of Lave & Wenger (1991) which began the consideration of an alternative concept for professional learning. Prior to this, learning was considered a 'standard paradigm' within which knowledge was transferred from a recognised teacher or

'expert' working in a formal space to an acquiring teacher as 'student' (Fullan, 2000). In effect learning was the mirror activity to teaching (Duguid, 2008). Lave & Wenger (1991) forced a re-examination of this assumption proposing instead that learning was an 'emerging paradigm' achieved through participation in a multitude of social practices (Figure 10.1). Firstly, the development of learning as the generation of meaning within life i.e. 'learning as experience'; secondly learning through practice i.e. 'learning as doing'; thirdly learning as an impact on evolving identity i.e. 'learning as becoming' and finally, learning within a community where enterprise contributes to a greater aim and experience becomes recognised as competence i.e. 'learning as belonging' (Wenger, 1998). As such, this emerging paradigm was of learning as a collective, relational and social activity within which the deployment of cogitative, social and physical resources facilitated learning to become a living practice rather than a theory based activity (Duguid, 2008). Such learning was termed 'situated learning' and sought to acknowledge that learning was influenced by context just as context was influenced by learning (Illeris, 1999).

Figure 10.1. Components of a social theory of learning after Wenger, 1998:5.

There was also an integrated awareness that such learning was learning for the long term and would be part of an ongoing process. However, in an educational system

where short term improvements are valued far more than systematic and considered innovation, a move away from quick-win solutions will be a challenge (Illeris, 1999). Within the study school, the innovation of pedagogy was driven by a £21 million investment in an educational building provided for the long term. Thus the incorporation of components within the innovation process which act in support of social learning was crucial in realising this and ensuring learning became the living practice identified by Duguid (2008).

10.8.2 Communities of Practice

It was further work by Wenger (1998, 2000) that expanded the concepts around learning as a social activity into what is now the recognised, yet still fluid, concept of 'Communities of Practice' (Amin & Roberts, 2008).

Defined as:

> *"groups of people who share a concern or passion for something they do and learn how to do it better as they interact regularly,"*
>
> (Wenger, 2006, 'What are Communities of Practice? Section, paragraph 1)

Communities of Practice were built on the premise that society accumulates learning over time by building upon and exploring a knowledge base generated by participation in complex social systems. As such, identified Communities of Practice build learning through an "*interplay between social competence and personal experience*" (Wenger, 2000:227). Such interplay is generated by three considerations within a Community of Practice. Firstly, Communities of Practice must have a **joint enterprise** approach to learning in order that the learning process generates a self-sustaining spirit of enquiry. To do this, a Community of Practice must seek to address gaps within its knowledge proactively and also be open to the addition of knowledge that potentially changes its direction of travel. In order that such knowledge gaps can be effectively filled and knowledge combined to generate a sum greater than its constituent parts, Communities of Practice must secondly operate with **mutuality**. Everyone within the community must

be both a contributor and receiver of knowledge, confident that they will be treated with respect in a trust based environment. Thus the collaborative generation of the final attributes of learning becomes a **shared repertoire** within which the community is self-reflecting on both the generation of learning but also its position within the broader communities within which it operates. As such, within an effective community of practice; learning is a function of doing; just as doing is a function of learning.

Yet it is also the relationship between experience and competence that allows Communities of Practice to keep evolving as a consequence of an appropriate level of tension between these two factors (Wenger, 1998). For a Community of Practice to effectively maintain the tension between competence and experience necessary for continued learning, whilst also establishing conditions which promote a shared repertoire, a number of considerations were also identified as important. At the centre of a Community of Practice must sit a focus; a learning project around which experience and competence can be discussed through regular learning events. Membership of a community of practice is also a key consideration. Effective communities need to have a small enough core membership to allow connectivity between members, often facilitated by a recognise coordinator (Wenger *et al*, 2002) whilst also containing multiple layers of 'leadership' which encompasses visioning ideas through to facilitation (Brouwer *et al*, 2012). Finally, Communities of Practice are, almost by definition, self-sustaining yet evolving organisations focussed around the continual generation of learning from knowledge which is not contextualised nor personalised (Woo, 2015); rather it is shared and explored as a community activity. As such, communities need to be reflective and responsive; they need the enterprise to keep learning, the mutuality to remain cohesive and a shared repertoire to reflect and apply their findings (Wenger, 2000).

Considering social learning as the heart of Communities of Practice, it is unsurprising that such learning organisations were never a concept considered to act in isolation. There is an assumption that individuals belong to a multitude of Communities of Practice and therefore the transfer of information through engagement in different communities at different times provides another crucial addition to the accumulated learning that can

occur (Wenger, 2000). Thus, the tension between experience and competence generated at the boundaries between Communities of Practice creates a pivotal zone for learning which expands the knowledge generated within each socially interactive community. Again, however, consideration of the climate necessary for such learning is crucial both on a short term and through support of boundaries that are also fluid and therefore responsive to need. The core of each Community of Practice needs to ensure that activity at the boundary meets the needs of all involved through negotiating an equality of input, establishing a commonality of language and operating in a transparent way. As such the recognition of the value of 'brokers' of learning who could migrate across the fluid boundaries between Communities of Practice rather than operating solely within one area was also made (Wenger, 2000); providing that such brokers were able to operate with the commonality of learning language formerly referred to.

It is though such zones of boundary learning that the addition of individuals to Communities of Practices occurs through a process termed Legitimate Peripheral Participation (Woo, 2015). Occurring over a period of time, Legitimate Peripheral Participation allows individuals formally operating outside a Community of Practice to engage positively with the more mature practice being generated within it. As a consequence, the membership of Communities of Practice is also fluid as newer members migrate from the boundary through peripheral areas to the core and vice-versa (Hughes, 2007) as learning is grown, revised and migrated from one community to another in a process that has the potential to increase the rate of learning overall (Fuller, 2007). Such interaction is also crucial in ensuring that learning remains current and thus Communities of Practice have the potential to be responsive to problems at an early stage possibly ensuring that challenges at an organisational level are avoided (Wenger, 1998).

Hence the operation of a multitude of Communities of Practice within any organisation, including educational institutions, can be seen as part of a systematic shift to raise the bar in the promotion of learning. Indeed, without such an inclusive approach, "*the adult culture in a school can undermine most school reform efforts"* (De Meulenaere, 2015) yet the potential use of Communities of Practice as a tool for the management of school

improvement can actually undermine their raison d'etre for being (Hatch & Cunliffe, 2006). Artificially created teams often have a rigid leadership and membership and fixed aims which removes much of the fluidity associated with the most effective Communities of Practice. Over time such teams tend to conform to the greatest authority within the team and generate a group rather than individual thinking mentality which has been shown to be more likely to arrive at an exaggerated outcome due to the generation of a competitive rather than collaborative basis for community learning (Newell *et al*, 2009).

Therefore, to be most effective, Communities of Practice need to be the spontaneous creation of non-hierarchical self-managing inter-connected groups focussed around a goal of mutual learning and knowledge development. Within the study school, the incorporation of such an approach was a fundamental in the facilitation of many of the core features of the innovation model as identified from the literature review (Figure 10.2).

Figure 10.2 Model of innovation proposed in Chapter 2 (Table 2.2)

Collaboration is highly dependent on social learning by its very nature and, by facilitating multiple groups of teachers to research areas largely independently, also created the non-hierarchical attribute of effective complementary Communities of Practice

focussed around a the various attributes of the central learning project; the facilitation of enquiry based learning. However, that research groups were also kept smaller in size with the attachment of Teaching and Learning team members to some groups simultaneously facilitated the core membership and the recognised co-ordination necessary tor productive action. In addition, the inclusion of change agents within a collaborative innovation process also ensures that knowledge development can be generated in a mutually beneficial way and allowing the self-sustaining nature of innovation required. This. in turn, when coupled with a reflective feedback process is a core feature in enabling a Community of Practice to become self-managing and in facilitating effective and embedded innovation.

This exploration of the links between the identified attributes of innovation and effective Communities of Practice adds further weight to the argument that in order to be successful, innovation needs to be a carefully considered process inclusive of a range of features. However, of equal if not more importance than all these skills is the creation of an appropriate climate for innovation and here an alternative collaboration of key authors brings us perhaps the strongest consideration of the conditions necessary to support successful innovators; the generation of Professional Capital.

10.8.3 Professional Capital

The concept of investing 'capital' to improve net worth is not new. However, the application of the concept of capital to education has sat uneasily with those who do not want to see education's primary purpose become the generation of profit; either directly through reducing the quality or quantity of teaching, which normally accounts for around 85% of a school budget (Odden, 2011), or indirectly through the promotion of technology to replace the role of the teacher (Hargreaves & Fullan, 2012).

Instead Hargreaves and Fullan (2012) propose an investment in the Professional Capital of individuals as a way to engage teachers in the sustainable improvement of their educational practice and build an education system that will be both high in quality and sustainability. Within the context of education this translates as the recognition that

financing the development of teachers is a long term investment in capacity building for the greater good of the next generation rather than a focus on a 'here and now' improvement (Emo, 2015). Professional Capital is therefore an ideal which must be achieved through the promotion of three areas of professional value; human capital, social capital and decisional capital.

Human capital is focussed on an individual's knowledge and skills and is similar to Senge's (2012) concept of personal mastery. Within an educational context this involves developing the requisite knowledge and skills necessary to qualify to teach, but also through recognising that this is only the start of a learning process. Beyond qualification, teachers need to embrace the passion and moral commitment necessary to keep developing these attributes for the fullest benefit of all. As such, developing human capital to the point at which someone has the expertise to be qualified to teach is the outcome from an educational process to a tertiary level (Hobson *et al*, 2014). However, facilitating the development of the competence Wenger identified as vital to effectively apply pedagogy to learners is one only developed through application to real situations. 'G*ood teachers are not just well-oiled machines*' (Hargreaves, 1998:385); thus, one teacher working for thirty years has a far greater awareness of the appropriate application of their skills to a specific challenge than the collective knowledge of thirty teachers with one years' experience each. It is this application of teachers' knowledge that is so crucial in effective learning (Day & Smethem, 2009) yet this creates a challenge for innovation. If the development of teachers' skills is so dependent upon competence gained through a significant number of years of experience, how do schools afford to have the necessary number of highly paid experienced staff to promote change? The answer lies within collaboration and the hypothesis that development in isolation within teaching is often seen as counterproductive (Hargreaves & Tucker, 1991). Therefore, improvement in human capital requires the commitment to learn in collaboration with others; an investment in social capital.

Social capital resides in the relations between teachers (Leana, 2011) and refers to how the quantity and quality of interactions between individuals affects their access to a collective base of knowledge and information. Thus it is the extent to which social

interaction provides access to the human capital of others and consequentially generates a tension between experience and competence to develop an individual further than is possible in isolation (Hargreaves & Fullan, 2013). As such, social capital is important when thinking about the right climate for innovation. However, to simply put a number of individuals together is not going to necessarily generate the desired outcomes. Thus Fullan (2000) makes a well-articulated argument that it is only by combining professionals with varied opinions that the necessary tension for creative conflict can be generated.

As well as facilitating the development of individuals, social capital is key to the effective development of systems where the old adage 'two heads are better than one', is promoted; particularly where the combination of intrinsic and extrinsic knowledge, the key to successful innovation, can be facilitated. The embedded success of initiatives developed by teachers working in collaboration rather than isolation (Datnow, 2011), and where possible with contributions from non-teaching staff (Stoll & Louis, 2007), is frequently demonstrated. Conversely, where teachers generate developments without collaboration, the outcomes can lack cohesion and result in professionally isolated teachers being inclined to leave the profession (Hargreaves & Tucker, 1991).

However, providing teachers with opportunities to enhance their human capital, through high quality and on-going training, and social capital, by making sure they have opportunities to work with others, is not enough to promote truly embedded change (Hargreaves, 2005). Innovators also require the autonomy to make decisions about where, when and how to apply their skills and knowledge for best effect (Leana, 2011). This is **decisional capital**; the recognition that teaching is a profession and as such contains professionals who, with the right investment in their human and social capital, should be trusted and supported to make professional decisions about how best to teach the individuals in-front of them.

Decisional capital comes from experience with around 10,000 hours of practice being considered the required amount needed for the brain to assimilate all the information necessary to make consistently high quality decisions that fully utilise the human and social capital of an individual (Gladwell, 2009). Within teaching in the UK, where

teachers are contracted for 1265 hours a year (DfE, 2015:52), this equates to seven and a half years at the chalk face. Thus it is the teachers who have several years of experience within the profession who;

> *"retain but also reign back some of their enthusiasm, and with growing confidence, competence and a sense of being established, they feel able to remain open to yet also selective about the change initiatives they exploit"*
>
> (Hargreaves, 2005:981)

Yet again this is an affirmation that it is only through the retention of teachers for significant periods of time in an environment based on professional trust and open communication that a school can expect to achieve a core outstanding teaching base around which generation of professional capital as a school ethos can be grown.

Within the study school, the strategy for innovation demonstrated a range of the attributes of Professional Capital. The utilisation of staff with varied levels of experience demonstrated the recognition that human capital is to be valued and that needs an investment of time to develop fully. In addition, the mixing of the levels of experience within the groups innovating strands of pedagogy allowed these high levels of experience to be shared for the benefit of many. This is also an aspect of social capital which in turn was further supported through ensuring that there was also a variety of subject backgrounds within each collaboration facilitating sharing of knowledge and the ability to collectively fill any knowledge gaps that existed within individuals and the groups collectively. Finally, the self-sustaining nature of such developments coupled with strategies such as the organic sharing of ideas where possible and the flexibility around the usage of many of the pedagogic innovations ensured that all individuals involved within the innovation, and those who were utilises of the pedagogy within the study school in general, had their professional capital highly valued.

10.9 Amalgamating Communities of Practice and Professional Capital into the proposed model for innovation

The above discussion, therefore, offers further evidence in response to the research question around the features of effective innovation. Yet it is in the interaction of these elements that the generation of the tension necessary to innovate effectively lies. So how do the attributes of Professional Capital, underpinned by the principles of Communities of Practice, intersect with the features of successful innovation (Figure 10.2) as modelled from an analysis of the literature?

One of the core aspects of successful educational innovation identified by Senge (2012) was the establishment of **personal mastery** within the area of focus. This idea was further developed by Fullan (1993) who coined the phrase '**change agents'** for those who utilised their human capital as well as an innate drive to convert personal mastery into actual change. Both of these attributes clearly ally with an investment in an individual's human capital whilst also providing the sphere of knowledge necessary to build an effective climate for innovation. They identify the need for investment in an individual's knowledge base in order that they can effectively contribute to an institutions innovation.

Internalising such a knowledge base would, however, lead to a more maverick approach to innovation and so here we need to consider the social capital encapsulated within the model. It was the work of Fidler (1996) who formally identified that a clear and contextualised **shared vision** within a Community of Practice was crucial to the process of innovation and thus, like many other authors, identified that innovation was strengthened by **collaboration** within the process. It is here that we see the influence of social capital through the realisation that opportunities to apply personal mastery to a focus in the company of others generates learning which is greater than the sum of its parts. It is also through collaborative learning discussions that an individual's personal mastery of a subject increases and so as in the theory of Professional Capital, the opportunities afforded by investment in social capital consequentially increase the human capital of the participants.

The inclusion of collaboration to promote a shared vision through strong social capital investment is only truly effective, however, if the process of collaborating towards a shared vision has the power to mould that vision throughout the innovation process. This is a features of innovation Fidler (1993) also identifies as crucial to successful processes, particularly where this facilitates a sustainable yet distributed leadership (Richmond & Manokore, 2010). Without such opportunities, innovation processes involving individuals with high knowledge bases working in collaboration lack any investment in decisional capital and become the, albeit effective, implementation of top-down policies for the benefit of short-term and un-sustained gains. Thus the opportunity for innovators to be **reflective of feedback,** in order to refine the shared vision of innovation through a **strategic journey** of change, is the most significant sector of the innovation model. This generates the professional trust which sits centrally to the success of Communities of practice.

It is within the combination of these three elements that the investment of high level decisional capital within the innovation process is enabled in order that change can become **self-sustaining** innovation. It is decisional capital that also drives transformation of input in other areas of the model; for example through the ability to effectively decide which aspects of personal mastery to share with others in order to contribute to collaboration in an effective way. Therefore, the investment of Professional Capital, both collectively and via its constituent parts, can be seen to pervade the innovation model in a number of ways (Figure 10.3).

Figure 10.3 The integration of Professional Capital and the proposed model of innovation.

It is also through the combination of the aspects of the innovation model in this way that inclusion of the broader principles of effective innovation contained within Wenger's writing on Communities of Practice can be demonstrated; and be seen to both exaggerate and underpin the aspects of Professional Capital herewith. Successful Communities of Practice were built around three premises; the enterprise to maintain the drive towards a learning focus; a mutuality of purpose to facilitate knowledge transfer in an environment of professional trust and a shared repertoire to enable holistic reflection of the innovation process. Yet again, consideration of the innovation model proposed demonstrates adherence to these principles.

The promotion of learning enterprise is driven by the inclusion of multiple change agents with high, yet contrasting, levels of personal mastery; those who have the necessary innate drive to ensure that the innovation journey progresses along a strategic journey without the need for external management to promote a pace of change. This ensured that the sharing of learning could both fill knowledge gaps and expand the collective knowledge held within the group through the investment in their social capital. That this expanding knowledge was contributing to progress towards a shared organically evolving vision that was being refined by collaborative reflection, promoting a mutuality

of purpose through utilising a professional trust to accurately and honestly reflect on progress and deepen the level of social capital generated. It is this strategic, yet reflective, journey completed by engaged change agents that facilitates the final element of effective Communities of Practice, that of shared repertoire. It is this holistic approach that in turn ensures that the investment in community engagement in innovation promotes the most crucial aspect of innovation; that of being self-sustaining, is also well represented within the climate for social learning. Thus, the application of the theory around professional learning encapsulated by Communities of Practice and Professional Capital can be seen to clearly underpin the innovation model proposed in Chapter 2 (Figure 5).

10.10 The application of theory to practice

The importance of Professional Capital within a Community of Practice; promoted through an investment in the contributing attributes of human, social and decisional capital, is reinforced within the innovation model proposed (Figure 10.4), generated through an expansion of the initial innovation model (Figure 10.2). The initial pedagogic innovation was inclusive of all elements of this model. However, limitations around time and resources meant that subsequent innovations were less inclusive of the identified attributes of the successful innovation. Whilst this unavoidable variety in application of the attributes of successful innovation can be seen to potentially limit the ultimate progress made, within in this study different pedagogic strands of innovation, it does offer an opportunity to effectively scrutinise the attributes of successful innovation. In turn, this facilitates an opportunity to investigate the link between a school (or other organisation)'s investment in Professional Capital within a Community of Practice and positive outcomes to innovation processes.

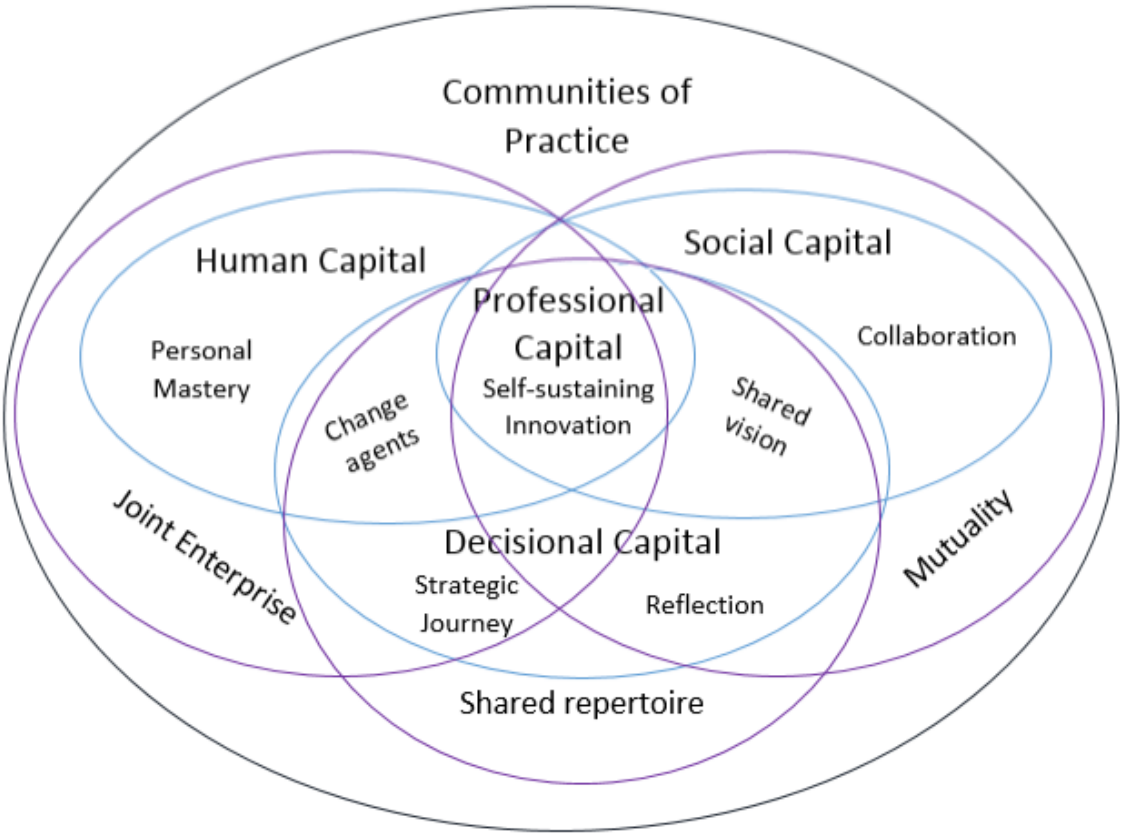


Figure 10.4 The integration of Communities of Practice, Professional Capital and the proposed model of innovation.

The development of students' transferable learning skills (Section 9.2.3) was a process demonstrated to be inclusive of all the identified attributes of successful innovation as determined from the literature review; thus generation of a climate conducive to effective innovation was also likely to be high. The involvement of the whole staff, teaching and non-teaching, in the sharing of the senior leadership's vision and the subsequent collaborative generation of initial ideas represented the generation of a large Community of Practice within which there was significant investment in social capital. Within this, the initial sharing of an organically developing strategic vision ensured that this investment in social capital was far from superficial, rather it was grounded in mutuality ensuring that a team cohesion and professional trust could be developed where members were encouraged to contribute a wide range of ideas in a creative rather than deductive process.

After this initial period of idea generation, the creation of an inclusive yet smaller Community of Practice ensured that this mutuality was carried forward. The group was comprised of a cross-section of teaching staff from the study school, all considered to have high levels of pedagogic personal mastery yet also the innate drive to be change agents. In order to promote investment in both the social and human capital of these individuals, the research group were provided with time to discuss the initial ideas in order to create a repertoire for their Community of Practice and begin the investment in their decisional capital. Whilst the time available for these processes was not insignificant, it fell far short of that required to fully develop decisional capacity in all members involved. However, the inclusion of a range of practitioners with varied years of teaching experience ensured that the enterprise to both keep learning central and fill any gaps in knowledge could both be provided in support of strong decisional capital investment. The inclusion of an identified 'coordinator' meant that the research group operated with the autonomy to form their own strategic journey to a shared vision, concurrent to the enterprise to keep learning central and with the additional input from the research as a broker of learning where necessary. This was refined by the application of reflection through the Action Research process underpinning this study. The operation of this Community of Practice with such mutuality ensured that the investment in human, social and most importantly, decisional capital was therefore very high and the research group had the autonomy to create their own repertoire for social learning.

The '7Cs' of transferable learning were established as the result of this process with the subsequent organic sharing of the initiative between each member of the research group and one member of the broader Community of Practice ensuring the 'brokerage' deemed so important for growing ideas was facilitated. As a result of this, a tension between the competence held by the members of the research group and the experience of the wider teaching community was generated facilitating progression of the innovation; whilst continued investment in social capital provided the time and space necessary for individuals to each generate a deeper personal understanding of the innovation and invest in their own human capital. It was as a result of the decisional capital generated through this enterprise that allowed the concept of transferable

learning to be further refined; for example through the removal of the formal assessment of students' acquisition of the 7Cs. In summary, the slow pace of growth meant that the deeper investment in both human and social capital were rewarded by a high decisional capital output. Consequentially the Professional Capital necessary for self-sustaining growth was achieved and then effectively shared through the broader Community of Practice.

Thus the innovation of the 7Cs can be seen to include opportunities for the development of human, social and decisional capital within a Community of Practice seeped in Professional Capital. However, the limitations enforced upon the innovation processes of other pedagogic strands as a consequence of time and resource constraints restricted the autonomy to apply Professional Capital within these strands. Also, the whole school processes were not as inclusive of all the contributing elements and therefore a holistic embracing of the Professional Capital ideal could not be achieved.

Within the development of both group work roles and the enquiry framework pedagogic strands (Sections 9.2.4 & 9.2.6) representation of the seven aspects of successful innovation was less than complete (Figure 9.2). These restrictions were present from the initiation of these areas of innovation as a consequence of the end points being far more predetermined than with the innovation of transferable learning. Group work had already seen development as a pedagogy prior to the commencement of the study and so the focus was on the development of group work roles to enhance, rather than recreate, this pedagogy. Similarly, enquiry learning was a predetermined concept within which a framework for effective consistent delivery was the specific focus of innovation. Thus, the development of group work roles lacked the opportunity to create a shared vision for the innovation and had only restricted opportunities to work in collaboration or be reflective of feedback in the devising of the final strategy. Work around a framework for enquiry similarly lacked opportunities for collaboration and a shared vision; however, here reflection opportunities were greater as a result of the trial process, though development of a personal mastery around such a pre-determined concept could never be as deep as for innovation of the 7Cs. In addition, an inability to trial the product on a repetitive basis due to both spatial and temporal limitations meant

that the opportunities to learn through application were limited and the generation of repertoire and the human capital investment consequently both suffered. The innovation of group work roles did include the opportunity to trial the pedagogic strand on a small scale which facilitated some investment in these areas. Here, however, time limitations meant that the opportunities to reflect on the outcomes of these trials were restricted, impacting on the decisional capital change agents were able to deploy.

Thus the Community of Practice within which this innovation evolved had a restricted repertoire through limitations to the shaping of a shared vision of successful innovation. Once established, such Communities of Practice maintained a high facilitation of enterprise through the opportunity to explore ideas outside the researchers' presence and thus develop a strategic journey for the innovation, albeit towards a predetermined vision. Within this journey, some investment in both human and decisional capital was facilitated through the opportunity to act as change agents, though the operation of each research group within only one zone and comprising only three teachers meant that both of these strands saw significantly lower opportunities for collaboration and consequently lower investment in social capital. As a consequence, the opportunity for this Community of Practice to operate with any degree of mutuality was also restricted with the loss of autonomy around the vision for the final innovation reducing the team cohesion generated and consequently lowering the investment in social capital.

As a consequence the development of group work roles and a framework for enquiry learning saw a significantly lower investment in Professional Capital holistically and in the investment in human, social and decisional capitals within the innovation processes. There was also a reduction in the contributing aspects of a fully effective Community of Practice. That these innovation strands are demonstrated to be less embedded is, therefore, an unsurprising finding.

It is within the innovation of the pedagogic strand seeking to empower learners, however, that the least effective creation of a Community of Practice operating around the ideals of Professional Capital can be seen. Initiation at the start of Intervention Cycle 2 meant that the innovation of this pedagogic strand was most time limited and had also been least represented in the initial pedagogic vision. As a consequence the need to

adapt a strategy already used at other schools meant that implementation of this pedagogic strand became more of a change process than one of innovation. This is a distinction which significantly hinders the creation of a Community of Practice and investment in holistic Professional Capital as the end point of the innovation is a predetermined leadership directive.

10.11 The integration of social learning attributes into the study school innovation

The implications of conceptualising an innovation in this way are significant for the principles of Communities and Practice and Professional Capital. Investment in the human and social capital of change agents, generated through conversing about innovation, were significantly limited, despite focussing the innovation in an area demonstrating personal mastery. In addition, whilst some reflection opportunities around the innovation generated the opportunity to apply decisional capital, these excluded the opportunity to reflect on trials with students outside the researcher's presence meant that decisional capital was similarly constrained. Finally, the shortened time frame applied to this innovation meant that it lacked broader reflection opportunities and so the investment in social capital was similarly constrained to the change agents; again at the detriment of the process. This minimal adherence to the attributes of Professional Capital also decimates the opportunities for an effective Community of Practice with the existence of change agents and a minimal reflective approach meaning that, whilst all aspect of Communities of Practice are included none are afforded any depth of development.

Therefore, similarly to the analysis conducted against the inclusion of the attributes of successful innovation processes with the development of each pedagogic strand; an analysis of the relative investment in the creation of a Community of Practice with Professional Capital at its heart can also be made. The innovation of students' transferable learning skills can be seen to encapsulate the full range of features of successful innovation and consequently demonstrates investment in all the contributing

factors of human, social and decisional capital as well as have the ethos of Professional Capital holistically embraced within its innovation. The innovation of other pedagogic strands, however, was less inclusive.

Whilst the linkage between a climate conducive to innovation and the potential for innovation success has been established through an analysis of the pedagogic strands, a number of more overarching whole school innovations are also worthy of consideration within this analysis. The high status placed on stakeholder involvement was a defining characteristic of this innovation process from the start and clearly reflects the importance of social capital within an effective Community of Practice. However, other aspects of the holistic process are more subtle in their support of the features of effective innovation. That the final vision for KS3 pedagogy was broad at the start and slowly refined over time ensured that innovation was not a process whereby pieces were fitted into an almost complete jigsaw. Instead, the constant refining of the shape of the individual pieces as well as the final picture facilitated the essential tension between competence and experience so crucial for promoting progress. Of even more importance, those in charge of shaping the pieces were also coming from mixed knowledge bases, ensuring that no piece came to dominate the picture and that adjustments could be made significantly through the strategic journey to ensure that the final picture was the best that it could be.

The professionalism that the study school placed at the heart of its innovation process is also highly significant within this process. At all scales within the innovation, Communities of Practice were facilitated to act with autonomy in the development of pedagogy; a strength clearly demonstrated through the severe restrictions to autonomy demonstrated within the development of independent learners and the consequential limited innovation success. As time moved forward, that this autonomy was shared with others within the study school would indicate that the success of such an approach was well recognised and extrapolated. Finally, it should be acknowledged that the researcher sat within this process and, as such, played a crucial role in effecting functioning Communities of Practice and the promotion of Professional Capital. The ability to move between Communities of Practice, including that of the overarching

Senior Leadership Team, ensured that knowledge could be migrated between communities through Legitimate Peripheral Participation by a broker able to amalgamate the repertoire demonstrated by several communities into a mutuality of collective learning. In addition, this sharing of knowledge was also key within the promotion of joint enterprise as developments from one Community of Practice integrated and therefore expanded the knowledge base of another. It is, finally, the brokering of knowledge between several developmental Communities of Practice and the strategic community of the Senior Leadership Team that also brings a deeper strength to this process. Through ensuring that knowledge transfer could be effected both into and out of the senior leadership team ensured that the movement towards a shared vision was both effective and empowering and facilitated the crucial promotion of Professional Capital necessary to promote learning to be encapsulated within all participants engaged in the process regardless of how peripheral that involvement might be.

10.12 The implications for future innovation

Analysis of the success of the pedagogic strands by the end of the study has already been compared to the facets of potentially successful innovation (Table 9.1). However, conclusions can also now be drawn about the relationship between attributes of innovation and their support of both investment in Professional Capital and the creation of multiple effectively functioning Communities of Practice, both concentrically contained within one another and extensively interlinked by the individuals involved and their area of foci. Here, this chapter argues that the process of innovation around empowering learners was not driven by an explicit focus on enhancing the facets of Professional Capital nor was delivered with a conscious attempt to develop Communities of Practice and consequently demonstrated minimal success, if judged by the principles underpinning these models. The most effective, albeit unconceptualised, was the development of the 7Cs set within a supportive climate which generated a series

of Communities of Practice and thus generated an innovation process highly indicative of the concept of Professional Capital.

Thus these findings indicate that where the key ingredients for an effective climate for innovation are present, success can be demonstrated; similarly, removing key features of the innovation process reduces the innovation impact. The questions, therefore, is why? Why is the investment in Professional Capital within a climate supportive of the generation of Communities of Practice so key to innovation and how can the positive impacts be most carefully recreated as a model for future innovation?

At the commencement of this chapter; the necessary attributes of an effective Community of Practice were established as a joint enterprise to generate a central focus around which an expanding knowledge base is created; a mutuality of purpose within which professional collaborative learning ensures an environment of trust; and a shared repertoire to ensure that learning was acquired in a reflective environment. Examination of the seven identified features of effective innovation in reflection of these core attributes of Communities of Practice identifies the strength within the proposed model of effective innovation. The opportunities generated within the research groups ensured that individual teachers were able to both develop personal mastery within the development of their pedagogic strand as well as act as change agents in its innovation. As such, the research groups were able to generate a self-sustaining initiative to keep learning central to their work whilst also having the open brief necessary to access any additional learning required to enhance their knowledge in order to promote their strategic journey towards their innovation. Thus a joint enterprise was generated within the Communities of Practice which was also complemented by a mutuality facilitated primarily by the emphasis on collaboration, but also by the underlying purpose of the collaboration; to promote a shared vision that was clarified by a reflective innovation process. It is this reflective vision which is a key contributor to the final attribute of a successful Community of Practice, a shared repertoire which within this model is driven by the progress of change agents along the reflective strategic journey towards a shared vision.

Thus the collective seven attributes of a successful model of innovation (Figure 10.2) can be demonstrated to be also indicative of an effective Community of Practice. However, the creation of an appropriate climate within which innovation can grow is only part of the process necessary. Using the theorisation of Professional Capital allows us to think about how, through conscious investment in the human, social and decisional capital of those driving innovation, successful outcomes can be generated. Within this conceptualisation there is a recognition that, for most, the driver of engagement in young people's education is not financial reward; indeed by the time teachers have gathered the human and social capital necessary to be able to invest good decisional capital in their trade, many of the opportunities for pay rises have already passed. Instead, good teachers are driven by an innate desire to do the best job for an altruistic purpose. Therefore, the investment in their Professional Capital is made via the professional development and training of individuals to support their own reflection of the role they do. Thus, the most effective learning is through doing; allowing teachers the space and security to experiment with pedagogy, to take risks and to learn from mistakes.

It is within this premise that we see the deeper reflection of Professional Capital within the model for successful innovation (Figure 10.4). The promotion of change agents is an investment in the human capital or personal mastery of individuals, whilst a vision that is organically emerging rather than fixed ensures that teachers working within the research groups are aware that their input is critical to the process of refining the vision through the development of their own human capital to ensure that an intangible aim is translated into effective and realistic outcomes. Similarly, the opportunities offered through Action Research ensures that the development of human capital is also supported by a reflective process driven by an investment in social capital; again adding to its relative worth in the eyes of the participants as change became a process and not simply a task to be completed.

One of the key findings of this study is that investment in social capital is not about simply working in the same point in space and time; it is about utilising collaborative social interaction to develop an individual's human capital and consequently increase

the cumulative learning available within a Community of Practice. Within the study school a number of attributes have been shown within the design process to facilitate meaningful investment in social capital, driven primarily by an investment in the golden resource within education; time. Intervention cycles were mainly of significant length which facilitated research groups meeting, discussing and reflecting upon the progress of the innovation; this was particularly true for the development of transferable learning where the investment in social capital for the benefit of human capital development was plentiful. Complementing the investment in time was the investment in existing human capital promoted through using data analysis to build on areas of strength. The coupling of this with research groups working largely autonomously of the researcher ensured that high quality social capital investment was also made.

It is through the time and autonomy granted to such research groups that the final facet of Professional Capital can be demonstrated. Decisional capital is generated through practitioners having the opportunity to practice ideas in order to get them right; *"For the things we have to learn before we can do them, we learn by doing them"* (Aristotle, 350). Within this study, the reflective opportunities to discuss and trial initiatives, sometimes repetitively, can be seen to be a strong potential investment in decisional capital supported by the opportunity to use this shared knowledge within a strategic journey. Teaching is a perpetually unfinished process; the interaction of so many human variables within a classroom means that learning experiences can always be improved and decisional capital becomes an integral skills to be demonstrated on a minute by minute basis. However, within a process of overarching innovation, an output is necessary and so the creation of a strategic journey creates delimiters in space or time which necessitate the investment in human and social capital to generate high quality decisional capital. Within this study, the vision was one that was clarified through progress ensured the investment in decisional capital by all those involved in the innovation process at any level was crucial for the final outcomes.

Of course, the ultimate success of the utility of the concept of Professional Capital comes not from the inclusion of its constituent parts but rather from the amalgamation of these in the generation of an institution driven by professionalism. From the start of this

process, innovation at the study school was inclusive; it was 'done with', not 'done to' and as such recognised the professionalism of those involved at all levels. Indeed, without an investment in the Professional Capital of the researcher this study would never have come to be. An unrefined initial strategic vision communicated that this was a process with purpose and aims; yet also one in which all had a role to play in defining the vision; whilst innovation over a significant period of time also ensured that involvement of practitioners in shaping the strategies for success was also high and meaningful. This was generally not a process where teacher's implemented change imposed from above; instead it was a process where professionals collaborated in multiple Communities of Practice at different levels of participation to effectively integrate innovation based on an investment in their collective Professional Capital. Inevitable constraints around time and resources meant that not all process could be as fully inclusive as might be ideal. The innovation of empowered learners was significantly lacking investment in Professional Capital and consequently demonstrated significantly limited levels of success. However, the generation of other innovations by teachers and brokered across communities by the researcher to ensure a collective contribution to the shared vision for pedagogy meant that even where individuals were implementing ideas that had been developed by others they were aware of their development by their peers within a contextualised setting and thus their status was elevated.

10.13 A revised model for innovative within a framework of professional growth

Therefore, this thesis focusses on the generation of a practical approach to embedding organisational innovation through the vehicle of professional growth. At the culmination of the literature review, this study proposed a model for innovation processes (Figure 10.2). Through a consideration of the concepts of Communities of Practice and Professional Capital under pinning such innovation, this study now concludes that successful innovation is not a result of undertaking the right steps; more it is a product of including the right steps within a climate conducive for education.

Generating Professional Capital within an effective Community of Practice through a holistic respect for teacher's professionalism is crucial if change is to become embedded within an institution (Figure 10.4). The innovation process needs to recognise the wealth of human capital that exists within schools, generate the right social capital to ensure that this knowledge is shared, morphed and refined and, through a joint enterprise based on mutuality and shared repertoire, apply the best decisional capital to open ended challenges.

This study demonstrates that the generation of such a climate and process for innovation is possible. However, it also concludes that the generation of such a climate is something that does not happen by accident. Incomplete innovation processes can significantly reduce the levels of success on a short term basis but, more crucially, severely restrict the opportunities for innovation to become self-sustaining through the loss of a holistic investment necessary for the creation of an effective Community of Practice driven by Professional Capital.

It is the creation of this climate for innovation that underpins the success of an innovation model and, as such, demonstrates that successful innovation requires investment on a multitude of levels. It requires an investment in the human capital of those involved to recognise that knowledge development is key to promoting innovation, whilst also recognising the need for collaboration to promote investment in social capital through generating a Community of Practice with all its contributing attributes. It is such social capital that allows both the enhancement of individual human capital but also generates the collective learning process that allows the development of effective decisional capital in teachers. It is also here that the most important investment of all is made, that of a collective investment in the professionalism of teachers who are "*entrusted to make wise, evidence informed and accountable judgements about their teaching and pupils progress"* (Day & Smethem, 2009:154). Only through a move away from the implementation of top-down management initiatives with the potential for only short-term impacts, towards innovations generated by practice and practitioners working collaboratively in an appropriate climate for innovation and with the long-term investment of time, will

education truly be able to embrace transformation. It is in pursuit of this ideal that the model for an effective innovation process is maintained operating within a conceptual framework of an appropriate climate for successful implementation.

List of Appendices

Appendix 1 Baseline teacher's questionnaire

Teaching and Learning - Teaching staff

1. I am a member of teaching staff

- With a TLR (not including bursaries)
- Within SLT
- Neither of the above

2. I am attached to the following zone

- Performing Arts (EXP, ENG, PE)
- Social Sciences (HUM, MFL, LSK, ICT)
- STEM (SCI, MAT, DT)
- Learning Support

3. I have worked within education for

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

4. I have worked at Crown Hills for

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

5. Do you have a learning space in which you teach the majority of your lessons?

- Yes
- No
- PE learning spaces

Skip to Q14

6. How many lessons a week are you timetabled to teach outside this space?

7. How do you feel you have made this space your own? Please select as many as apply.

- ☐ Name on display
- ☐ Displays
- ☐ Organisation
- ☐ Layout

Other (please specify)

8. Which of the following formats most closely matches the organisation of the learning space you are most commonly teaching in?

- ○ Tables individually
- ○ Tables in rows
- ○ Tables in groups
- ○ Purpose designed teaching space i.e. Science lab, design room, sports area.

9. Do you ever change the organisation of the learning space you are working in?

- ○ Never
- ○ Occassionally
- ○ Often
- ○ Not possible to change due to fixed facilities

10. Why do you never change the layout of your learning space?

- ☐ Not enough space
- ☐ Too time consuming
- ☐ Students become chatty
- ☐ Student misbehaviour increases

Other (please specify)

11. Why do you change the layout of your learning space?

- ☐ To allow students to discuss ideas
- ☐ To facilitate group work
- ☐ To share resources effectively
- ☐ To differentiate
- ☐ To deliver different learning activities
- ☐ To deploy additional adults effectively

Other (please specify)

12. Which would be your preferred learning space layout?

- ○ Tables individually
- ○ Tables in rows
- ○ Tables in groups
- ○ Flexible tables which are easily moved
- ○ Purpose designed learning space for my subject

Other (please specify)

13. Why do you prefer this learning space layout?

14. Which of the following are in the learning space you most commonly teach in? Please tick all that apply. (If you would like to many any additional comments, please also select the 'Any additional comments' option)

- ☐ A designated teaching desk
- ☐ Write on board
- ☐ Display areas
- ☐ Networked computer
- ☐ Projector
- ☐ Interactive Whiteboard
- ☐ Reliable internet access
- ☐ Adequate heating
- ☐ Adequate lighting
- ☐ Adequate sun protection
- ☐ Climate control
- ☐ Any additional comments

15. Any additional comments

16. Do you ever take large groups of students/whole classes to a different learning space?

- ○ Yes
- ○ No
- ○ Use varied PE spaces

Skip to Q19

17. How often do you take learning outside of your room?

- ○ 1 lesson a half term on average
- ○ 1 lesson a week on average
- ○ 1 lesson a day on average

18. Where else do you take learning? Tick as many as apply.

- ☐ Library
- ☐ ICT room
- ☐ Outside school building but on- site
- ☐ Off-site

Other (please specify)

Collaborative Planning

19. Have you done any collaborative planning in the last term (excluding theme days)?

- ○ Yes
- ○ No Skip to Q22

20. Was this collaborative planning within your own faculty, own zone or beyond?

- ○ Own faculty
- ○ Own zone
- ○ Beyond my zone
- ○ Don't know

21. What did this collaborative planning involve?

- ☐ Writing a scheme of work
- ☐ Planning a small project
- ☐ Planning individual lessons
- ☐ Planning assessments

Other (please specify)

22. Have you delivered any cross-curricular learning in the last term (excluding theme days)?

- ○ Yes
- ○ No Skip to Q26

23. Was this linked to a subject in your own zone or beyond?

- ○ Subject in my own zone
- ○ Subject outside my own zone
- ○ Don't know

24. What year group(s) did it involve?

- ☐ Year 7
- ☐ Year 8
- ☐ Year 9
- ☐ KS4

25. How many lessons did it last (on average if more than once)

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ more

Team Teaching

26. Have you done any team teaching in the last term?

- ○ Yes
- ○ No

Skip to Q30

27. Did you also plan this lesson(s) collaboratively?

- ○ Yes
- ○ Usually
- ○ No

28. Are you normally timetabled to be in this lesson?

- ○ Yes - as support
- ○ Yes - as a team teach arrangement
- ○ No

29. What did you find as the benefits of team teaching?

Teaching & Learning Styles

30. The following are all teaching styles we hope to utilise in the new school. There are 15 of them. Please identify the 5 you think are most important from 1 (most important) to 5 (least important of the 5)

Individual work	
Paired work	
Group work	
Role play/Drama	
Creative teaching strategies i.e. poetry, art, music	
Teachers using ICT	
Students using ICT	
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.	
Students as researchers	
Students doing enquiries to discover learning	
Kinesthetic learning styles	
Learning with identified skills included	
Student choice of learning locations	
Student choice of learning activities	
Student leadership in lessons	

31. How often do you use these teaching styles?

	At least once a day	At least once a week	At least once a month	At least once a term	At least once a year	Never
Individual work						
Paired work						
Group work						
Role play/Drama						
Creative teaching strategies i.e. poetry, art, music						
Teachers using ICT						
Students using ICT						
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.						
Students as researchers						
Students doing enquiries to discover learning						

Kinesthetic learning styles						
Learning with identified skills included						
Student choice of learning locations						
Student choice of learning activities						
Student leadership in lessons						

32. How confident do you feel about using these teaching styles?

	Very confident	Quite confident	Lack confidence	Out of my depth
Individual work				
Paired work				
Group work				
Role play/Drama				
Creative teaching strategies i.e. poetry, art, music				
Teachers using ICT				
Students using ICT				
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.				
Students as researchers				
Students doing enquiries to discover learning				
Kinesthetic learning styles				
Learning with identified skills included				
Student choice of learning locations				
Student choice of learning activities				
Student leadership in lessons				

33. Please enter 5 words or short phrases to describe ideal teaching and learning

34. Please enter 5 words or phrases to describe your ideal learning space.

35. What are the greatest opportunities that you feel different learning spaces would offer?

36. What are the greatest challenges such a change might bring?

Thank you for completing this suvey.

Appendix 2 Baseline TA questionnaire

Teaching and Learning - Teaching Assistants

Thank you for completing this questionnaire as part of my action research project into innovating teaching and learning. The questionnaire should take you no more than 10 minutes to complete and is anonymous. In addition, if there are any questions you would prefer not to answer then please leave them out.
Thank you

1. I have worked within education for:

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

2. I have worked at Crown Hills for:

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

3. Most lessons I support are in the following zone:

- Performing Arts (EXP, ENG, PE)
- Social Sciences (HUMS, MFL, LSK, ICT)
- STEM (SCI, MA, DT)
- Various

Learning Spaces

4. Do you have a learning space in which you support the majority of your lessons or one which you particularly enjoy working in?

- Yes
- No

Skip to Q12

5. How many lessons a week do you support in this space?

6. Which of the following formats matches the organisation of this space most closely?

- Tables individually
- Tables in rows
- Tables in groups
- Purpose designed teaching space i.e. Science lab, design room,Sports area
- None of the above

7. Does the organisation of the learning spaces you are working in ever change?

- Never
- Occasionally
- Often

8. Do you know why these changes are made:

- No
- Yes

9. Please give the reason for the changes in layout

10. Which would be your prefered learning space organisation?

- Tables individually
- Tables in rows
- Tables in groups

Other (please specify)

11. Why do you prefer this learning space organisation?

12. Do you ever support teachers with classes who are outside their normal learning space?

- Yes
- No

Skip to Q15

13. How often do you support teachers with classes outside their normal learning space?

- 1 lesson a day on average
- 1 lesson a week on average
- 1 lesson a half term on average

14. Which other spaces do you support learning in?

- Library
- ICT room
- Outside the school building but on site
- Off-site

Other (please specify)

15. Do you withdraw small groups or individual students from their normal lessons for support?

- Yes
- No

Skip to Q19

16. Where do you normally take them?

- Library
- LEC
- Empty classroom
- Meeting room

Other (please specify)

17. Are these facilities adequate for this purpose?

- Yes
- No

18. Why do you think this?

Collaborative planning

19. Have you done any collaborative planning in the last term?

- Yes
- No

Skip to Q22

20. Was this with other support assistants or teachers?

- ○ Support assistants
- ○ Teachers
- ○ Both

21. What did this collaborative planning involve? Please tick as many as apply.

- ☐ Writing schemes of work
- ☐ Planning a small project
- ☐ Planning individual lessons
- ☐ Planning assessments
- ☐ Differentiating for individual students

Other (please specify)

22. The following are all teaching styles we hope to utilise in the new school. There are 15 of them. Please identify the 5 you think are most important from 1 (most important) to 5 (least important of the 5)

Individual work	
Paired work	
Group work	
Role play/Drama	
Creative teaching strategies i.e. poetry, art, music	
Teachers using ICT	
Students using ICT	
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.	
Students as researchers	
Students doing enquiries to discover learning	
Kinesthetic learning styles	
Learning with identified skills included	
Student choice of learning locations	
Student choice of learning activities	
Student leadership in lessons	

23. How confident do you feel supporting a teacher using these teaching and learning styles?

	Very confident	Quite confident	Lack confidence	Out of my depth
Individual work				
Paired work				
Group work				
Role play/Drama				
Creative teaching strategies i.e. poetry, art, music				
Teachers using ICT				
Students using ICT				
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.				
Students as researchers				
Students doing enquiries to discover learning				
Kinesthetic learning styles				
Learning with identified skills included				
Student choice of learning locations				
Student choice of learning activities				
Student leadership in lessons				

24. How commonly do you see these teaching and learning styles used in the lessons you support?

	At least once a day	At least once a week	At least once a month	At least once a term	At least once a year	Never
Individual work						
Paired work						
Group work						
Role play/Drama						
Creative teaching strategies i.e. poetry, art, music						
Teachers using ICT						
Students using ICT						
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.						
Students as researchers						

Students doing enquiries to discover learning						
Kinesthetic learning styles						
Learning with identified skills included						
Student choice of learning locations						
Student choice of learning activities						
Student leadership in lessons						

Appendix 3 Baseline student questionnaire

Teaching and Learning - Student

Thank you for completing this questionnaire as part of my action research project into innovating teaching and learning. The questionnaire should take you no more than 10 minutes to complete and are anonymous. In addition, if there are any questions you would prefer not to answer then please leave them out.
Thank you

1. What year are you in?

- Year 7
- Year 8
- Year 9

2. Are you:

- Male
- Female

3. Are you on the SEN register? (Special Educational Needs)

- Yes
- No
- Don't know

4. Do you usually speak English at home?

- Yes
- No

5. What sort of classrooms do you have lessons in?

- [ ] Each table is on its own
- [ ] Tables are in rows
- [ ] Tables are in groups

6. Do your teachers ever change the way your classroom is laid out?

- ○ Never
- ○ Occassionally
- ○ Often

7. Which way would you most like your classrooms to be laid out?

- ○ Each table is on its own
- ○ Tables in rows
- ○ Tables in groups
- ○ Don't mind

8. Why would you like it to be laid out like this?

9. Do your teachers ever take your class out of your normal classrooms for example to the library or an ICT room?

- ○ Yes
- ○ No Skip to Q12

10. How often do your teachers take you to another room?

- ○ Once a day
- ○ Once a week
- ○ Once a half term
- ○ Less than this

11. Where else does your teacher take you to learn? Tick as many as you need to.

- [ ] Library
- [ ] ICT Room
- [ ] Outside the school building but on the school grounds
- [ ] Off the school site

Other (please specify)

12. Do you go out of any lessons to work with a teaching assistant or a coach?

- ○ Yes
- ○ No Skip to Q15

13. Where do you normally go to work with your teaching assistant or coach?

- [ ] Library
- [ ] LEC
- [ ] Empty classroom

Other (please specify)

14. Do you think this is a suitable place to learn?

- ○ Yes
- ○ No
- ○ Don't know

15. Have you had any lessons in the last term that have had links to other subjects in them? (Not including theme days)

- ○ Yes
- ○ No

16. Which subjects were linked together?

17. Please describe how the subjects were linked together

13. Where do you normally go to work with your teaching assistant or coach?

- [ ] Library
- [ ] LEC
- [ ] Empty classroom

Other (please specify)

14. Do you think this is a suitable place to learn?

- ○ Yes
- ○ No
- ○ Don't know

15. Have you had any lessons in the last term that have had links to other subjects in them? (Not including theme days)

- ○ Yes
- ○ No

Skip to Q18

16. Which subjects were linked together?

17. Please describe how the subjects were linked together

18. Do any of your lessons have more than one teacher teaching in them? (This means they both deliver part of the lesson to the whole class)

- Yes
- No

Skip to Q23

19. What subjects does this happen in?

20. Please describe what this is like.

21. Do you think having 2 teachers delivering a lesson is good?

- Yes
- No

22. Why do you think this?

23. The following are all ways of learning we hope to use in the new school. Which 5 do you think are most important? (Please tick 5)

- Working on your own
- Working in a pair
- Working in a group
- Doing a role play
- Using music, art or poetry to learn something
- Teachers using ICT to present information
- Using ICT in lessons
- Being able to use devices like mobile phones
- Being able to reserach ideas
- Asking a question and then trying to answer it
- Learning by moving around
- Learning skills like literacy or team work in lessons
- Being able to choose where you learn
- Being able to choose which activity to do
- Being able to lead bits of lesson

24. How often do you learn in these ways at the moment?

	Once a day	Once a week	Once a half term	Occasionally	Never
Working on your own					
Working in a pair					
Working in a group					
Doing a role play					
Using music, art or poetry to learn something					
Teachers using ICT to present information					
Using ICT in lessons					
Using devices like mobile phones					
Being able to reserach ideas					
Asking a question then trying to answer it yourself					
Learning by moving around					
Learning skills like literacy or team work in lessons					
Being able to choose where you learn					
Being able to choose which activity to do					
With students being able to lead bits of lesson					

25. How well do these activities help you learn?

	This is the way I learn best	helps me to learn a lot	helps me to learn a bit	are no use to me
Working on your own				
Working in a pair				
Working in a group				
Doing a role play				
Using music, art or poetry to learn something				
Teachers using ICT to present information				
Using ICT in lessons				
Being able to use devices like mobile phones				
Being able to reserach ideas				
Asking a question then trying to answer it				
Learning by moving around				
Learning skills like literacy or team work in lessons				
Being able to choose where you learn				
Being able to choose which activity to do				
Being able to lead bits of lesson				

26. If you could plan your own lesson what 5 things would you include? I.e. working in pairs, using a computer etc.

27. If you could design a classroom for the new school, what would it be like? What would you put in it? Try to think of 5 things.

Appendix 4 Review Point 1 Teacher questionnaire

Teaching and Learning Review 1 - Teaching staff

Personal information

1. I am a member of teaching staff

- With a TLR (not including bursaries)
- Within SLT
- Neither of the above

2. I am attached to the following zone

- Express (EXP, ENG, PE)
- Explore (HUM, MFL, LSK, ICT)
- Discover (SCI, MAT, DT)
- Reflect (SEN, EAL)

3. I have worked within education for

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

4. I have worked at Crown Hills for

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

5. Do you have access to the following?

	I have one of my own	I have regular access to one at home	No
Internet connection	○	○	○
Mobile phone (not smart)	○	○	○
Smart phone (not i-phone)	○	○	○
i-phone	○	○	○
i-pad	○	○	○
Other tablet device	○	○	○

Learning Spaces

6. Which of the following formats most closely matches the organisation of the learning space you are most commonly teaching in?

- ○ Tables individually
- ○ Tables in rows
- ○ Tables in groups
- ○ Purpose designed teaching space i.e. Science lab, design room, sports area.

7. Do you ever change the organisation of the learning space you are working in?

- ○ Never
- ○ Occassionally
- ○ Often
- ○ Not possible to change due to fixed facilities

Collaborative Planning

8. Have you done any collaborative planning in the last term?

- ○ Yes
- ○ No Skip to Q11

9. Was this collaborative planning within your own faculty, own zone or beyond?

- ○ Own faculty
- ○ Own zone
- ○ Beyond my zone
- ○ Don't know

10. What did this collaborative planning involve?

- ☐ Writing a scheme of work
- ☐ Planning a small project
- ☐ Planning individual lessons
- ☐ Planning assessments

Other (please specify)

Cross-curricular Learning

11. Have you delivered any cross-curricular learning in the last term?

- Yes
- No Skip to Q16

12. Was this linked to a subject in your own zone or beyond?

- Subject in my own zone
- Subject outside my zone
- Don't know

13. What year group(s) did it involve?

- Year 7
- Year 8
- Year 9
- KS4

14. How many lessons did it last (on average if more than once)

- 1
- 2
- 3
- 4
- more

15. Please give a brief description of the activity

Cross-curricular homework

16. Have you set any cross-curricular homework this term?

- Yes
- No Skip to Q18

17. Did this link within or beyond your zone?

- Within my zone - Express
- Within my zone - Explore
- Within my zone - Discover
- Outside my zone

Team Teaching

18. Have you done any team teaching in the last term?

- Yes
- No Skip to Q21

19. Did you also plan this lesson(s) collaboratively?

- Yes
- Usually
- No

20. Are you normally timetabled to be in this lesson?

- Yes - as support
- Yes - as a team teach arrangement
- No

The 7Cs

21. Were you involved in the development of the 7Cs?

- Yes
- No

22. Do you think the 7Cs will help students learn?

- Yes - they will help all students
- Yes - they will help more able students
- Yes - they will help lessa ble students
- No

23. Have you used the 7Cs in your teaching at all this term?

- Yes
- No

24. In what way have you used the 7Cs?

- In learning objectives
- As assessment criteria
- To help articulate a task
- As skills linked to specific tasks
- In homework projects
- As assessment criteria for homework projects

Other (please specify)

25. What has prevented you using the 7Cs this term?

- I'm not sure what they are
- I find them too complicated
- I can't get them to link to my subject area
- I haven't had time

Other (please specify)

Learning styles

26. How often do you use these teaching styles?

	At least once a day	At least once a week	At least once a month	At least once a term	At least once a year	Never
Individual work						
Paired work						
Group work						
Role play/Drama						
Creative teaching strategies i.e. poetry, art, music						
Teachers using ICT						
Students using ICT						
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.						
Students as researchers						
Students doing enquiries to discover learning						
Kinesthetic learning styles						
Learning with identified skills included						
Student choice of learning locations						
Student choice of learning activities						
Student leadership in lessons						

27. How confident do you feel about using these teaching styles?

	Very confident	Quite confident	Lack confidence	Out of my depth
Individual work				
Paired work				
Group work				
Role play/Drama				
Creative teaching strategies i.e. poetry, art, music				
Teachers using ICT				
Students using ICT				
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.				

Students as researchers	○	○	○	○
Students doing enquiries to discover learning	○	○	○	○
Kinesthetic learning styles	○	○	○	○
Learning with identified skills included	○	○	○	○
Student choice of learning locations	○	○	○	○
Student choice of learning activities	○	○	○	○
Student leadership in lessons	○	○	○	○

Appendix 5 Review Point 1 TA questionnaire

Teaching and Learning Review 1- Teaching Assistants

Personal information

Thank you for completing this questionnaire as part of my action research project into innovating teaching and learning. The questionnaire should take you no more than 10 minutes to complete and is anonymous. In addition, if there are any questions you would prefer not to answer then please leave them out.
Thank you

1. I have worked within education for:

- ○ 0-5 years
- ○ 6-10 years
- ○ 11-20 years
- ○ Over 20 years

2. I have worked at Crown Hills for:

- ○ 0-5 years
- ○ 6-10 years
- ○ 11-20 years
- ○ Over 20 years

3. Most lessons I support are in the following zone:

- ○ Express (EXP, ENG, PE)
- ○ Explore (HUMS, MFL, LSK, ICT)
- ○ Discover (SCI, MA, DT)
- ○ Various

ICT access

4. Do you have access to the following?

	I have one of my own	I have regular access to one at home	No
Internet connection	○	○	○
Mobile phones (not smart)	○	○	○
Smart phone (not i-phone)	○	○	○
i-phone	○	○	○
i-pad	○	○	○
Other tablet device	○	○	○

Learning spaces

5. Does the organisation of the learning spaces you are working in ever change?

- ○ Never
- ○ Occasionally
- ○ Often

Collaborative planning

6. Have you done any collaborative planning in the last term?

- ○ Yes
- ○ No Skip to Q9

7. Was this with other support assistants or teachers?

- ○ Support assistants
- ○ Teachers
- ○ Both

8. What did this collaborative planning involve? Please tick as many as apply.

- ☐ Writing schemes of work
- ☐ Planning a small project
- ☐ Planning individual lessons
- ☐ Planning assessments
- ☐ Differentiating for individual students

Other (please specify)

The 7Cs

9. Do you know what the 7Cs are?

- ○ Yes
- ○ No Skip to Q14

10. Do you think the 7Cs will help students learn?

- ○ Yes - they will help all students
- ○ Yes - they will help more able students
- ○ Yes - they will help less able students
- ○ No

11. Have you seen the 7Cs used in lessons?

- ○ Yes
- ○ No

12. Where were they used?

- ☐ Express (English, Expressive Arts, PE)
- ☐ Explore (Humanities, Life Skills, Langauges, ICT)
- ☐ Discover (Science, Technology, Maths)
- ☐ Other

13. How were the 7Cs used?

- ☐ In learning objectives
- ☐ As assessment criteria
- ☐ To help articulate a task
- ☐ As skills linked to specific tasks
- ☐ Other

Learning styles

14. How commonly do you see these teaching and learning styles used in the lessons you support?

	At least once a day	At least once a week	At least once a month	At least once a term	At least once a year	Never
Individual work	○	○	○	○	○	○
Paired work	○	○	○	○	○	○
Group work	○	○	○	○	○	○
Role play/Drama	○	○	○	○	○	○
Creative teaching strategies i.e. poetry, art, music	○	○	○	○	○	○
Teachers using ICT	○	○	○	○	○	○
Students using ICT	○	○	○	○	○	○
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.	○	○	○	○	○	○

Students as researchers						
Students doing enquiries to discover learning						
Kinesthetic learning styles						
Learning with identified skills included						
Student choice of learning locations						
Student choice of learning activities						
Student leadership in lessons						

15. How confident do you feel supporting a teacher using these teaching and learning styles?

	Very confident	Quite confident	Lack confidence	Out of my depth
Individual work				
Paired work				
Group work				
Role play/Drama				
Creative teaching strategies i.e. poetry, art, music				
Teachers using ICT				
Students using ICT				
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.				
Students as researchers				
Students doing enquiries to discover learning				
Kinesthetic learning styles				
Learning with identified skills included				
Student choice of learning locations				
Student choice of learning activities				
Student leadership in lessons				

Appendix 6 Review Point 1 student questionnaire

Personal information

Thank you for completing this questionnaire as part of my action research project into innovating teaching and learning. The questionnaire should take you no more than 10 minutes to complete and are anonymous. In addition, if there are any questions you would prefer not to answer then please leave them out.
Thank you

1. What year are you in?

- Year 7
- Year 8
- Year 9

2. Are you:

- Male
- Female

3. Are you on the SEN register? (Special Educational Needs)

- Yes
- No
- Don't know

4. Do you usually speak English at home?

- Yes
- No

ICT access

5. Do you have access to the following?

	I have one of my own	I have regular access to one in my family	No
Internet connection			
Mobile phone (not smart)			
Smart phone (not i-phone)			
i-phone			
i-pad			
Other tablet device			

Classroom layout

6. What sort of classrooms do you have lessons in?

- ☐ Each table is on its own
- ☐ Tables are in rows
- ☐ Tables are in groups

7. Do your teachers ever change the way your classroom is laid out?

- ○ Never
- ○ Occassionally
- ○ Often

Cross-curricular learning

8. Have you had any lessons in the last term that have had links to other subjects in them?

- ○ Yes
- ○ No Skip to Q11

9. Which subjects were linked together?

- ☐ Science, Technology or Maths
- ☐ Humanities, Life Skills, Languages or ICT
- ☐ English, Dance, Drama, Art, Music or PE

Other (please specify)

10. Please describe how the subjects were linked together

Cross-curricular homework

11. Have you had any homework projects in the last tearm that have linked the following subjects together?

- ☐ Science, Technology and Maths
- ☐ Humanities, Life Skills, Languages and ICT
- ☐ English. Music, Art, Drama, Dance and PE

Team teaching

12. Do any of your lessons have more than one teacher teaching in them? (This means they both deliver part of the lesson to the whole class)

- ○ Yes
- ○ No

13. What subjects does this happen in?

14. Please describe what this is like.

The 7Cs

15. Do you know what the 7C's are?

- Yes
- No

Skip to Q19

16. Can you name any of the 7Cs?

17. Which subject(s) have they been mentioned in? Please tick as many as you need to.

- Science, technology or maths
- English, Expressive Arts or PE
- Humanities, Life Skills, Languages or ICT
- Don't know

18. Do you think the 7Cs will help you with your learning?

- Yes
- No
- Don't know

Learning styles

19. How often do you learn in these ways at the moment?

	Once a day	Once a week	Once a half term	Occasionally	Never
Working on your own					
Working in a pair					
Working in a group					
Doing a role play					
Using music, art or poetry to learn something					
Teachers using ICT to present information					
Using ICT in lessons					
Using devices like mobile phones					

Being able to reserach ideas					
Asking a question then trying to answer it yourself					
Learning by moving around					
Learning skills like literacy or team work in lessons					
Being able to choose where you learn					
Being able to choose which activity to do					
With students being able to lead bits of lesson					

Appendix 7 Review Point 2 Teacher questionnaire

Personal information

Thank you for completing this questionnaire as part of the innovation of teaching and learning at CHCC. The questionnaire should take you no more than 10 minutes to complete and should be completed as a reflection of the spring and summer terms before the summer holiday. Please note, if you were not here during the previous academic year then you are not required to complete the survey.
All responses are anonymous. In addition, if there are any questions you do not wish to answer, you can skip them.
Thank you

1. I am a member of teaching staff

- With a TLR (not including bursaries)
- Within SLT
- Neither of the above

2. I am attached to the following zone

- Express (EXP, ENG, PE)
- Explore (HUM, MFL, LSK, ICT)
- Discover (SCI, MAT, DT)
- Reflect (SEN, EAL)

3. I have worked within education for

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

4. I have worked at Crown Hills for

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

Collaborative Planning

5. Have you done any collaborative planning in the last 2 terms?

- ○ Yes
- ○ No Skip to Q8

6. Was this collaborative planning within your own faculty, own zone or beyond?

- ○ Own faculty
- ○ Own zone
- ○ Beyond my zone
- ○ Don't know

7. What did this collaborative planning involve?

- ☐ Writing a scheme of work
- ☐ Planning a small project
- ☐ Planning individual lessons
- ☐ Planning assessments

Other (please specify)

Cross-curricular Learning

8. Have you delivered any cross-curricular learning in the last 2 terms or tiralled an enquiry project?

- ○ Yes
- ○ No Skip to Q13

9. Was this linked to a subject in your own zone or beyond?

- ○ Subject in my own zone
- ○ Subject outside my zone
- ○ Don't know

10. What year group(s) did it involve?

- ☐ Year 7
- ☐ Year 8
- ☐ Year 9
- ☐ KS4

11. How many lessons did this delivery last? Please complete for up to 3 examples.

	First example	Second example	Third example
1	☐	☐	☐
2	☐	☐	☐
3	☐	☐	☐
4	☐	☐	☐
more	☐	☐	☐

12. Please give a brief description of one of the activities

Cross-curricular homework

13. Did you set any cross-curricular homework in the last 2 terms?

- ○ Yes
- ○ No

Skip to Q15

14. Did this link within or beyond your zone?

- ○ Within my zone - Express
- ○ Within my zone - Explore
- ○ Within my zone - Discover
- ○ Outside my zone

Team Teaching

15. Have you done any team teaching in the last 2 terms?

- ○ Yes
- ○ No

Skip to Q19

16. Who was this done with?

- ○ Colleagues within my faculty
- ○ Colleagues within my zone
- ○ Colleagues outside my zone

17. Did you also plan this lesson(s) collaboratively?

- ○ Yes
- ○ Usually
- ○ No

18. Are you normally timetabled to be in this lesson?

- ○ Yes - as support
- ○ Yes - as a team teach arrangement
- ○ No

The 7Cs

19. Do you feel confident with the concept of the 7Cs? I.e. could you explain what they are to someone from another school?

- ○ Yes
- ○ No
- ○ Maybe

20. Do you think the 7Cs will help students learn?

- ○ Yes - they will help all students
- ○ Yes - they will help more able students
- ○ Yes - they will help less able students
- ○ No

21. Have you used the 7Cs in your teaching in the last two terms?

- ○ Yes
- ○ No

22. How often do you use the 7Cs?

- ○ Most lessons
- ○ 2 or 3 times a week
- ○ Only occasionally

23. In what way have you used the 7Cs?

- ☐ In learning objectives
- ☐ As assessment criteria
- ☐ To help articulate a task
- ☐ As skills linked to specific tasks
- ☐ In homework projects
- ☐ As assessment criteria for homework projects

Other (please specify)

24. What has prevented you using the 7Cs in the last two terms?

- ○ I find them too complicated
- ○ I can't get them to link to my subject area
- ○ I struggle to put them into learning objectives
- ○ The students don't understand them
- ○ I haven't had time

Other (please specify)

Group work

25. How often do you use group work in your lessons?

- ○ Once a day
- ○ Once a week
- ○ Once a half term
- ○ Occasionally
- ○ Never

Skip to Q29

26. Which year groups do you do group work with? Please tick all that apply.

- ☐ Year 7
- ☐ Year 8
- ☐ Year 9
- ☐ KS4

27. When you do group work, do you assign roles within the group like 'Director' or 'Creator'?

- Yes
- No
- Sometimes

28. How do you think the assigning of roles to individuals like 'Director' influences group work?

- It improves it for all students
- It improves it for more able students
- It improves it for less able students
- Students are still unclear of the roles but it should make it better when they are more familiar with them
- It makes it more complicated
- It makes no difference

Independent learning

29. How effective are our students at independent learning?

- Very good
- Ok
- They get better from Y7 to Y11
- They get worse from Y7 to Y11
- Poor

30. How confident are you to support students to be more independent learners?

- Confident
- A little unsure
- Completely lacking in confidence

31. Have you seen the 'C3B4ME' idea used or discussed it with a colleague?

- Yes
- No

Skip to Q34

32. Do you think providing students with strategies to help them learn independently will support them to do so?

- Yes - all students will benefit
- Less able students will find it helpful
- More able students will find it helpful
- Maybe
- No

33. Now we are nearly moving into the new school how do you feel about this? Please write 5 words to express your feelings.

Learning styles

34. How often do you use these teaching styles?

	At least once a day	At least once a week	At least once a month	At least once a term	At least once a year	Never
Individual work						
Paired work						
Role play/Drama						
Creative teaching strategies i.e. poetry, art, music						
Teachers using ICT						
Students using ICT						
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.						
Students as researchers						
Students doing enquiries to discover learning						
Kinesthetic learning styles						
Learning with identified skills included						
Student choice of learning locations						
Student choice of learning activities						
Student leadership in lessons						

35. How confident do you feel about using these teaching styles?

	Very confident	Quite confident	Lack confidence	Out of my depth
Individual work				
Paired work				
Group work				
Role play/Drama				
Creative teaching strategies i.e. poetry, art, music				
Teachers using ICT				
Students using ICT				
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.				

Students as researchers	○	○	○	○
Students doing enquiries to discover learning	○	○	○	○
Kinesthetic learning styles	○	○	○	○
Learning with identified skills included	○	○	○	○
Student choice of learning locations	○	○	○	○
Student choice of learning activities	○	○	○	○
Student leadership in lessons	○	○	○	○

Appendix 8 Review Point 2 TA questionnaire

Teaching and Learning Review 2 - Teaching Assistants

Personal information

Thank you for completing this questionnaire as part of my action research project into innovating teaching and learning. The questionnaire should take you no more than 10 minutes to complete and should be completed about the spring and summer terms before the summer holiday. Please note, if you were not here during last academic year then you do not need to complete the survey.
All responses are anonymous. In addition, if there are any questions you would prefer not to answer then please leave them out.
Thank you

1. I have worked within education for:

- ○ 0-5 years
- ○ 6-10 years
- ○ 11-20 years
- ○ Over 20 years

2. I have worked at Crown Hills for:

- ○ 0-5 years
- ○ 6-10 years
- ○ 11-20 years
- ○ Over 20 years

3. Most lessons I support are in the following zone:

- ○ Express (EXP, ENG, PE)
- ○ Explore (HUMS, MFL, LSK, ICT)
- ○ Discover (SCI, MA, DT)
- ○ Various

Collaborative planning

4. Have you contributed to the planning of any projects for the new school in the last two terms?

- ○ Yes
- ○ No Skip to Q7

5. Was this with other support assistants or teachers?

- ○ Support assistants
- ○ Teachers
- ○ Both

6. What did this collaborative planning involve? Please tick as many as apply.

- ☐ Writing schemes of work
- ☐ Planning individual lessons
- ☐ Differentiationg lessons or resources for SEN students in general
- ☐ Planning assessments
- ☐ Differentiating for individual students

Other (please specify)

The 7Cs

7. feel confident with the concept of the 7Cs? I.e. could you explain them to someone from another school?

- ○ Yes
- ○ No

8. Do you think the 7Cs will help students learn?

- ○ Yes - they will help all students
- ○ Yes - they will help more able students
- ○ Yes - they will help less able students
- ○ No

9. Have you seen the 7Cs used in lessons in the last two terms?

- ○ Yes
- ○ No

Skip to Q12

10. Where were they used? Please tick as many as you need to.

- ☐ Express (English, Expressive Arts, PE)
- ☐ Explore (Humanities, Life Skills, Langauges, ICT)
- ☐ Discover (Science, Technology, Maths)
- ☐ Other

11. How were the 7Cs used? Please tick as many as you need to.

- ☐ In learning objectives
- ☐ As assessment criteria
- ☐ To help articulate a task
- ☐ As skills linked to specific tasks
- ☐ Other

12. How often do you see group work used in lessons, in which areas and with which year groups?

	Once a day	Once a week	Once a half term	Occasionally	Never	Don't know
Science, Technology or Maths	○	○	○	○	○	○
English, PE or Expressive Arts	○	○	○	○	○	○
Humanities, MFL, ICT or Lifeskills	○	○	○	○	○	○
Year 7	○	○	○	○	○	○
Year 8	○	○	○	○	○	○
Year 9	○	○	○	○	○	○

13. When students do group work, do they have assigned roles like 'Director' or 'Leader'?

- Yes
- No
- Sometimes

Skip to Q15

14. How do you think assigning roles to individuals influences group work?

- It improves it for all students
- It improves it for more able students
- It improves it for less able students
- Students are unclear of the roles but it should make it better when they are more familiar with them
- It makes it more complicated
- It makes no difference

Independent learning

15. How effective are our students at independent learning?

- Very good
- OK
- They get better from Y7 to Y11
- They get worse form Y7 to Y11
- Poor

16. How confident are you to support students to be more independent?

- Confident
- A little unsure
- Completely lacking in confidence

17. Have you seen the 'C3B4ME' idea used in classrooms?

- Yes in Science, Technology or Maths
- Yes in English, PE or Expressive Arts
- Yes in Humanities, MFL, ICT or Lifeskills
- Yes, but I'm not sure where
- No, nowhere

18. Do you think providing students with strategies to help them learn independently will support them to do so?

- Yes - all students will benefit
- Less able students will find it helpful
- More able students will find it helpful
- Maybe
- No

19. Now we are nearly moving into the new school how do you feel about it? Please write 5 words to express your feelings.

Learning styles

20. How commonly do you see these teaching and learning styles used in the lessons you support?

	At least once a day	At least once a week	At least once a month	At least once a term	At least once a year	Never
Individual work						
Paired work						
Group work						
Role play/Drama						
Creative teaching strategies i.e. poetry, art, music						
Teachers using ICT						
Students using ICT						
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.						
Students as researchers						
Students doing enquiries to discover learning						
Kinesthetic learning styles						
Learning with identified skills included						
Student choice of learning locations						
Student choice of learning activities						
Student leadership in lessons						

21. How confident do you feel supporting a teacher using these teaching and learning styles?

	Very confident	Quite confident	Lack confidence	Out of my depth
Individual work				
Paired work				
Group work				
Role play/Drama				
Creative teaching strategies i.e. poetry, art, music				
Teachers using ICT				
Students using ICT				
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.				

Students as researchers	○	○	○	○
Students doing enquiries to discover learning	○	○	○	○
Kinesthetic learning styles	○	○	○	○
Learning with identified skills included	○	○	○	○
Student choice of learning locations	○	○	○	○
Student choice of learning activities	○	○	○	○
Student leadership in lessons	○	○	○	○

Appendix 9 Review Point 2 Questionnaire for students

Teaching and Learning Review 2 - Student

Personal information

Thank you for completing this questionnaire as part of my action research project into innovating teaching and learning. The questionnaire should take you no more than 10 minutes to complete and you should complete it by thinking about the spring and summer terms during your last school year (before the summer holidays). The survey is anonymous. In addition, if there are any questions you would prefer not to answer then please leave them out.
Thank you

1. What year are you in?

- ○ Year 8
- ○ Year 9
- ○ Year 10

2. Are you:

- ○ Male
- ○ Female

3. Are you on the SEN register? (Special Educational Needs)

- ○ Yes
- ○ No
- ○ Don't know

4. Do you usually speak English at home?

- ○ Yes
- ○ No

Cross-curricular learning

5. Have you had any lessons in the last two terms (before the holidays) that have had links to other subjects in them?

- ○ Yes
- ○ No

Skip to Q8

6. Which subjects were linked together?

- ☐ Science, Technology or Maths
- ☐ Humanities, Life Skills, Languages or ICT
- ☐ English, Dance, Drama, Art, Music or PE

Other (please specify)

7. Please describe how the subjects were linked together

Cross-curricular homework

8. Have you had any homework projects in the last term (before the holidays) that have linked the following subjects together?

- ☐ Science, Technology and Maths
- ☐ Humanities, Life Skills, Languages and ICT
- ☐ English. Music, Art, Drama, Dance and PE

Team teaching

9. Do any of your lessons have more than one teacher teaching in them? (This means they both deliver part of the lesson to the whole class)

- ○ Yes
- ○ No

10. What subjects does this happen in?

11. Please describe what this is like.

The 7Cs

12. Do you know what the 7C's are?

- Yes
- No

Skip to Q16

13. Can you name any of the 7Cs?

14. Which subject(s) have they been mentioned in? Please tick as many as you need to.

- Science, technology or maths
- English, Expressive Arts or PE
- Humanities, Life Skills, Languages or ICT
- Don't know

15. Do you think the 7Cs will help you with your learning?

- Yes
- No
- Don't know

Other (please specify)

Group work

16. How often does your teacher ask you to work in groups in the following subjects? (Group work means at least 3 people working together).

	Once a day	Once a week	Once a half term	Occasionally	Never
Science, Technology or Maths	○	○	○	○	○
English, PE or Expressive Arts	○	○	○	○	○
Humanities, MFL, ICT or Lifeskills	○	○	○	○	○

17. When you work in groups, does your teacher assign you roles like 'Director' or 'Leader'? Please tick as many as you need to.

- ☐ Yes in Science, Teachnology or Maths
- ☐ Yes in English, PE or Expressive Arts
- ☐ Yes in Humanities, MFL, ICT or Lifeskills
- ☐ No, never

Skip to Q19

Group work

18. Does having a role in a group help the group work better or not?

- ○ Yes, all the time
- ○ Yes most of the time
- ○ It depends on the role I am given
- ○ It doesn't make any difference
- ○ No, it makes group work more complicated

Other (please specify)

Independent Learning

19. Do you know what independent learning means?

- ○ Yes
- ○ No
- ○ Not sure

20. How good are you at learning by yourself and knowing how to help yourself if you get stuck?

- ○ Very good - I can usually work out how to do most tasks
- ○ Good - I will try to work out what to do by myself before I ask for help
- ○ OK - I ask my friends before I ask for help
- ○ Not very good - I just ask an adult as soon as it gets hard

Independent Learning

21. Have you seen the 'C3B4ME' idea used in classrooms? Tick as many answers as you need to.

- ☐ Yes in Science, Technology or Maths
- ☐ Yes in English, PE or Expressive Arts
- ☐ Yes in Humanities, MFL, ICT or Lifeskills
- ☐ Yes but I'm not sure where
- ☐ No, nowhere

22. Do you think being reminded how to learn by yourself will make you a more independent learner?

- ○ Yes
- ○ Maybe
- ○ Not sure
- ○ No

23. Now we are nearly moving in to the new school, how do you feel about this? Please write 5 words to express your feelings

Learning styles

24. How often do you learn in these ways at the moment?

	Once a day	Once a week	Once a half term	Occasionally	Never
Working on your own	○	○	○	○	○
Working in a pair	○	○	○	○	○
Working in a group	○	○	○	○	○
Doing a role play	○	○	○	○	○
Using music, art or poetry to learn something	○	○	○	○	○
Teachers using ICT to present information	○	○	○	○	○
Using ICT in lessons	○	○	○	○	○
Using devices like mobile phones	○	○	○	○	○

Being able to reserach ideas					
Asking a question then trying to answer it yourself					
Learning by moving around					
Learning skills like literacy or team work in lessons					
Being able to choose where you learn					
Being able to choose which activity to do					
With students being able to lead bits of lesson					

Appendix 10 Finalline questionnaire for teachers

Teaching and Learning Finalline - Teachers

***1. I am a member of teaching staff**

- With a TLR (not including bursaries)
- Within SLT
- Neither of the above

***2. I am attached to the following zone**

- Discovery (SCI, MAT, DT)
- Exploration (HUM, MFL, LSK, ICT)
- Expression (EXP, ENG, PE)
- Reflection

3. I have worked within education for

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

4. I have worked at Crown Hills for

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

Teaching & Learning Styles

5. The following are all teaching styles which we hoped to facilitate through the new school design. Please identify all the styles which you think are easier to utilise now than in the old building.

- ☐ Individual work
- ☐ Paired work
- ☐ Group work
- ☐ Role play/Drama
- ☐ Creative teaching strategies i.e. poetry, art, music
- ☐ Teachers using ICT
- ☐ Students using ICT
- ☐ Use of hand held devices such as mobile phones, i-phones, Blackberries etc.
- ☐ Students as researchers
- ☐ Students doing enquiries to discover learning
- ☐ Kinesthetic learning styles
- ☐ Learning with identified skills included
- ☐ Student choice of learning locations
- ☐ Student choice of learning activities
- ☐ Student leadership in lessons

6. How often do you use these teaching styles?

	At least once a day	At least once a week	At least once a month	At least once a term	At least once a year	Never
Individual work	○	○	○	○	○	○
Paired work	○	○	○	○	○	○
Group work	○	○	○	○	○	○
Role play/Drama	○	○	○	○	○	○
Creative teaching strategies i.e. poetry, art, music	○	○	○	○	○	○
Teachers using ICT	○	○	○	○	○	○
Students using ICT	○	○	○	○	○	○
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.	○	○	○	○	○	○
Students as researchers	○	○	○	○	○	○
Students doing enquiries to discover learning	○	○	○	○	○	○
Kinesthetic learning styles	○	○	○	○	○	○
Learning with identified skills included	○	○	○	○	○	○
Student choice of learning locations	○	○	○	○	○	○
Student choice of learning activities	○	○	○	○	○	○
Student leadership in lessons	○	○	○	○	○	○

7. How confident do you feel about using these teaching styles?

	Very confident	Quite confident	Lack confidence	Out of my depth
Individual work	○	○	○	○
Paired work	○	○	○	○
Group work	○	○	○	○
Role play/Drama	○	○	○	○
Creative teaching strategies i.e. poetry, art, music	○	○	○	○
Teachers using ICT	○	○	○	○
Students using ICT	○	○	○	○
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.	○	○	○	○
Students as researchers	○	○	○	○
Students doing enquiries to discover learning	○	○	○	○
Kinesthetic learning styles	○	○	○	○
Learning with identified skills included	○	○	○	○
Student choice of learning locations	○	○	○	○
Student choice of learning activities	○	○	○	○
Student leadership in lessons	○	○	○	○

Learning Spaces

8. Do you have a learning space in which you teach the majority of your lessons?

- ○ Yes
- ○ No
- ○ PE learning spaces

Skip to Q15

9. How many lessons a week are you timetabled to teach outside this space?

10. How do you feel you have made this space your own? Please select as many as apply.

- ☐ Name on display
- ☐ Displays
- ☐ Organisation
- ☐ Layout
- ☐ I don't feel this space is mine

Other (please specify)

11. Which of the following formats most closely matches the organisation of the learning space you are most commonly teaching in?

- ○ Tables individually
- ○ Tables in rows
- ○ Tables in groups
- ○ Purpose designed teaching space i.e. Science lab, design room, sports area.

Reorganising learning spaces

12. Do you ever change the organisation of the learning spaces you are working in?

- ○ Never
- ○ Occassionally
- ○ Often
- ○ Not possible to change due to fixed facilities

13. Why do you never change the layout of your learning space?

- ☐ Not enough space
- ☐ Too time consuming
- ☐ Other people use the room
- ☐ Means I have to replan the seating
- ☐ Students become chatty
- ☐ Student misbehaviour increases

14. Why do you change the layout of your learning space?

- ☐ To allow students to discuss ideas
- ☐ To facilitate group work
- ☐ To share resources effectively
- ☐ To differentiate
- ☐ To deliver different learning activities
- ☐ To deploy additional adults effectively
- ☐ To aid classroom management

Other (please specify)

Preferred learning space layout

15. Which would be your preferred learning space layout?

- ○ Tables individually
- ○ Tables in rows
- ○ Tables in groups
- ○ Flexible tables which are easily moved
- ○ Purpose designed learning space for my subject

Other (please specify)

16. Why do you prefer this learning space layout?

Contents of learning spaces

17. Which of the following are in the learning space you most commonly teach in? Please tick all that apply. (If you would like to add any additional comments, please also select the 'Any additional comments' option)

- ☐ A designated teaching desk
- ☐ Write on board
- ☐ Display areas
- ☐ Networked computer or docking point
- ☐ Projector
- ☐ Interactive Whiteboard
- ☐ Reliable internet access
- ☐ Adequate heating
- ☐ Adequate lighting
- ☐ Adequate sun protection
- ☐ Climate control

18. If you are not able to tick any of the boxes above then please note the room number and issue below and we will look into this.

Moving learning

19. Has the availability of student laptops and i-pads changed how often you move learning to an alternative location?

- ○ Yes - I move more often
- ○ Yes - I move less often
- ○ No

Teaching in a plaza or auditorium

20. Have you taught in a plaza or an auditorium? (Excluding during tutor time).

- ○ Yes I am timetabled into these spaces
- ○ No but I have taken classes here for enquiries
- ○ No but I have taken classes here in normal timetable time
- ○ No, I have not taught in any of these spaces

Skip to Q23

21. What do you see as the advantages of teaching in a plaza or auditorium space?

	Plaza	Auditoria
You can have more than one class learning together	☐	☐
It facilitates team teaching	☐	☐
Students have more space to learn in	☐	☐
It facilitates different styles of learning	☐	☐
It integrates well with the use of bookable ICT	☐	☐

Other (please specify)

22. What do you see as the disadvantages of teaching in a plaza or auditorium space?

	Plaza	Auditoria
Lessons are disrupted by movement to and from other classrooms	☐	☐
Spaces restrict the use of traditional teaching methods	☐	☐
Use of teacher laptops is less straight-forward	☐	☐
Less formal seating effects behaviour	☐	☐
I feel on display as other staff walk past	☐	☐

Other (please specify)

Collaborative Planning

23. Are you clear about the aims of enquiry learning?

- ○ Yes
- ○ No

24. Have you done any collaborative enquiry planning since we moved in?

- ○ Yes
- ○ No

Skip to Q31

25. Was this collaborative planning within your own faculty, own zone or beyond?

- ○ Own faculty
- ○ Own zone
- ○ Beyond my zone
- ○ Don't know

26. What did this collaborative planning involve? Please tick all that apply

- ☐ Planning the overview of an enquiry project
- ☐ Planning individual lessons for an enquiry project
- ☐ Planning the assessment of an enquiry project
- ☐ Developing resources for an enquiry project
- ☐ It was not linked to an enquiry project

Other (please specify)

27. Did you feel prepared for the planning of enquiry projects

- ○ Yes
- ○ No
- ○ Partly

28. Did this collaborative planning build on work you had completed prior to the school move?

- ○ Yes
- ○ No

29. When did this collaborative planning occur? Please tick all that apply.

- ☐ During free lessons/PPA
- ☐ During Directed time sessions
- ☐ During covered lesson time
- ☐ In my own time

30. How easy was it to find time to complete collaborative planning?

- ○ The available directed time was enough for these needs
- ○ Directed time supported by the provision of cover was enough for these needs
- ○ I had to use PPA/free lessons to complete this planning
- ○ I had to do some of this planning in my own time
- ○ Planning was restricted by limited access to time

Enquiry projects

31. Have you been involved in the delivery of an enquiry project since we moved?

- ○ Yes - 1 project
- ○ Yes - 2 projects
- ○ Yes - more than 2 projects
- ○ No

Skip to Q44

Team Teaching

32. Have you done any team teaching in the last term?

- ○ Yes
- ○ No

33. Have your delivered any lessons which have had cross-curricular links in them?

- ○ Yes
- ○ No

Please answer the following questions for the first one or two examples of enquiry learning you have been involved in.

34. What year group(s) did it involve?

	First example	Second example
Year 7	☐	☐
Year 8	☐	☐
Year 9	☐	☐

35. How many classes were involved at once?

	First example	Second example
1 class	☐	☐
2 classes	☐	☐
3 classes	☐	☐
More	☐	☐

36. How many lessons did it last?

	First example	Second example
1-3	☐	☐
4-6	☐	☐
7-10	☐	☐
Over 10	☐	☐

Enquiry learning sheets

37. Do you think having a consistent format for enquiry learning is important?

- ○ Yes
- ○ No
- ○ Don't know

38. Did the enquiry project(s) you delivered use the enquiry learning front sheet?

- ○ Yes
- ○ No
- ○ Not sure

39. How successful do you consider the enquiry learning sheet to be with respect to the following aspects?

	Very good	Good	OK	Poor	Very poor
The 7Cs	○	○	○	○	○
Establishing prior knowledge	○	○	○	○	○
Promoting the use of a range of resources	○	○	○	○	○
Encouraging action planning	○	○	○	○	○
Referencing assessment criteria	○	○	○	○	○

If you completed the enquiry learning survey circulated around February half term then please skip this question. If not, we are grateful for your feedback now.

40. How much do you agree with the statements below applied to the enquiry project(s) you have delivered?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The process was based on an open question for which there could be more than one answer	○	○	○	○	○
Students discovered ideas, theories, plans etc. for themselves	○	○	○	○	○
Students took ownership of their own learning	○	○	○	○	○
The teacher facilitated learning as opposed to telling students what to do next	○	○	○	○	○
You feel that your subject was well represented in the project	○	○	○	○	○
You enjoyed working with students in this way	○	○	○	○	○

This question was not included in the previous survey so please complete it.

***41. How well do you feel enquiry learning supports the following types of learners?**

	Very well	Reasonably well	Neither well or badly	Poorly	Very poorly
High ability	○	○	○	○	○
Middle ability	○	○	○	○	○
Low ability/low literacy levels	○	○	○	○	○

42. Has enquiry learning influenced the amount of cross-curricular links you make in normal curriculum lessons?

- ○ Yes - it has increased it
- ○ Yes - it has decreased it
- ○ No - it has not made any difference

43. What more needs to be done to further improve enquiry learning? Please tick all that apply.

- [ ] Timetable changes are required to facilitate all groups partaking
- [ ] Greater sharing of schemes of work needs to be completed before the project so facilitators are more confident
- [ ] Methods of assessment of projects need formalising
- [ ] Methods of handing learning over from lesson to lesson need to be formalised
- [ ] Students need more information aboutnequiry learning purposes and processes at a whole school level
- [ ] More skills need to be included in projects to promote students independence

Other (please specify)

The 7Cs

44. Do you think the 7Cs are helping students learn?

- ○ Yes - they will help all students
- ○ Yes - they will help more able students
- ○ Yes - they will help less able students
- ○ No

45. In what ways have you used the 7Cs?

- [ ] In learning objectives
- [ ] As assessment criteria
- [ ] To help articulate a task
- [ ] As skills linked to specific tasks
- [ ] In homework projects
- [ ] As assessment criteria in homework projects
- [ ] Within enquiry leanring
- [ ] I haven't used them

46. What has prevented you using the 7Cs since we moved?

- ○ I find them too complicated
- ○ I can't get them to link to my subject area
- ○ I struggle to put them into learning objectives
- ○ The students don't understand them
- ○ I haven't had time

Other (please specify)

Group work

47. How often do you use group work in your lessons?

- Once a day
- Once a week
- Once a half term
- Occasionally
- Never

Skip to Q51

48. Which year groups do you do group work with? Please tick all that apply.

- Year 7
- Year 8
- Year 9
- KS4

49. When it is appropriate; do you assign roles within the group like 'Director' or 'Creator'?

- Yes
- No
- Sometimes

50. How do you think the assigning of roles to individuals like 'Director' influences group work?

- It improves it for all students
- It improves it for more able students
- It improves it for less able students
- Students are still unclear of the roles but it should make it better when they are more familiar with them
- It makes it more complicated
- It makes no difference

Independent learning

51. How effective are our students at independent learning?

- They show the same ability now as they did before we moved
- They have got better since we moved
- They have got worse since we moved

52. How useful has the C3B4ME poster been in promoting student independence?

- Useful for all students
- Useful for More Able students
- Useful for Less Able students
- Of little use

53. How often do you refer students, or how often do they refer themselves, to the C3B4ME posters?

- Every lesson
- Most lessons
- Once a week
- Less
- Never

The last question!
Thank you for your time.

54. Are you glad we moved into the new school building?

- Yes
- Mainly
- No

Appendix 11 Finalline questionnaire for TAs

Teaching and Learning Finalline - Teachers

Thank you for completing this questionnaire as part of my action research project into innovating teaching and learning. The questionnaire should take you no more than 10 minutes to complete and is anonymous. In addition, if there are any questions you would prefer not to answer then please leave them out.
Thank you

1. I have worked within education for:

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

2. I have worked at Crown Hills for:

- 0-5 years
- 6-10 years
- 11-20 years
- Over 20 years

***3. Most lessons I support are in the following zone:**

- Performing Arts (EXP, ENG, PE)
- Social Sciences (HUMS, MFL, LSK, ICT)
- STEM (SCI, MA, DT)
- Reflection (SEN & EAL)
- Various

4. Which would be your prefered learning space organisation?

- Tables individually
- Tables in rows
- Tables in groups

Other (please specify)

5. Why do you prefer this learning space organisation?

6. Which spaces do you support learning in?

- Library
- ICT room
- Plaza
- Auditorium
- Other

Skip to Q10

Other (please specify)

7. What do you see as the advantages of teaching in a plaza or auditorium space?

	Plaza	Auditoria
You can have more than one class learning together		
It facilitates team teaching		
Students have more space to learn in		
It facilitates different styles of learning		
It integrates well with the use of bookable ICT		

Other (please specify)

8. What do you see as the disadvantages of teaching in a plaza or auditorium space?

	Plaza	Auditoria
Lessons are disrupted by movement to and from other classrooms		
Spaces restrict the use of traditional teaching methods		
Use of teacher laptops is less straight-forward		
Less formal seating effects behaviour		
I feel on display as other staff walk past		

Other (please specify)

9. How does supporting in a plaza or an auditorium compare to supporting in classrooms? Please tick as many answers as apply.

- ☐ It's easier as there is more space
- ☐ It's easier as the seating is more flexible
- ☐ It's easier generally
- ☐ It's harder as lessons are less structured
- ☐ It's harder as students are less focussed
- ☐ It's harder generally

10. Do you withdraw small groups or individual students from their normal lessons for support?

- ○ Yes
- ○ No

Skip to Q14

11. Where do you normally take them?

- ○ Reflection plaza
- ○ Reflection room
- ○ Library
- ○ Empty classroom
- ○ Meeting room

Other (please specify)

12. Are these facilities adequate for this purpose?

- ○ Yes
- ○ No

13. Why do you think this?

Collaborative planning

14. Are you clear about the aims of enquiry learning?

- ○ Yes
- ○ No

15. Have you contributed to the planning of any enquiry projects?

- ○ Yes in Expression
- ○ Yes in Exploration
- ○ Yes in Discovery
- ○ No

16. Was this with other support assistants or teachers?

- ○ Support assistants
- ○ Teachers
- ○ Both

17. What did this collaborative planning involve? Please tick all that apply

- ☐ Planning the overview of an enquiry project
- ☐ Planning individual lessons for an enquiry project
- ☐ Planning the assessment of an enquiry project
- ☐ Developing resources for an enquiry project

Other (please specify)

18. Have you been involved in supporting an enquiry project since we moved? Please tick all that apply.

- ○ Yes - In Discovery
- ○ Yes - In Exploration
- ○ Yes - In Expression
- ○ No Skip to Q23

19. Do you think having a consistent format for enquiry learning is important?

- ○ Yes
- ○ No
- ○ Don't know

20. Did the enquiry project(s) you supported use the enquiry learning front sheet?

- ○ Yes
- ○ No
- ○ Not sure

21. How much do you agree with the statements below applied to the enquiry project(s) you have supported?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The process was based on an open question for which there could be more than one answer	○	○	○	○	○
Students discovered ideas, theories, plans etc. for themselves	○	○	○	○	○
Students took ownership of their own learning	○	○	○	○	○
The teacher facilitated learning as opposed to telling students what to do next	○	○	○	○	○
You enjoyed working with students in this way	○	○	○	○	○

22. How well do you feel enquiry learning supports the following types of learners?

	Very well	Reasonably well	Neither well or badly	Poorly	Very poorly
High ability	○	○	○	○	○
Middle ability	○	○	○	○	○
Low ability/low literacy levels	○	○	○	○	○

23. Do you think the 7Cs are helping students learn?

- ○ Yes - they will help all students
- ○ Yes - they will help more able students
- ○ Yes - they will help less able students
- ○ No

24. In what ways have you seen the 7Cs used?

- ☐ In learning objectives
- ☐ As assessment criteria
- ☐ To help articulate a task
- ☐ As skills linked to specific tasks
- ☐ In homework projects
- ☐ As assessment criteria in homework projects
- ☐ Within enquiry leanring
- ☐ I haven't used them

25. How often do you see group work used in lessons?

- ○ Once a day
- ○ Once a week
- ○ Once a half term
- ○ Occasionally
- ○ Never

Skip to Q29

26. What year group do you see group work used with? Please tick all that apply

- ☐ Year 7
- ☐ Year 8
- ☐ Year 9
- ☐ KS4

27. Do you see roles assigned in group work like 'Director' or 'Cretor'?

- ○ Yes
- ○ No
- ○ Sometimes

28. How do you think the assigning of roles to individuals like 'Director' influences group work?

- ○ It improves it for all students
- ○ It improves it for more able students
- ○ It improves it for less able students
- ○ Students are still unclear of the roles but it should make it better when they are more familiar with them
- ○ It makes it more complicated
- ○ It makes no difference

29. How effective are our students at independent learning?

- ○ They show the same ability now as they did before we moved
- ○ They have got better since we moved
- ○ They have got worse since we moved

30. How useful has the C3B4ME poster been in promoting student independence?

- ○ Useful for all students
- ○ Useful for More Able students
- ○ Useful for Less Able students
- ○ Of little use

31. How often do you refer students, or how often do they refer themselves, to the C3B4ME posters?

- ○ Every lesson
- ○ Most lessons
- ○ Once a week
- ○ Less
- ○ Never

32. The following are all teaching styles we hoped to facilitate through the new school design. Please identify all the styles which you think are easier to utilise now than in the new building.

- ☐ Individual work
- ☐ Paired work
- ☐ Group work
- ☐ Role play/Drama
- ☐ Creative teaching strategies i.e. poetry, art, music
- ☐ Teachers using ICT
- ☐ Students using ICT
- ☐ Use of hand held devices such as mobile phones, i-phones, Blackberries etc.
- ☐ Students as researchers
- ☐ Students doing enquiries to discover learning

- [ ] Kinesthetic learning styles
- [ ] Learning with identified skills included
- [ ] Student choice of learning locations
- [ ] Student choice of learning activities
- [ ] Student leadership in lessons

33. How confident do you feel supporting a teacher using these teaching and learning styles?

	Very confident	Quite confident	Lack confidence	Out of my depth
Individual work	○	○	○	○
Paired work	○	○	○	○
Group work	○	○	○	○
Role play/Drama	○	○	○	○
Creative teaching strategies i.e. poetry, art, music	○	○	○	○
Teachers using ICT	○	○	○	○
Students using ICT	○	○	○	○
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.	○	○	○	○
Students as researchers	○	○	○	○
Students doing enquiries to discover learning	○	○	○	○
Kinesthetic learning styles	○	○	○	○
Learning with identified skills included	○	○	○	○
Student choice of learning locations	○	○	○	○
Student choice of learning activities	○	○	○	○
Student leadership in lessons	○	○	○	○

34. How commonly do you see these teaching and learning styles used in the lessons you support?

	At least once a day	At least once a week	At least once a month	At least once a term	At least once a year	Never
Individual work	○	○	○	○	○	○
Paired work	○	○	○	○	○	○
Group work	○	○	○	○	○	○
Role play/Drama	○	○	○	○	○	○
Creative teaching strategies i.e. poetry, art, music	○	○	○	○	○	○
Teachers using ICT	○	○	○	○	○	○
Students using ICT	○	○	○	○	○	○
Use of hand held devices such as mobile phones, i-phones, Blackberries etc.	○	○	○	○	○	○

Students as researchers	○	○	○	○	○	○
Students doing enquiries to discover learning	○	○	○	○	○	○
Kinesthetic learning styles	○	○	○	○	○	○
Learning with identified skills included	○	○	○	○	○	○
Student choice of learning locations	○	○	○	○	○	○
Student choice of learning activities	○	○	○	○	○	○
Student leadership in lessons	○	○	○	○	○	○

The last question!
Thank you for your time.

35. Are you glad we moved school?

- ○ Yes
- ○ Mainly
- ○ No

Appendix 12 Finalline questionnaire for Students

***1. What year are you in?**

- ○ Year 7
- ○ Year 8
- ○ Year 9

***2. Are you:**

- ○ Male
- ○ Female

***3. Are you on the SEN register? (Special Educational Needs)**

- ○ Yes
- ○ No
- ○ Don't know

***4. Do you usually speak English at home?**

- ○ Yes
- ○ No

Teaching and Learning

5. Which of the following ways of teaching and learning do you think are easier now we are in the new building? You can tick as many as you would like.

- ☐ Working on your own
- ☐ Working in a pair
- ☐ Working in a group
- ☐ Doing a role play
- ☐ Using music, art or poetry to learn something
- ☐ Teachers using ICT to present information
- ☐ Using ICT in lessons
- ☐ Being able to use devices like mobile phones
- ☐ Being able to reserach ideas
- ☐ Doing an enquiry project
- ☐ Learning by moving around
- ☐ Learning skills like literacy or team work in lessons
- ☐ Being able to choose where you learn
- ☐ Being able to choose which activity to do
- ☐ Being able to lead bits of lesson

6. How often do you learn in these ways at the moment?

	Once a day	Once a week	Once a half term	Occasionally	Never
Working on your own	○	○	○	○	○
Working in a pair	○	○	○	○	○
Working in a group	○	○	○	○	○
Doing a role play	○	○	○	○	○
Using music, art or poetry to learn something	○	○	○	○	○
Teachers using ICT to present information	○	○	○	○	○
Using ICT in lessons	○	○	○	○	○
Using devices like mobile phones	○	○	○	○	○
Being able to reserach ideas	○	○	○	○	○
Doing an enquiry project	○	○	○	○	○
Learning by moving around	○	○	○	○	○
Learning skills like literacy or team work in lessons	○	○	○	○	○
Being able to choose where you learn	○	○	○	○	○
Being able to choose which activity to do	○	○	○	○	○
With students being able to lead bits of lesson	○	○	○	○	○

7. How well do these activities help you learn?

	This is the way I learn best	This helps me to learn a lot	This helps me to learn a bit	These are no use to me
Working on your own	○	○	○	○
Working in a pair	○	○	○	○
Working in a group	○	○	○	○
Doing a role play	○	○	○	○
Using music, art or poetry to learn something	○	○	○	○
Teachers using ICT to present information	○	○	○	○
Using ICT in lessons	○	○	○	○
Being able to use devices like mobile phones	○	○	○	○
Being able to reserach ideas	○	○	○	○
Doing an enquiry project	○	○	○	○
Learning by moving around	○	○	○	○
Learning skills like literacy or team work in lessons	○	○	○	○
Being able to choose where you learn	○	○	○	○
Being able to choose which activity to do	○	○	○	○
Being able to lead bits of lesson	○	○	○	○

Classroom layout

8. What sort of classrooms do you have lessons in? You can tick as many as you want to.

- ☐ Each table is on its own
- ☐ Tables are in rows
- ☐ Tables are in groups

9. Do your teachers ever change the way your classroom is laid out?

- ○ Never
- ○ Occassionally
- ○ Often

10. Which way would you most like your classrooms to be laid out?

- ○ Each table is on its own
- ○ Tables in rows
- ○ Tables in groups
- ○ Don't mind

11. Do you get to use more ICT like laptops and i-pads than in the old school?

- ○ Yes
- ○ It has made no difference
- ○ No

Moving learning

12. Do your teachers ever take your class out of your normal classrooms to a plaza, the exploration steps, the viewing gallery or the discovery auditorium?

- ○ Yes
- ○ No

13. Do you go to this location for normal lessons, enquiry lessons or both?

- ○ Normal lessons
- ○ Enquiry lessons
- ○ Both

14. How often do your teachers take you to one of these places?

- ○ Once a day
- ○ Once a week
- ○ Once a half term
- ○ Less than this

Withdrawing learning

15. Do you go out of any lessons to work with a teaching assistant or a coach?

- ○ Yes
- ○ No

16. Where do you normally go to work with your teaching assistant or coach?

- ☐ Library
- ☐ Reflection plaza
- ☐ Reflection classroom
- ☐ Empty classroom

Other (please specify)

_____

17. Do you think this is a suitable place to learn?

- ○ Yes
- ○ No
- ○ Don't know

Plaza learning

18. Do you have any lessons which are on your timetable as being in a plaza or an auditorium every week?

- ○ Yes
- ○ No
- ○ Don't know

19. What do you think is good about learning in a plaza or an auditorium? Tick as many answers as you like.

- ☐ You can work with another class as there is lots of space
- ☐ It is easier for adults to get to help you
- ☐ You have more space to spread out into
- ☐ You can learn in different ways, like groups or through role play, more easily
- ☐ There is plenty of space to work wih ICT

Other (please specify)

20. Wht do you think is less good about learning in a plaza or an auditorium? Tick as many answers as you like.

- ☐ It is easier to get distracted, for example when other classes go in an out
- ☐ It is harder to hear the teacher or see the whiteboard
- ☐ The lesson is less organised as resources aren't easily found
- ☐ I find it harder to behave as it feels more relaxed
- ☐ I don't like that other students can see me learn

Other (please specify)

Enquiry learning

21. Which zones have you completed enquiry learning in?

- ☐ Discovery
- ☐ Exploration
- ☐ Expression
- ☐ None of the above

22. Thinking about one enquiry project you have completed, how much do you agree with the statements below?

	Really agree	Agree	In the middle	Dsiagree	Really disagree
The enquiry had a big question which we tried to answer	○	○	○	○	○
There were lots of differnt resources we could use to help us	○	○	○	○	○
We were able to plan how we completed the enquiry ourselves	○	○	○	○	○
The teacher didn't tell us what we had to do	○	○	○	○	○
The 7Cs were included in the project	○	○	○	○	○
We used group roles like 'Director' in the project	○	○	○	○	○

23. Did you enjoy doing the enquiry project more than you enjoy normal lessons?

- ○ Yes
- ○ No

24. What would make enquiry projects better?

- ○ They should be longer
- ○ They should be shorter
- ○ They should involve more classes
- ○ They should involve less classes
- ○ You should be able to have more choice about what you do

Other (please specify)

25. Have you had any lessons in the last term that have had links to other subjects in them? (Not including enquiry projects)

- ○ Yes in Discovery
- ○ Yes in Exploration
- ○ Yes in Expression
- ○ No

The 7Cs

26. How often do you see the 7Cs in your lessons?

- ○ Almost every lesson
- ○ In about half my lessons
- ○ Not very often

27. How have you seen the 7Cs used in lessons? You can tick as many answers as you want to.

- ☐ As learning objectives
- ☐ As assessment criteria
- ☐ To help explain a task
- ☐ As skills to be developed
- ☐ In homework projects
- ☐ As assessment criteria in homework projects
- ☐ Within enquiry learning projects

28. Do you think the 7Cs help you with your learning?

- ○ Yes
- ○ No
- ○ Don't know

Other (please specify) _____

29. Do the 7Cs help you link ideas together from different lessons?

- ○ Yes
- ○ No
- ○ Don't know

Group work

30. How often do you work in groups in the following areas?

	Every day	Once a week	Once a half-term	Occasionally	Never
Discovery	○	○	○	○	○
Exploration	○	○	○	○	○
Expression	○	○	○	○	○

31. Do you use group work roles like 'Director' when you work in groups in these areas?

	Always	Most of the time	Sometimes	Never
Discovey	○	○	○	○
Exploration	○	○	○	○
Expression	○	○	○	○

32. Does being given a role in group work help the group work better or not?

- Yes, all the time
- Yes most of the time
- It depends on the role I am given
- It doesn't make any difference
- No, it makes group work more complicated

Other (please specify)

Independent learning

33. Do you know what independent learning means?

- Yes
- No
- Not sure

34. How good are you at learning by yourself and knowing how to help yourself if you get stuck?

- Very good - I can usually work out how to do most tasks
- Good - I will try to work out what to do by myself before I ask for help
- OK - I ask my friends before I ask for help
- Not very good - I just ask an adult as soon as it gets hard

35. Have you seen the 'C3B4ME' posters in classrooms? You can tick as many answers as you want.

- [ ] Yes in Discovery
- [ ] Yes in Exploration
- [ ] Yes in Expression
- [ ] No

36. Do you use the poster to help you if you are stuck?

- ○ Yes
- ○ Yes, if an adult reminds me
- ○ No

37. Do you think having posters to remind you how to learn by yourself will make you a more independent learner?

- ○ Yes
- ○ Maybe
- ○ Not sure
- ○ No

The last question!
Thank you for your time!

38. Are you glad we moved into the new school building?

- ○ Yes
- ○ No

Appendix 13 Questions for the teacher interview group at the Baseline data collection point

1. What impact do learning spaces have on teaching and learning?
2. What is the impact of moving learning to new spaces?
3. What does a collaborative planning session normally look like?
4. When teachers ask students to work on their own, do they expect work in complete isolation?
5. What restricts the use of pedagogies with which teachers are confident yet are rarely used such as students choosing learning locations?

Appendix 14 Questions for the student interview group at the Baseline data collection point

1. What does it mean if a teacher asks you to work on your own and what do you do in lessons at these times?
2. Can you tell me about some cross-curricular learning you have done?
3. If you have had a lesson with more than one teacher in, who was the additional person?

Appendix 15 Questions for the teacher interview group at the Finalline data collection point

1. How has the frequency of movement of learning been affected by the move to the new school building?
2. Why do teachers move learning?
3. Why do you think that there has been a decrease in teachers rearranging learning space layouts since the move to the new building?
4. Why do you think there is not a higher percentage of responses about adequate heating and lighting?
5. What has supported teachers to become more confident in the use of pedagogies?
6. How does the use of group roles influence learning?
7. What advantages does enquiry learning bring for students?

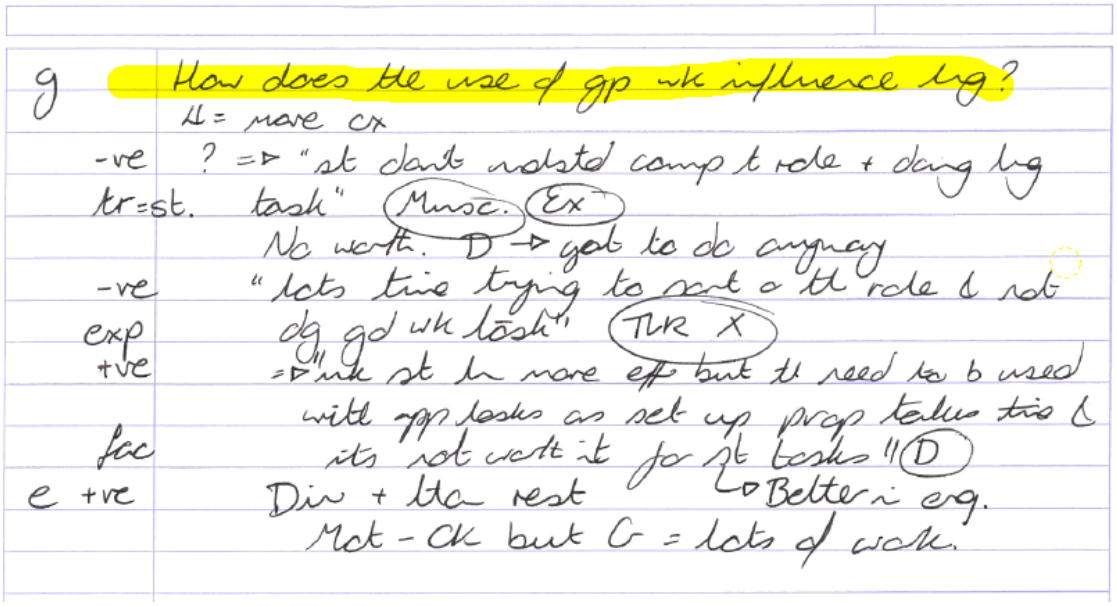
Appendix 16 Questions for the student interview group at the Finalline data collection point

1. Have you used ICT in your lessons since we moved?
2. Have you been involved in an enquiry project? What can you tell me about it?
3. What has influenced your use of the 7Cs in learning?
4. How does the use of group roles affect your lessons?
5. Does enquiry learning help you learn and if so how?

Appendix 17 Example of processed qualitative questionnaire data

progress fulfilment knowledge understanding co-operation engaging accessible inter-active purposeful fun Well-planned Differentiated Engaging Varied Focused on learning enjoyable student discovers learning for themselves interest engaged interaction calm varied All students engaged in learning new skills or creative activities using and discovering new ways of doing things fun engaging thought provoking rewarding progressive collaboration supportive self-motivated inspiring each other diverse Engaged progress dynamic Interactive engaging motivating independent fun Variety fun challenging without being out of reach engaging choice dedication differentiation commitment subject knowledge Knowing your students timed developing focused participation exploring student-centred teacher led Interactive Fresh Fun Creative Informative friendly patient focused well-resourced high-expectations creative thoughtfully-planned well-managed dynamic purposeful fun interesting interactive practical focused accessible enthusiastic transferable varied Fun interactive engaging differentiated relevant independent individual-learning relevant challenge for all good-learning-habits pace challenge student-independence consistent links-to-bigger-picture Consistent Visual Quality ICT displays home-learning-links small-class-sizes Interesting Challenging Relevant Engaging Achievable Good-progress Challenging-the-learners Good-questioning Students-fully-involved Students-ready-to-learn inspiring progression independent student-centred Collaborative enquiry investigating creative flexible enthusiastic passionate teaching engages Mutual Respect Secure safe environment Enthusiasm for subject matter Broad balanced differentiated tasks Awareness of individual needs strengths weaknesses energy vibrant eager inquisitive elation-of-discovery Motivated-pupils keen-to-learn Interactive enjoyable student-led creative challenging Engaging Inspiring Safe Enquiring Togetherness interesting fun dynamic differentiated student-ownership Clear simple-short-sections inspirational productive open interactive Interesting engaging enthusiastic time-management independent questioning enthusiastic imaginative variety-of-activities pace challenge independent confident inquisitive exciting meaningful Own-room space-to-organise teach learn inspiring interesting motivating praise self-esteem engagement enjoyment motivation successful productive relevant respect partnership cooperation interesting different

Appendix 18 An example of coded notes



Appendix 19 Statement of confidentiality for online data collection

Thank you for agreeing to give your opinions on teaching and learning and learning spaces. All responses will be anonymous and questions not considering participant characteristics can be skipped. The questionnaire can also be exited at any time. Data collected will be used within school to help shape teaching and learning and also referenced in academic writing. I am grateful for your input. Thank you.

Appendix 20 Letter to parents regarding involvement in data collection

Dear parent/guardian

In order to support the development of teaching and learning as we move towards our new school building, I am currently conducting a research project. As part of this project, students are being asked to give their opinion about different aspects of teaching and learning via a number of online questionnaires. All data collected will be confidential. Students will also have the opportunity to skip any questions they do not wish to respond to or exit the questionnaire at any time. The information collected will be used within school to incorporate student's views into the development of teaching and learning and also within a range of academic writing.

Please feel free to discuss this activity with your child. If have any questions about the process or would like to discuss the interviews further then please feel free to contact me at jmellor@[studyschool].leicester.sch.uk. If you do not wish your child to participate in this project, please return the slip below by the date stated.

Yours faithfully

Mrs J Mellor

Assistant Principal

✂----------

Please return the reply slip below to your form tutor by _____

Student name: _____ Form: _____

I do not wish my child to be involved in the data collection around teaching and learning.

Signed: _____ Date: _____

Appendix 21 Consent form for adults participating in group interviews

I hereby give my consent to be involved in a group interview around teaching and learning and learning spaces. I understand that my responses will be treated confidentially and that any quotes used will be anonymised. I am also aware that information generated from interviews will be used both within school to help develop teaching and learning and within academic writing which may have a wider audience.

Name: _____ Date: _____

Signed: _____

Appendix 22 Consent form for student focus group participants

Dear parent/guardian

In order to support the development of teaching and learning as we move towards our new school building, I am currently conducting a research project. As part of this project, a number of students will be asked to give their opinion about different aspects of teaching and learning in a group interview situation. All interview responses will be given in confidence and any quotes used anonymised. Students will also have the opportunity to not answer any questions they do not wish to respond to. The information collected will be used within school to incorporate student's views into the development of teaching and learning and also within a range of academic writing.

Please feel free to discuss this activity with your child. If have any questions about the process or would like to discuss the interviews further then please feel free to contact me at jmellor@[studyschool].leicester.sch.uk. If you are happy for your child to participate in this project, please return the slip below by the date stated.

Yours faithfully

Mrs J Mellor

Assistant Principal

✂----------

Please return the reply slip below to your form tutor by _____

Student name: _____ Form: _____

I wish my child to be involved in the group interviews around teaching and learning.

Signed: _____ Date: _____

Appendix 23 Baseline questionnaire data

					All Teachers (71)		TLR & SLT (43)		Mainscale (26)		Expression (22)		Exploration (24)		Discovery (16)		Reflection (6)		TA's (28)		All Students (241)		Year 7 (92)		Year 8 (74)		Year 9 (75)	
Te	TA	St	Question	Answers	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No
1			I am a member of teaching staff	With a TLR	51%	35	81%	35			59%	13	50%	12	27%	4	80%	4										
1				Within SLT	12%	8	19%	8			23%	5	8%	2	7%	1	0%	0										
1				Neither of the above	38%	26			###	26	18%	4	42%	10	67%	10	20%	1										
1				Skipped		2		2		0		0		0		1		1										
2	3		I am attached to the following zone	Expression	32%	22	44%	18	16%	4	###	22							14%	4								
2	3			Exploration	35%	24	34%	14	40%	10			###	24					4%	1								
2	3			Discovery	24%	16	12%	5	40%	10					###	16			25%	7								
2				Reflection	9%	6	10%	4	4%	1							###	6										
	3			Various															57%	16								
2	3			Skipped		3		2		1		0		0		0				0								
3	1		I have worked within education for	0-5 years	25%	18	14%	6	46%	12	9%	2	50%	12	19%	3		0	25%	7								
3	1			6-10 years	28%	20	28%	12	31%	8	41%	9	12%	3	44%	7	17%	1	32%	9								
3	1			11-20 years	23%	16	28%	12	12%	3	32%	7	21%	5	25%	4	0%	0	36%	10								
3	1			Over 20 years	24%	17	30%	13	12%	3	18%	4	17%	4	12%	2	83%	5	7%	2								
3				Skipped		0		0		0		0		0		0		0		0								
4	2		I have worked at Crown Hills for	0-5 years	49%	34	37%	16	68%	17	32%	7	62%	15	38%	6	83%	5	25%	7								
4	2			6-10 years	23%	16	28%	12	16%	4	32%	7	21%	5	25%	4	0%	0	46%	13								
4	2			11-20 years	23%	16	28%	12	12%	3	36%	8	8%	2	31%	5	0%	0	29%	8								
4	2			Over 20 years	6%	4	7%	3	4%	1	0%	0	8%	2	6%	1	17%	1	0%	0								
4	2			Skipped		1				1		0		0		0		0		0								
5	4		Do you have a learning space in which you teach/support the majority of your lessons?	Yes	71%	50	64%	27	81%	21	55%	12	75%	18	88%	14	###	5	65%	17								
5	4			No	17%	12	19%	8	15%	4	9%	2	25%	6	12%	2	0%	0	35%	9								
5				PE learning spaces	11%	8	17%	7	4%	1	36%	8	0%	0	0%	0	0%	0										
5				Yes + PE	83%	58	81%	34	85%	22	91%	20	0%	0		0	0%	0										
5	4			Skipped		1		1				0		0				1		0								
6			How many lessons a week are you timetabled to teach outside this space?	0		28																						
6				1		8		6		2		3		3		1		1										
6				2		4				3						3												
6				3		7		4		3		2		2		4												
6				4		1				1				1														
6				5		0																						
6				6		1		1				1																
6				7		0																						
6				8		1		1								1												

Te	TA	St			All Teachers (71)		TLR & SLT (43)		Mainscale (26)		Expression (22)		Exploration (24)		Discovery (16)		Reflection (6)		TA's (28)		All Students (241)		Year 7 (92)		Year 8 (74)		Year 9 (75)	
	5		How many lessons a week do you support in this space?	1-3															17%	2								
	5			4-6															25%	3								
	5			7-10															8%	1								
	5			11-20															42%	5								
	5			21+															8%	1								
7			How do you feel you have made this space your own? Please select as many as apply.	Name on display	24%	10	23%	5	29%	5	25%	2	14%	2	36%	5		0										
7				Displays	89%	41	91%	20	88%	15	###	8	93%	13	86%	12	75%	3										
7				Organisation	63%	26	59%	13	65%	11	62%	5	57%	8	71%	10	50%	2										
7				Layout	73%	30	59%	13	88%	15	75%	6	71%	10	71%	10	75%	3										
7				Other		7		5		2		3		1		1		1										
7				Skipped		30				9		14		10		2		2										
7				storage of resources				0		1																		
8	6	5	Which of the following formats most closely matches the learning space you most commonly teach in?	Tables individually	14%	6	17%	4	6%	1	0%	0	29%	4	14%	2	0%	0	6%	1	16%	37	17%	15	8%	6	22%	16
8	6	5		Tables in rows	30%	13	21%	5	44%	8	36%	4	50%	7	7%	1	0%	0	25%	4	61%	143	54%	46	67%	49	65%	48
8	6	5		Tables in groups	30%	13	29%	7	28%	5	36%	4	14%	2	21%	3	###	4	56%	9	61%	142	52%	45	69%	50	64%	47
8	6			Purpose designed	27%	12	33%	8	22%	4	27%	3	7%	1	57%	8	0%	0	6%	1								
	6			None of the above															6%	1								
8	6	5		Skipped		27		19		8				10		2		2		12		8		6		1		1
9	7	6	Do you ever change the organisation of the learning space you are working in?	Never	5%	3	3%	1	9%	2	0%	0	14%	3	0%	0	0%	0	4%	1	20%	47	26%	23	19%	14	14%	10
9	7	6		Occasionally	63%	36	61%	20	64%	14	77%	10	67%	14	56%	9	75%	3	83%	19	59%	137	48%	42	59%	43	70%	52
9	7	6		Often	18%	10	18%	6	18%	4	3%	3	5%	1	12%	2	25%	1	13%	3	21%	50	25%	22	22%	16	16%	12
9				Fixed facilities	14%	8	18%	6	9%	2	0%	0	14%	3	31%	5	0%	0										
9		6		Skipped		14		10		4		9		3		0		2		5		7		5		1		1
	8		Do you know why these changes are made?	No															30%	7								
	8			Yes															70%	16								
	8			Skipped																5								
10			Why do you never change the layout of your learning space?	Not enough space	66%	2	0%	0	50%	2	0%	0	66%	2	0%	0	0%	0										
10				Too time consuming	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
10				Students chatty	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
10				misbehaviour increases	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
10				Other		1		0		1		0		0		0		0										
10				Share all my spaces			0%	0	25%	1	0%	0	33%	1	0%	0	0%	0										
10				Skipped		69		43		24		22		22		16		6										

Te	TA	St			All Teachers (71)		TLR & SLT (43)		Mainscale (26)		Expression (22)		Exploration (24)		Discovery (16)		Reflection (6)		TA's (28)		All Students (241)		Year 7 (92)		Year 8 (74)		Year 9 (75)	
11			Why do you change the layout of your learning space?	To allow discussion	39%	18	35%	9	44%	8	46%	6	27%	4	45%	5	0%	0										
11				To facilitate group work	74%	34	69%	18	78%	14	69%	9	73%	11	82%	9	25%	1										
11				Share resources	26%	12	27%	7	22%	4	31%	4	13%	2	36%	4	0%	0										
11				To differentiate	22%	10	15%	4	22%	4	23%	3	7%	1	27%	3	25%	1										
11				Deliver diff activities	70%	32	73%	19	56%	10	85%	11	53%	8	55%	6	###	4										
11				To deploy TAs	17%	8	12%	3	28%	5	23%	3	13%	2	18%	2	0%	0										
11				Other		3		2				2		0		0		2										
11				Skipped		25		17		8		9		9		5		2										
12	10	7	Which would be your preferred learning space layout?	Tables individually	7%	4	7%	2	9%	2	0%	0	11%	2	12%	2	0%	0	0%	0	17%	39	17%	15	12%	9	20%	15
12	10	7		Tables in rows	6%	3	7%	2	5%	1	8%	1	11%	2	0%	0	0%	0	29%	6	11%	26	12%	10	10%	7	12%	9
12	10	7		Tables in groups	25%	14	20%	6	32%	7	0%	0	26%	5	44%	7	0%	0	71%	15	49%	114	41%	36	53%	39	53%	39
12				Flexible tables	44%	24	40%	12	50%	11	50%	6	42%	8	31%	5	75%	3										
12				Purpose designed	19%	10	27%	8	5%	1	42%	5	11%	2	12%	2	25%	1										
12	10			Other		2		1		1		0		0		2		0		2								
		7		Don't mind																	24%	55	28%	26	24%	18	15%	11
12	10	7		Skipped		17		13		4		10		5		0		2		7		7		5		1		1
14			Which of the following are in the learning space you most commonly teach in? Please tick all that apply. (If you would like to many any additional comments, please also select the 'Any additional comments' option)	Teaching desk	74%	46																						
14				Write on board	82%	51																						
14				Display areas	73%	45																						
14				Networked computer	74%	46																						
14				Projector	68%	42																						
14				Interactive Whiteboard	44%	27																						
14				Reliable internet access	65%	40																						
14				Adequate heating	50%	31																						
14				Adequate lighting	57%	35																						
14				Adequate shade	23%	14																						
14				Climate control	8%	5																						
14				Other	8%	5																						
14				Skipped		9																						
16	12	9	Do you ever take large groups of students to a different learning space?	Yes	68%	43	63%	24	78%	18	60%	12	68%	13	75%	12	80%	4	59%	13	73%	169	76%	65	73%	53	69%	51
16	12	9		No	21%	13	24%	9	13%	3	5%	1	32%	6	25%	4	20%	1	41%	9	28%	64	24%	21	27%	20	31%	23
16	12			Use varied PE spaces	11%	7	13%	5	9%	2	35%	7	0%	0	0%	0	0%	0	0%	0								
16	12	9		Skipped		8		5		3		2		5		0		1		6		8		6		1		1

Te	TA	St			All Teachers (71)		TLR & SLT (43)		Mainscale (26)		Expression (22)		Exploration (24)		Discovery (16)		Reflection (6)		TA's (28)		All Students (241)		Year 7 (92)		Year 8 (74)		Year 9 (75)	
		10	How often do you take learning outside of your room?	Less than this																	20%	34	17%	11	0%	0	0%	0
17	13	10		1 lesson a half term	50%	19	55%	11	47%	8	44%	4	92%	12	8%	1	33%	1	15%	2	27%	45	20%	13	51%	27	43%	22
17	13	10		1 lesson a week	45%	17	40%	8	53%	9	44%	4	8%	1	92%	11	33%	1	62%	8	49%	83	52%	34	32%	17	29%	15
17	13	10		1 lesson a day	5%	2	5%	1	0%	0	11%	1	0%	0	0%	0	33%	1	23%	3	4%	7	11%	7	17%	9	28%	14
17	13	10		Skipped		33		23		9		13		11		4		3		15		72		27		21		24
18	14	11	Where else do you take learning? Tick as many as apply.	Library	50%	19	63%	12	39%	7	89%	8	33%	4	25%	3	75%	3	40%	4	89%	145	87%	53	91%	48	90%	44
18	14	11		ICT room	95%	36	90%	18	###	18	78%	7	###	12	###	12	75%	3	50%	5	80%	131	82%	50	74%	39	86%	42
18	14	11		Outside but on- site	36%	14	37%	9	11%	4	55%	5	25%	3	25%	3	50%	2	10%	4	31%	51	33%	20	25%	21	45%	11
18	14	11		Off-site	3%	1	5%	1	0%	0	0%	0	8%	1	0%	0	0%	0	0%	0	6%	9	8%	5	4%	2	4%	2
18	14	11		Other		7		4		4		1		1		0		0		4		8		3				5
18	14	11		Skipped		33		24		8		11		12		4		2		18		78		31				26
	15	12	Do you withdraw small groups for support?	Yes															67%	14	11%	25	15%	13	12%	9	4%	3
	15	12		No															33%	7	89%	208	85%	73	88%	64	96%	71
	16	13	Where do you normally take them?	Library															62%	8	42%	10	25%	3	56%	5	67%	2
	16	13		LEC															15%	2	33%	8	17%	2	44%	4	67%	2
	16	13		Empty classroom															23%	3	46%	11	67%	8	33%	3	0%	0
	16			Meeting room															0%	0								
	16			Office															23%	3								
	17	14	Are these facilities adequate for this purpose?	Yes															67%	10	64%	16	54%	7	78%	7	67%	2
	17	14		No															33%	5	12%	3	8%	1	11%	1	33%	1
		14		Don't know																	24%	6	39%	5	11%	1	0%	0
				Skipped																								
30			Which learning styles would you like to see in the new school? / Which learning styles are easier to facilitate in the new school?	Individual work	59%	34													74%	14	22%	50						
30				Paired work	57%	33													42%	8	33%	75						
30				Group work	69%	40													74%	14	74%	168						
30				Role play	12%	7													42%	8	34%	76						
30				Creative teaching	35%	20													47%	9	30%	68						
30				Teachers ICT	35%	20													37%	7	35%	80						
30				Students ICT	35%	20													53%	10	63%	144						
30				Hand held devices	22%	13													26%	5	41%	93						
30				Students as researchers	31%	18													58%	11	33%	74						
30				Enquiry learning	36%	21													58%	11	21%	47						
30				Kinaesthetic	35%	20													74%	14	40%	91						
30				Transferable skills	38%	22													47%	9	24%	55						
30				Choice of location	9%	5													21%	4	35%	80						
30				Choice of activities	31%	18													32%	6	52%	117						
30				Student leadership	52%	30													32%	6	25%	57						

Te	TA	St			All Teachers (71)		TLR & SLT (43)		Mainscale (26)		Expression (22)		Exploration (24)		Discovery (16)		Reflection (6)		TA's (28)		All Students (241)		Year 7 (92)		Year 8 (74)		Year 9 (75)	
19	19		Have you done any collaborative planning	Yes	70%	50	81%	29	83%	19	79%	15	84%	16	81%	13	75%	3	46%	10								
19	19			No	18%	11	19%	7	17%	4	21%	4	16%	3	19%	3	25%	1	55%	12								
19	19			Skipped		10		7		3		3		5		0				6								
20			Was this collaborative planning within your own faculty, own zone or beyond?	Own faculty	72%	36	69%	20	79%	15	87%	13	69%	11	69%	9	67%	2										
20				Own zone	8%	4	0%	0	16%	3	0%	0	6%	1	23%	3	0%	0										
20				Beyond my zone	20%	10	31%	9	5%	1	13%	2	25%	4	8%	1	33%	1										
20				Don't know	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
20				Skipped		21		14		7		7		8		3		3										
	20		Was this with other support assistants or teachers?	Support assistants															0%	0								
	20			Teachers															60%	6								
	20			Both															40%	4								
				Skipped																18								
21	21		What did this collaborative planning involve?	Writing a scheme	37%	18	35%	10	39%	7	40%	6	31%	5	42%	5	0%	0	0%	0								
21	21			Planning a project	27%	13	24%	7	22%	4	7%	1	19%	3	33%	4	100	3	10%	1								
21	21			Planning ind lessons	67%	33	72%	21	61%	11	73%	11	94%	15	33%	4	67%	2	50%	5								
21	21			Planning ass'ts	33%	16	31%	9	33%	6	40%	6	38%	6	25%	3	33%	1	20%	2								
				Differentiating																								
21	21			Other		3		0		3		0		0		2		1		8								
21	21			Skipped		22		14		8		7		8		4		3		12								
22		15	Have you delivered any cross-curricular learning	Yes	59%	36	61%	22	57%	13	53%	10	37%	7	81%	13	100	4			35%	79	38%	31	35%	25	31%	23
22		15		No	41%	25	39%	14	44%	10	47%	9	63%	12	19%	3	0%	0			65%	149	62%	51	65%	47	69%	51
22		15		Skipped		10		7		3		3		5		0		2				13		10		2		
23			Was this linked to a subject in your own zone or beyond?	In my own zone	47%	16	45%	9	54%	7	38%	3	29%	2	71%	10	25%	1										
23				Outside my zone	47%	16	50%	10	39%	5	62%	5	57%	4	21%	3	75%	3										
23				Don't know	6%	2	5%	1	8%	1	0%	0	14%	1	7%	1	0%	0										
23				Skipped		37		23		13		14		17		2		2										
24			What year group(s) did it involve?	Year 7	39%	13	33%	7	46%	5	33%	3	67%	4	38%	5	25%	1										
24				Year 8	52%	17	67%	14	18%	2	78%	7	50%	3	46%	6	25%	1										
24				Year 9	33%	11	33%	7	27%	3	33%	3	50%	3	31%	4	25%	1										
24				KS4	39%	13	52%	11	9%	1	56%	5	33%	2	8%	1	100	4										
24				Skipped		38		22		15		13		18		3		2										
25			How many lessons did it last (RP1 on average if more than once) (RP2 up to 3 responses)	1	30%	10	29%	6	36%	4	11%	1	33%	2	54%	7	0%	0										
25				2	15%	5	14%	3	18%	2	22%	2	17%	1	15%	2	0%	0										
25				3	9%	3	10%	2	9%	1	11%	1	0%	0	15%	2	0%	0										
25				4	3%	1	5%	1	0%	0	0%	0	17%	1	0%	0	0%	0										
25				more	more	0	43%	9	36%	4	56%	5	33%	2	15%	2	100	4										
25				Skipped		38		22		15		13		18		3		2										
26		18		Yes	35%	21	40%	14	26%	6	21%	4	37%	7	38%	6	75%	3			41%	94	60%	50	32%	23	29%	21
26		18		No	65%	39	60%	21	74%	17	79%	15	63%	12	62%	10	25%	1			59%	134	40%	33	68%	49	71%	52
26		18		Skipped		11		8		3		3		5		0		2				13		9		2		2

Te	TA	St			All Teachers (71)		TLR & SLT (43)		Mainscale (26)		Expression (22)		Exploration (24)		Discovery (16)		Reflection (6)		TA's (28)		All Students (241)		Year 7 (92)		Year 8 (74)		Year 9 (75)	
27			Did you also plan this lesson(s) collaboratively?	Yes	64%	14	67%	10	50%	3	50%	2	75%	6	33%	2	100	3										
27				Usually	5%	1	0%	0	17%	1	0%	0	0%	0	17%	1	0%	0										
27				No	32%	7	33%	5	33%	2	50%	2	25%	2	50%	3	0%	0										
27				Skipped		49		28		20		18		16		10		3										
28			Are you normally timetabled to be in this lesson?	Yes - as support	11%	2	8%	1	20%	1	0%	0	17%	1		0	33%	1										
28				Yes - team teach	37%	7	31%	4	40%	2	25%	1	17%	1	60%	3	67%	2										
28				No	53%	10	62%	8	40%	2	75%	3	67%	4	40%	2	0%	0										
28				Skipped		52		30		21		18		18		11		3										
		21	Is having 2 teachers good?	Yes																	80%	71	85%	40	74%	17	74%	14
		21		No																	20%	18	15%	7	26%	6	26%	5
		21		Skipped																		152		45		53		56
		1	What year are you in?	Year 7																	38%	92	100	92				
		1		Year 8																	31%	74			100	74		
		1		Year 9																	31%	75					100	75
		1		Skipped																								
		2	What gender are you?	Male																	54%	128	64%	57	47%	34	49%	37
		2		Female																	46%	109	36%	32	53%	39	51%	38
		2		Skipped																		4		3		1		
		3	Are you on the SEN register?	Yes																	3%	7	3%	3	1%	1	4%	3
		3		No																	73%	177	65%	60	76%	56	81%	61
		3		Don't know																	24%	57	32%	29	23%	17	15%	11
		4	Do you usually speak English at home?	Yes																	84%	203	76%	70	84%	62	95%	71
		4		No																	16%	38	24%	22	16%	12	5%	4
31			How often do you use group work in lessons?	Daily	37%	22													56%	9	27%							
31				Weekly	33%	20													38%	6	43%							
31				At least weekly	70%	42													94%	15	70%							
31				Half term	17%	10													25%	4								
31				Occasionally	14%	8													13%	2								
31				Never	0%	0													0%	0								
31				Skipped		0														0								
32			How confident do you feel doing group work?	Very confident	57%	32													52%	11								
32				Quite confident	39%	22													38%	8								
32				Lack confidence	4%	2													10%	2								
32				Out of my depth	0%	0													0%	0								

	The following are all teaching styles we hope to utilise in the new school. Please identify the 5 you think are most important from 1 to 5						The following are all teaching styles which we hoped to facilitate through the new school design. Please identify all the styles which you think are easier to utilise now than in the old building.					
	Teachers BL Q30		TAs BL Q		Students		Teachers		TAs		Students	
Answer Options	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count
Individual work	59%	34	74%	14	22%	50	27%	19	41%	9	30%	83
Paired work	57%	33	42%	8	33%	75	37%	26	55%	12	55%	154
Group work	69%	40	74%	14	74%	168	73%	52	86%	19	75%	210
Role play/Drama	12%	7	42%	8	34%	76	45%	32	73%	16	48%	133
Creative teaching strategies	35%	20	47%	9	30%	68	30%	21	36%	8	29%	80
Teachers using ICT	35%	20	37%	7	35%	80	73%	52	73%	16	45%	125
Students using ICT	35%	20	53%	10	63%	144	83%	59	77%	17	71%	199
Use of hand held devices	22%	13	26%	5	41%	93	44%	31	27%	6	50%	139
Students as researchers	31%	18	58%	11	33%	74	58%	41	55%	12	41%	114
Students doing enquiries	36%	21	58%	11	21%	47	61%	43	50%	11	42%	118
Kinaesthetic learning styles	35%	20	74%	14	40%	91	54%	38	36%	8	46%	128
Learning with identified skills included	38%	22	47%	9	24%	55	20%	14	14%	3	27%	75
Student choice of locations	9%	5	21%	4	35%	80	39%	28	36%	8	40%	111
Student choice of activities	31%	18	32%	6	52%	117	34%	24	23%	5	58%	162
Student leadership	52%	30	32%	6	25%	57	35%	25	46%	10	33%	93
Answered		60		19		227		71		22		280
Skipped		11		9		14		0		8		4

Teacher BL Q	How often do you use these teaching styles?						How confident do you feel about using these teaching styles?			
	Daily	Weekly	Monthly	Termly	Yearly	Never	Very	Quite	Low	None
Individual work	56	3	1	0	0	0	55	2	0	0
Paired work	40	16	3	1	0	0	46	11	0	0
Group work	22	20	10	7	1	0	32	22	2	0
Role play/Drama	2	4	14	12	10	14	6	30	14	5
Creative teaching strategies	8	9	13	14	4	8	11	30	12	0
Teachers using ICT	36	12	3	3	1	4	23	26	8	0
Students using ICT	5	11	24	11	5	3	23	23	9	1
Use of hand held devices	0	5	6	6	3	37	6	12	25	12
Students as researchers	3	19	15	17	4	1	17	33	5	0
Students doing enquiries	3	19	14	11	5	4	16	26	12	0
Kinaesthetic learning styles	25	17	11	4	1	1	31	22	2	0
Learning with skills included	24	12	11	6	2	1	23	25	5	0
Choice of learning locations	2	1	5	8	7	33	6	11	31	3
Choice of learning activities	0	11	13	16	10	8	10	28	16	1
Student leadership	7	20	8	10	8	5	19	24	12	0

TA BL Q	How commonly do you see these teaching and learning styles used in the lessons you support?						How confident do you feel about supporting these styles?			
	Daily	Weekly	Monthly	Termly	Yearly	Never	Very	Quite	Low	None
Individual work	18	4	0	0	0	0	14	6	0	0
Paired work	7	10	3	0	0	0	11	8	2	0
Group work	9	6	4	2	0	0	11	8	0	0
Role play/Drama	3	2	5	4	3	3	7	8	2	0
Creative teaching strategies	2	4	1	4	3	2	7	9	3	0
Teachers using ICT	15	3	1	1	0	0	7	10	2	0
Students using ICT	6	11	2	1	0	0	5	10	3	0
Use of hand held devices	0	1	1	3	0	11	5	9	5	0
Students as researchers	0	7	4	5	2	1	5	9	4	0
Students doing enquiries	3	3	3	5	3	0	5	9	4	0
Kinaesthetic learning styles	3	7	4	1	0	2	4	11	3	0
Learning with skills included	7	5	4	1	0	0	4	10	4	1
Choice of learning locations	2	1	5	1	2	6	4	9	3	1
Choice of learning activities	2	2	4	2	2	5	3	11	3	2
Student leadership	1	4	1	4	3	3	2	4	9	2

Student BL Q	How often do you learn in these ways at the moment?						How well do these activities help you learn?			
	Daily	Weekly	Monthly	Yearly	Never		Very	Quite	Low	None
Individual work	134	26	1	41	12		54	47	57	27
Paired work	88	77	9	33	6		60	93	25	5
Group work	57	91	22	37	7		98	53	24	10
Role play/Drama	9	39	61	66	33		53	47	47	28
Creative teaching strategies	18	42	42	48	58		47	40	50	40
Teachers using ICT	103	46	12	32	12		72	68	31	12
Students using ICT	31	90	33	39	16		77	66	30	8
Use of hand held devices	21	10	8	16	149		62	30	39	47
Students as researchers	33	69	32	52	19		79	62	29	8
Students doing enquiries	65	47	23	36	34		55	62	43	18
Kinaesthetic learning styles	33	56	37	34	46		67	46	42	20
Learning with skills included	53	69	27	35	18		60	72	28	16
Choice of learning locations	16	28	19	31	109		81	51	34	10
Choice of learning activities	18	27	19	54	87		90	51	25	11
Student leadership	16	29	30	44	85		67	44	36	30

Appendix 24 All group work roles descriptions

Role	Tasks	Talking tips
Checker	Think of potential problems that the group may have and speak to the Director about them Ensure that students are working as effectively as possible Find alternative words/actions or reassess work or improve it	"I would like to check ..." "This part does not make sense because ..." "We need to correct ..."
Creator	Your job is to create whatever your group needs You must make sure you are really clear about how your group want your work to look Make sure you check the content carefully before finalising it	"How would you like this to look/sound/come across?" "To complete this I need ..." "I'm not sure, do we have any suggestions?"
Director	You must make sure that every voice is heard Ensure that people in your group are doing jobs that are focused on the learning task Organise members of your group Be prepared to step into a role if someone is absent	"xxx, what do you think?" "Thanks for the idea but it's not connected to the task because ..." "I'm going to help you with ... because ..."
Motivator	Find ways to encourage and motivate people in your group Look out for successes and let people know about them Try to create harmony if people disagree Encourage people to reflect on their progress	"I think you have done an excellent job because ..." Let's look at what we have done well" "xxx is doing a good job because ..."
Recorder	Your job is to write/record the ideas that your group members have come up with or gathered You act as the groups memory since you are responsible for recording their ideas You take notes/minutes during meetings	"I think I heard you say ...; is that right?" "This is what we have come up with so far" This is what I have recorded ... Does everyone agree?"
Resource Manager	You encourage the group to stay on task Yu set mini-deadlines throughout the task and remind people of them You record the use of any resources or research	"By the end of the lesson we should have ... "We are/not on schedule" "This is what we need to do. How should we ..."

Appendix 25 Review Point 1 data

Applied to					All Teachers (52)		TLR & SLT 34)		Mainscale (17)		Expression (16)		Exploration (17)		Discovery (14)		Reflection (5)		TAs (34)		Students (378)		Year 7 (155)		Year 8 (163)		Year 9 (60)	
Te	TA	St	Question	Answers	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No
1			I am a member of teaching staff	With a TLR	57%	29	85%	29			44%	7	71%	12	50%	7	75%	3										
1				Within SLT	10%	5	15%	5			19%	3	12%	2	0%	0		0										
1				Neither of the above	33%	17			100%	17	37%	6	18%	3	50%	7	25%	1										
1				Skipped		1		1		0		0		0		0		1										
2	3		I am attached to the following zone	Expression	31%	16	29%	10	35%	6	100%	16							12%	4								
2	3			Exploration	33%	17	41%	14	18%	3			100%	17					9%	3								
2	3			Discovery	27%	14	21%	7	41%	7					100%	14			27%	9								
2	3			Reflection	10%	5	9%	3	6%	1							100%	5	52%	17								
2	3			Various															0%	0								
2	3			Skipped		0		0		0		0		0		0		0		1								
3	1		I have worked within education for	0-5 years	16%	8	3%	1	41%	7	60%	1	19%	3	29%	4	0%	0	21%	7								
3	1			6-10 years	26%	13	30%	10	17%	3	25%	4	31%	5	14%	2	40%	2	41%	14								
3	1			11-20 years	35%	18	36%	12	35%	6	44%	7	25%	4	50%	7	0%	0	30%	10								
3	1			Over 20 years	24%	12	30%	10	6%	1	25%	4	25%	4	7%	1	60%	3	9%	3								
3	1			Skipped		1		1				0		1		0		0		0								
4	2		I have worked at Crown Hills for	0-5 years	40%	21	24%	8	71%	12	25%	4	35%	6	50%	7	80%	4	35%	12								
4	2			6-10 years	23%	12	32%	11	6%	1	25%	4	35%	6	14%	2	0%	0	41%	14								
4	2			11-20 years	29%	15	32%	11	24%	4	50%	8	18%	3	29%	4	0%	0	21%	6								
4	2			Over 20 years	8%	4	12%	4	0%	0		0	12%	2	7%	1	20%	1	3%	1								
4	2			Skipped		0		0		0		0		0		0		0		0								
6		6	Which of the following formats most closely matches the organisation of the learning space you are most commonly teach in?	Tables individually	4%	2	6%	2	0%	0	0%	0	0%	0	7%	1	20%	1			14%	52	7%	11	17%	27	24%	14
6		6		Tables in rows	31%	16	32%	11	29%	5	31%	5	53%	9	14%	2	0%	0			51%	186	47%	69	54%	84	56%	33
6		6		Tables in groups	33%	17	27%	9	41%	7	25%	4	35%	6	21%	3	80%	4			63%	229	66%	97	63%	98	56%	33
6		6		Purpose designed	33%	17	35%	12	29%	5	44%	7	12%	2	57%	8	0%	0										
6		6		Skipped		0		0				0		2		0		0				16		7		8		1
7	5	7	Do you ever change the organisation of the learning space you are working in?	Never	4%	2	60%	19	12%	2	44%	0	0%	0	7%	1	20%	1	28%	9	29%	104	32%	47	25%	39	31%	18
7	5	7		Occasionally	60%	31	12%	4	65%	11	25%	7	77%	13	64%	9	40%	2	69%	22	57%	208	55%	82	63%	97	49%	29
7	5	7		Often	12%	6	32%	11	12%	2	31%	4		0	7%	1	20%	1	3%	1	14%	52	13%	20	12%	19	20%	12
7	5	7		Fixed facilities	25%	13			12%	2		5	23%	4	21%	3	20%	1										
7	5	7		Skipped		0		0				0		0		0		0		2		15		6		8		1
8	6		Have you done any collaborative planning in the last term?	Yes	92%	47	91%	31	94%	15	88%	14	94%	16	93%	13	100%	4	31%	10								
8	6			No	8%	4	9%	3	7%	1	12%	2	6%	1	7%	1	0%	0	69%	22								
8	6			Skipped		1		0		0		0		0		0		1		2								

Te	TA	St			All Teachers (52)		TLR & SLT 34)		Mainscale (17)		Expression (16)		Exploration (17)		Discovery (14)		Reflection (5)		TAs (34)		Students (378)		Year 7 (155)		Year 8 (163)		Year 9 (60)	
9			Was this collaborative planning within your own faculty, own zone or beyond?	Own faculty	23%	11	19%	6	31%	5	36%	5	31%	5	8%	1	0%	0										
9				Own zone	65%	31	65%	20	63%	10	50%	7	69%	11	85%	11	40%	2										
9				Beyond my zone	10%	5	16%	5	0%	0	14%	2	0%	0	8%	1	40%	2										
9				Don't know	2%	1	0%	0	6%	1	0%	0	0%	0	0%	0	20%	1										
9				Skipped		4		3		0		2		1		0		0										
	7		Was this with other support assistants or teachers?	Support assistants															30%	3								
	7			Teachers															30%	3								
	7			Both															40%	4								
	7			Skipped																24								
10	8		What did this collaborative planning involve?	Writing a scheme	59%	25	57%	16	57%	8	45%	5	60%	9	67%	8	60%	3	0%	0								
10	8			Planning a project	47%	20	50%	14	36%	5	18%	2	60%	9	50%	6	60%	3	22%	2								
10	8			Planning ind lessons	47%	20	46%	13	43%	6	82%	9	47%	7	25%	3	20%	1	67%	6								
10	8			Planning assessments	14%	6	11%	3	14%	2	9%	1	20%	3	8%	1	20%	1	33%	3								
10	8			Differentiating															89%	8								
10	8			Other (please specify)		6		4		2	3%	3		2		1		0		1								
10	8			Skipped		9		6		3	5%	5		2		2		0		25								
11		8	Have you delivered any cross-curricular learning in the last term?	Yes	46%	24	41%	14	53%	9	50%	8	35%	6	43%	6	80%	4			67%	246	70%	105	68%	105	59%	35
11		8		No	54%	28	59%	20	47%	8	50%	8	65%	11	57%	8	20%	1			33%	119	30%	45	32%	50	41%	24
11		8		Skipped		0		0	0%	0		0		0		0		0				14		5		8		1
12			Was this linked to a subject in your own zone or beyond?	In my own zone	52%	13	50%	7	60%	6	67%	6	50%	3	50%	3	25%	1										
12				Outside my zone	44%	11	50%	7	30%	3	33%	3	33%	2	50%	3	75%	3										
12				Don't know	4%	1		0	10%	1	0%	0	17%	1	0%	0	0%	0										
12				Skipped		27		20		7		7		11		8		1										
13			What year group(s) did it involve?	Year 7	54%	13	47%	6	60%	6	33%	3	67%	4	100%	5	25%	1										
13				Year 8	54%	13	47%	6	60%	6	66%	6	50%	3	60%	3	25%	1										
13				Year 9	46%	11	31%	4	60%	6	55%	5	50%	3	40%	2	25%	1										
13				KS4	58%	14	61%	8	50%	5	44%	4	67%	4	40%	2	100%	4										
13				Skipped		28		21		7		7		11		9		1										
14			How many lessons did it last (RP1 on average if more than once) (RP2 up to 3 responses)	1	23%	5	33%	4	11%	1	22%	2	20%	1	25%	1	25%	1										
14				2	14%	3	0%	0	33%	3	22%	2	0%	0	25%	1	0%	0										
14				3	9%	2	8%	1	11%	1	0%	0	40%	2	0%	0	0%	0										
14				4	9%	2	17%	2	0%	0	22%	2	0%	0	0%	0	0%	0										
14				more	46%	10	42%	5	44%	4	33%	3	40%	2	50%	2	75%	3										
14				Skipped		30		22		8		7		12		10		1										
16			Have you set any cross-curricular homework this term	Yes	31%	16	36%	12	18%	3	44%	7	41%	7	8%	1	20%	1										
16				No	67%	35	64%	21	82%	14	56%	9	59%	10	92%	12	80%	4										
16				Skipped		1		1		0		0		0		1		0										
17		9	Did this link within or beyond your zone?	Within Express	38%	6	33%	4	67%	2	91%	5	14%	1	0%	0	0%	0			45%	98	47%	40	58%	56	49%	16
17		9		Within Explore	25%	4	25%	3	33%	1	14%	1	43%	3	0%	0	0%	0			32%	69	33%	28	30%	29	33%	11
17		9		Within Discover	6%	1	8%	1	0%	0	0%	0	0%	0	100%	1	0%	0			51%	111	45%	39	42%	40	55%	18
17		9		Outside	31%	5	33%	4	0%	0	14%	1	43%	3	0%	0	100%	1										
17		9		Skipped		36		22		14		9		10		13		4				163		69				27

Te	TA	St			All Teachers (52)		TLR & SLT 34)		Mainscale (17)		Expression (16)		Exploration (17)		Discovery (14)		Reflection (5)		TAs (34)		Students (378)		Year 7 (155)		Year 8 (163)		Year 9 (60)	
18		12	Have you done any team teaching in the last term?	Yes	18%	9	15%	5	24%	4	12%	2	12%	2	31%	4	20%	1			43%	155	47%	70	44%	66	33%	19
18		12		No	82%	42	85%	28	76%	13	88%	14	88%	15	69%	9	80%	4			57%	203	53%	80	56%	84	67%	38
18		12		Skipped	1	1		1		0		0		0		1		0				21		5		13		3
19			Did you also plan this lesson(s) collaboratively?	Yes	70%	7	50%	3	100%	4	33%	1	50%	1	100%	4	100%	1										
19				Usually	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
19				No	30%	3	50%	3	0%	0	66%	2	50%	1	0%	0	0%	0										
19				Skipped		42		28		13		13		15		10		4										
20			Are you normally timetabled to be in this lesson?	Yes - as support	22%	2	0%	0	50%	2	0%	0	0%	0	50%	2	0%	0										
20				Yes - team teach	56%	5	80%	4	25%	1	100%	2	100%	2	25%	1	0%	0										
20				No	22%	2	20%	1	25%	1	0%	0	0%	0	25%	1	100%	1										
20				Skipped		43		29		13		2		15		10		4										
		1	What year are you in?	Year 7																	41%	155	100%	155				
		1		Year 8																	43%	163			100	163		
		1		Year 9																	16%	60					100	60
				Skipped																		0		0		0		0
		2	What gender are you?	Male																	60%	226	61%	94	59%	95	60%	36
		2		Female																	40%	152	39%	61	41%	67	40%	24
		2		Skipped																		1		0		1		0
		3	Are you on the SEN register?	Yes																	5%	18	5%	8	3%	4	10%	6
		3		No																	70%	258	65%	99	78%	121	63%	38
		3		Don't know																	25%	93	30%	45	20%	31	27%	16
		4	Do you usually speak English at home?	Yes																	87%	321	86%	152	90%	141	85%	49
		4		No																	13%	46	14%	22	10%	15	15%	9
		15	Do you know what the 7Cs are?	Yes																	58%	203	64%	96	54%	81	48%	26
		15		No																	42%	150	36%	53	46%	68	52%	28
		15		Skipped																		26		6		14		6
21	9		Were you involved in the development of the 7Cs?	Yes	28%	14	39%	13	6%	1	19%	3	47%	8	23%	3	0%	0	71%	24								
21	9			No	72%	37	61%	20	94%	16	81%	13	53%	9	77%	10	100%	5	29%	10								
21	9			Skipped	1	1		1		0		0		0		1		0		0								
24			In what way have you used the 7Cs?	LOs	53%	20	52%	12	50%	7	54%	7	77%	10	20%	2	50%	1	63%	10								
24				Assessment criteria	28%	9	17%	4	29%	4	15%	2	15%	2	40%	4	50%	1	31%	5								
24				Articulate a task	42%	16	48%	11	29%	4	54%	7	38%	5	20%	2	100%	2	31%	5								
24				Skills linked to tasks	45%	17	39%	9	50%	7	69%	9	23%	3	30%	3	100%	2	25%	4								
24				Homework projects	18%	7	17%	4	21%	3	15%	2	31%	4	10%	1	0%	0	0%	0								
24				Ass. Crit for hwk	21%	8	22%	5	21%	3	15%	2	23%	3	30%	3	0%	0										
24				Other		3		1		2		2		1				0										
24				Skipped	14	14		11		3		3		4		4		2		18								

Te	TA	St			All Teachers (52)		TLR & SLT 34)		Mainscale (17)		Expression (16)		Exploration (17)		Discovery (14)		Reflection (5)		TAs (34)		Students (378)		Year 7 (155)		Year 8 (163)		Year 9 (60)	
25			What has prevented you using the 7Cs this term?	Not sure what they are	10%	2	0%	0	29%	2	0%	0	12%	1	0%	0	100%	1										
25				Too complicated	25%	5	23%	3	29%	2	0%	0	28%	3	50%	2	0%	0										
25				Don't link to subject	10%	2	15%	2	0%	0	14%	1	12%	1	0%	0	0%	0										
25				No time	55%	11	62%	8	43%	3	86%	6	28%	3	50%	2	0%	0										
25				Other	13	13		8		4		3		2		4	0%	0										
25				Skipped	32	32		13		7		9		9		10		4										
26	14		How often do you use group work in lessons?	Daily	29%	14					47%	7	12%	2	17%	2	60%	3	18%	5	20%	63	21%	27	22%	30	12%	6
26	14			Weekly	38%	18					40%	6	38%	6	50%	6	20%	1	46%	13	39%	122	33%	43	45%	61	37%	18
				At least weekly	67%	32					87%	13	50%	8	67%	8	80%	4	64%	18	59%	185	54%	70	67%	91	49%	24
26	14			Half term	19%	9													18%	5								
26	14			Occasionally	13%	6													11%	3								
26	14			Never	2%	1													7%	2								
26	14			Skipped															0%	0								
			How confident do you feel doing group work?	Very confident	57%	28													45%	13								
				Quite confident	41%	20													52%	15								
				Lack confidence	2%	1													3%	1								
				Out of my depth	0%	0													0%	0								

Teacher RP1 Q	How often do you use these teaching styles?						How confident do you feel about using these teaching styles?			
	Daily	Weekly	Monthly	Termly	Yearly	Never	Very	Quite	Low	None
Individual work	43	3	0	1	0	0	47	2	0	0
Paired work	24	17	5	2	0	0	43	6	0	0
Group work	14	18	9	5	1	1	28	20	1	0
Role play/Drama	1	2	13	11	6	13	8	24	12	5
Creative teaching strategies	8	10	6	11	2	10	16	12	17	4
Teachers using ICT	32	7	3	1	3	2	25	20	4	0
Students using ICT	5	9	16	12	3	3	17	26	6	0
Use of hand held devices	1	5	4	3	4	30	9	10	22	8
Students as researchers	3	11	12	13	4	3	13	27	8	0
Students doing enquiries	2	11	15	11	5	2	14	22	11	1
Kinaesthetic learning styles	19	12	10	5	1	1	24	17	6	1
Learning with skills included	13	18	7	4	1	1	21	20	6	1
Choice of learning locations	1	4	2	10	7	22	5	20	18	5
Choice of learning activities	1	11	7	10	7	10	10	26	11	2
Student leadership	4	14	10	11	1	8	13	22	11	2

TA RP1 Q	How commonly do you see these teaching and learning styles used in the lessons you support?						How confident do you feel about supporting these styles?			
	Daily	Weekly	Monthly	Termly	Yearly	Never	Very	Quite	Low	None
Individual work	20	4	1	1	0	0	19	10	0	0
Paired work	7	14	4	0	1	1	19	10	0	0
Group work	5	13	5	2	1	2	13	15	1	0
Role play/Drama	1	5	9	4	0	9	5	12	9	1
Creative teaching strategies	3	5	3	3	1	8	2	14	7	2
Teachers using ICT	17	6	2	0	0	0	9	16	3	0
Students using ICT	6	14	2	2	0	1	9	11	6	0
Use of hand held devices	4	4	0	1	1	14	4	11	7	2
Students as researchers	1	10	5	5	0	5	6	18	2	1
Students doing enquiries	0	9	6	5	0	2	5	19	1	1
Kinaesthetic learning styles	6	12	6	1	1	1	7	19	1	0
Learning with skills included	5	11	3	4	0	0	6	16	3	0
Choice of learning locations	0	6	1	3	2	11	3	18	3	1
Choice of learning activities	0	4	2	6	4	7	4	18	2	1
Student leadership	0	3	7	5	1	6	4	17	2	1

Student RP1 Q	How often do you learn in these ways at the moment?					
	Daily	Weekly	Monthly	Yearly	Never	
Individual work	211	46	4	69	5	
Paired work	109	113	13	85	6	
Group work	63	122	33	92	6	
Role play/Drama	32	62	98	103	26	
Creative teaching strategies	55	56	55	98	48	
Teachers using ICT	144	78	24	59	7	
Students using ICT	64	135	28	67	18	
Use of hand held devices	57	13	15	44	176	
Students as researchers	70	90	42	89	15	
Students doing enquiries	110	81	16	72	22	
Kinaesthetic learning styles	61	73	50	67	48	
Learning with skills included	84	104	30	67	14	
Choice of learning locations	52	44	43	65	94	
Choice of learning activities	49	35	45	76	96	
Student leadership	54	59	34	79	74	

Appendix 26 Review Point 2 data

Applied to					All Teacher (54)		TLR & SLT (37)		Mainscale (17)		Express (14)		Explore (17)		Discover (16)		Reflection (7)		TAs (19)		Students (259)		Year 7 (95)		Year 8 (80)		Year 9 83)	
Te	TA	ST	Question	Answers	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No
1		1	I am a member of teaching staff	With a TLR	59%	32	86%	32			50%	7	59%	10	63%	10	71%	5										
1		1		Within SLT	9%	5	14%	5			14%	2	12%	2	7%	1	0%	0										
1		1		Neither of the above	31%	17			100%	17	36%	5	29%	5	31%	5	29%	2										
1		1		Skipped						0		0		0														
2	3	2	I am attached to the following zone	Expression	26%	14	24%	9	29%	5	100%	14							16%	3								
2	3	2		Exploration	31%	17	32%	12	29%	5			100%	17					16%	3								
2	3	2		Discovery	30%	16	30%	11	29%	5					100%	16			16%	3								
2	3	2		Reflection	13%	7	14%	5	12%	2							100%	7	0%	0								
2	3	2		Various															53%	10								
2	3	2		Skipped		0		0		0		0		0		0		0	0%	0								
3	1	3	I have worked within education for	0-5 years	19%	10	3%	1	53%	9	7%	1	29%	5	19%	3	14%	1	11%	2								
3	1	3		6-10 years	26%	14	30%	11	18%	3	43%	6	23%	4	25%	4		0	21%	4								
3	1	3		11-20 years	37%	20	46%	17	18%	3	43%	6	35%	6	44%	7	14%	1	58%	11								
3	1	3		Over 20 years	19%	10	22%	8	12%	2	7%	1	12%	2	13%	2	71%	5	11%	2								
3	1	3		Skipped						0				0		0		0										
4	2	4	I have worked at Crown Hills for	0-5 years	30%	16	17%	6	59%	10	14%	2	47%	8	19%	3	50%	3	26%	5								
4	2	4		6-10 years	39%	21	50%	18	18%	3	36%	5	35%	6	50%	8	33%	2	32%	6								
4	2	4		11-20 years	24%	13	31%	11	12%	2	50%	7	12%	2	25%	4	0%	0	42%	8								
4	2	4		Over 20 years	6%	3	3%	1	12%	2	0%	0	6%	1	6%	1	17%	1	0%	0								
4	2	4		Skipped		1		1		0		0		0		0		1		0								
5		5	Have you done any collaborative planning in the last term?	Yes	91%	48	95%	34	82%	14	100%	13	94%	16	75%	12	100%	7	17%	3								
5		5		No	9%	5	6%	2	18%	3	0%	0	6%	1	25%	4	0%	0	83%	15								
5		5		Skipped		1		1				1		0		0		0		1								
6		6	Was this collaborative planning within?	Own faculty	58%	28	56%	19	64%	9	62%	8	69%	11	50%	8	43%	3										
6		6		Own zone	75%	36	82%	28	57%	8	77%	10	75%	12	100%	12	29%	2										
6		6		Beyond my zone	15%	7	18%	6	7%	1	0%	0	6%	1	0%	0	57%	4										
6		6		Skipped		6		3		3		1		1		4		0										
	7		Was this with other support assistants or teachers?	Support assistants															0%	0								
	7			Teachers															100%	3								
	7			Both															0%	0								
	7			Skipped																16								

Te	TA	St			All Teacher (54)		TLR & SLT (37)		Mainscale (17)		Express (14)		Explore (17)		Discover (16)		Reflection (7)		TAs (19)		Students (259)		Year 7 (95)		Year 8 (80)		Year 9 83)	
7	8	7	What did this collaborative planning involve?	Writing a scheme	67%	32	65%	22	71%	10	69%	9	75%	12	67%	8	43%	3	0%	0								
7	8	7		Planning a project	71%	34	82%	28	###	5	62%	8	75%	12	83%	10	43%	3	50%	1								
7	8	7		Planning ind lessons	69%	33	74%	25	64%	9	54%	7	81%	13	75%	9	71%	5	100%	2								
7	8	7		Planning ass'ts	31%	15	38%	13	14%	2	15%	2	38%	6	33%	4	43%	3	0%	0								
7	8	7		Differentiating	2	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	50%	1								
				Not linked to enquiry	2	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
7	8	7		Other (please specify)		0		1		0		0		0		0		0		0								
7	8	7		Skipped		6		3		3		1		1		4				17								
8		8	Have you delivered any cross-curricular learning?	Yes	53%	28	50%	18	59%	10	54%	7	59%	10	44%	7	57%	4			50%	126	60%	55	55%	42	35%	29
8		8		No	47%	25	50%	18	41%	7	46%	6	41%	7	56%	9	43%	3			50%	126	40%	37	45%	34	65%	54
8		8		Skipped		1		1		0		1		0		0		0				7		3		4		0
9		9	Was this linked to a subject in your own zone or beyond?	Own zone	72%	21	68%	13	80%	8	71%	5	80%	8	86%	6	40%	2										
9		9		Outside my zone	31%	9	37%	7	20%	2	43%	3	20%	2	14%	1	60%	3										
9		9		Don't know	3%	0	0%	3	10%	1	21%	0	0%	2	14%	1	0%	0										
9		9		Skipped		25		18		7		7		7		9		2										
X			Which zone was it in?	Discovery																	37%	59	52%	26	30%	12	66%	19
X				Exploration																	13%	21	22%	11	10%	4	21%	6
X				Expression																	43%	69	40%	20	90%	36	41%	12
X				Other																		5		4		3		
X				Maths & ICT																		5		5		0		
X				Skipped																								
10		10	What year group(s) did it involve?	Year 7	55%	16	53%	10	60%	6	14%	1	80%	8	71%	5	40%	2										
10		10		Year 8	52%	15	53%	10	50%	5	86%	6	30%	3	57%	4	40%	2										
10		10		Year 9	24%	7	21%	4	30%	3	14%	1	10%	1	57%	4	20%	1										
10		10		KS4	21%	6	21%	4	20%	2	14%	1	10%	1	14%	1	60%	3										
10		10		Skipped		25		18		7		7		7		9		2										
11		11	How many lessons did it last (RP1 on average if more than once) (RP2 up to 3 responses)	1	36%	9		7		2	17%	1	25%	3	66%	4		1										
11		11		2	36%	9		7		2	17%	1	25%	3	66%	4		1										
11		11		3	8%	2		1		1	17%	1	8%	1				0										
11		11		4	12%	3		2		1			17%	2	17%	1		0										
11		11		more	52%	13		5		8	66%	4	25%	3	66%	4		2										
11		11		Skipped		29		22		7		8		5		10		4										
13		13	Have you set any cross-curricular homework this term	Yes	36%	19	36%	13	35%	6	46%	6	24%	4	44%	7	29%	2										
13		13		No	64%	34	64%	23	65%	11	54%	7	76%	13	56%	9	71%	5										
13		13		Skipped		1		1		0		1						0										
14		14	Did this link within or beyond your zone?	Within Express	21%	4	23%	3	17%	1	50%	3	0%	0	14%	1	0%	0			37%	33	49%	21	48%	13	42%	8
14		14		Within Explore	11%	2	15%	2	0%	0	0%	0	50%	2	0%	0	0%	0			35%	31	53%	23	11%	3	26%	5
14		14		Within Discover	32%	6	39%	5	17%	1	0%	0	0%	0	86%	6	0%	0			51%	45	28%	12	48%	13	58%	11
14		14		Outside	37%	7	23%	3	67%	4	50%	3	50%	2	0%	0	100%	2										
14		14		Skipped		35		24		11		8		13		9		5				170		52		53		64

Te	TA	St			All Teacher (54)		TLR & SLT (37)		Mainscale (17)		Express (14)		Explore (17)		Discover (16)		Reflection (7)		TAs (19)		Students (259)		Year 7 (95)		Year 8 (80)		Year 9 83)	
15		9	Have you done any team teaching in the last term?	Yes	34%	18	31%	11	41%	7	46%	7	24%	4	19%	3	71%	5			39%	98	42%	39	43%	32	33%	26
15		9		No	66%	35	69%	25	59%	10	54%	6	76%	13	81%	13	29%	2			61%	151	58%	54	57%	43	68%	54
15		9		Skipped		1		1		0		1		0		0		0				10		2		5		3
16			Who was this with	In faculty	32	6	42%	5	14%	1	29%	2	75%	3	33%	1	0%	0										
16				In zone	42	8	33%	4	57%	4	71%	5	25%	1	33%	1	20%	1										
16				Outside zone	26	5	25%	3	29%	2	0%	0	0%	0	33%	1	80%	4										
16				Skipped		35		25		10		7		13		13		2										
		10	Which zones does team teaching occur in?	Within Express																	25%	20						
		10		Within Explore																	30%	24						
		10		Within Discover																	37%	29						
		10		Skipped																		186						
17			Did you also plan this lesson(s) collaboratively?	Yes	63%	12	58%	7	71%	5	57%	4	50%	2	67%	2	80%	4										
17				Usually	21	4	25%	3	14%	1	14%	1	50%	2	0%	0	20%	1										
17				No	16%	3	17%	2	14%	1	29%	2	0%	0	33%	1	0%	0										
17				Skipped		35		25		10		7				13		2										
18			Are you normally timetabled to be in this lesson?	Yes - as support	16%	3	17%	2	14%	1	0%	0	0%	0	33%	1	40%	2										
18				Yes - team teach	21%	4	17%	2	29%	2	14%	1	25%	1	33%	1	20%	1										
18				No	63%	12	67%	8	57%	4	86%	6	75%	3	33%	1	40%	2										
18				Skipped		35		25		10		7		13		13		2										
		11	Is having 2 teachers good?	Yes																	83%	49						
		11		No																	17%	10						
		11		Skipped																		200						
		1	What year are you in?	Year 7																	37%	95	100%	95				
		1		Year 8																	31%	80			100%	80		
		1		Year 9																	32%	83					100%	83
		1		Skipped																		1						
		2	What gender are you?	Male																	53%	137	57%	54	56%	45	46%	38
		2		Female																	47%	121	43%	41	44%	35	54%	44
		2		Skipped																		1						1
		3	Are you on the SEN register?	Yes																	7%	16	5%	5	3%	2	10%	8
		3		No																	77%	196	78%	73	81%	62	74%	61
		3		Don't know																	17%	42	17%	16	17%	13	16%	13
		4	Do you usually speak English at home?	Yes																	86%	217	85%	80	95%	72	78%	64
		4		No																	14%	36	15%	14	5%	4	22%	18
		12	Do you know what the 7Cs are?	Yes																	70%	170	88%	81	54%	40	63%	49
		12		No																	30%	74	12%	11	46%	34	37%	29
		12		Skipped																		15		3		6		5
		13	Name the 7Cs	Some																	98%	157						
		13		No																	2%	4						
		13		Skipped																		98						

Te	TA	St			All Teacher (54)		TLR & SLT (37)		Mainscale (17)		Express (14)		Explore (17)		Discover (16)		Reflection (7)		TAs (19)		Students (259)		Year 7 (95)		Year 8 (80)		Year 9 83)	
19	7		Confident with the 7Cs	Yes	58%	31	64%	23	47%	8	85	11	59%	10	38%	6	57	4	88%	14								
19				Maybe	4%	20	33%	12	6%	1	15	2	6%	1	6%	1	43	3	0%	0								
19	7			No	38%	2	3%	1	47%	8	0	0	35%	6	56%	9	0	0	12%	2								
19	7			Skipped		1				0		1		0		0		0		0								
20	8	15	Do you think the 7Cs will help students learn?	Yes - all students	40%	21	47%	17	24%	4	54%	7	41%	7	25%	4	43%	3	78%	14	69%	115	80%	65	56%	22	60%	28
20				Yes - some	55%	29	53%	19	59%	10	46%	6	59%	10	63%	10	43%	3										
20	8	15		Yes - MA students	2	1	0%	0	6%	1	0%	0	0%	0	6%	1	0%	0	17%	3								
	8	15		Yes - LA students	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	6%	1								
20	8	15		No/Other	4%	2	0%	0	12%	2	0%	0	0%	0	6%	1	14%	1			13%	22	9%	7	21%	8	15%	7
	8	15		Don't know	0%	0	0%	0	0%	0	0%	0	0%	0	0	0	0	0			18%	30	11%	9	23%	9	26%	12
20	8	15		Skipped		1		1		0		1		0		0		0		2		10		14		41		36
21			Have you used the 7Cs in your teaching this term?	Yes	79%	42	78%	28	82%	14	92%	12	88%	15	75%	12	43%	3	100%	17								
21				No	21%	11	22%	8	18%	3	8%	1	12%	2	25%	4	57%	4										
21				Skipped		1		1		0		1		0		0		0										
22				Most lessons	31%	13	25%	7	43%	6	42%	5	40%	6	17%	2	0%	0										
22				2/3 a week	29%	12	25%	7	36%	5	25%	3	33%	5	25%	3	33%	1										
22				once a week	10%	4	14%	4	0%	0	17%	2	0%	0	8%	1	33%	1										
22				occasionally	31%	13	36%	10	21%	3	17%	2	27%	4	50%	6	33%	1										
22				Skipped		12		9		3		2		2		4		4										
	10	14	Where were they used?	Express															40%	6	67%	115	63%	51	64%	27	76%	37
	10	14		Explore															47%	7	44%	75	53%	43	33%	14	37%	18
	10	14		Discover															40%	6	43%	74	52%	42	36%	15	35%	17
	10	14		Other/Don't know															20%	3	2%	35	20%	16	26%	11	16%	8
	10	14		Skipped																0		87		14		38		34
23	11		In what way have you used the 7Cs?	LOs	85%	35	89%	25	73%	10	92%	11	100%	15	55%	6	100%	3	69%	11								
23	11			Assessment criteria	20%	8	25%	7	7%	1	8%	1	27%	4	18%	2	33%	1	31%	5								
23	11			Articulate a task	37%	15	39%	11	31%	4	58%	7	13%	2	36%	4	67%	2	38%	6								
23	11			Skills linked to tasks	59%	24	61%	17	54%	7	75%	9	33%	5	73%	8	67%	2	25%	4								
23	11			Homework projects	29%	10	32%	9	23%	3	25%	3	47%	7	18%	2	0%	0	19%	3								
23	11			Ass. Crit for hwk	15%	6	14%	4	15%	2	8%	1	20%	3	18%	2	0%	0										
23	11			Other		2		0		0		1		0		1		0										
23	11			Skipped		13		9		4		2		2		5		4										
24			What has prevented you using the 7Cs this term?	Not sure what they are	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
24				Too complicated	4%	1	0%	0	11%	1	0%	0	0%	0	9%	1	0%	0										
24				Don't link to subject	8%	2	0%	0	22%	2	0%	0	12%	1	0%	0	33%	1										
24				Hard to put into LOs	15%	4	18%	3	11%	1	25%	1	12%	1	9%	1	33%	1										
24				St don't understand	4%	1	0%	0	11%	1	0%	0	0%	0	0%	0	33%	1										
24				No time	69%	18	82%	14	44%	4	75%	3	75%	6	82%	9	0%	0										
24				Other		16		11		0		0		0		0		0										
24				Skipped		28		20		8		10		9		5		4										

Te	TA	St			All Teacher (54)		TLR & SLT (37)		Mainscale (17)		Express (14)		Explore (17)		Discover (16)		Reflection (7)		TAs (19)		Students (259)		Year 7 (95)		Year 8 (80)		Year 9 83)	
25			How often do you use group work in lessons?	Daily	40%	21	33%	12	53%	9	77%	10	12%	2	38%	6	43%	3	27%	4	15%	31	11%	8	15%	10	21%	13
25				Weekly	32%	17	36%	13	24%	4	15%	2	35%	6	31%	5	57%	4	27%	4	44%	90	49%	37	42%	28	40%	25
				At least weekly	72%	38	69%	25	77%	13	92%	12	47%	8	69%	11	100%	7	54%	8	59%	121	60%	45	57%	38	61%	38
25				Half term	8%	4	11%	4	0%	0	8%	1	12%	2	6%	1	0%	0										
25				Occasionally	21%	11	19%	7	24%	4	0%	0	41%	7	25%	4	0%	0										
25				Never	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
25				Skipped		1		1		0		1		0		0		0										
26			Who do you do group work with?	7	85%	45	83%	30	88%	15	100%	13	82%	14	94%	15	43%	3										
26				8	79%	42	78%	28	82%	14	100%	13	71%	12	94%	15	29%	2										
26				9	68%	36	69%	25	65%	11	92%	12	59%	10	69%	11	43%	3										
26				KS4	79%	42	86%	31	65%	11	85%	11	59%	10	88%	13	100%	7										
26				Skipped		1		1		0		1		0		0		0										
27	13	17	Assigned roles in group work?	Yes	8%	4	11%	4	0%	0	15%	2	6%	1	6%	1			25%	4								
				Sometimes	60%	32	56%	20	71%	12	78%	11	53%	9	57%	6	43%	3	75%	12								
				Sometimes +	68%	36	67%	24	71%	12	93%	13	59%	10	63%	7	0%	0	100%	16								
27		17		Yes Discovery																	24%	38	37%	27	8%	3	18%	8
27		17		Yes Exploration																	32%	50	57%	42	55%	21	47%	21
27		17		Yes Expression																	54%	84	45%	33	18%	7	22%	10
27	13	17		No	32%	17	33%	12	29%	5	0%	0	41%	7	38%	6	57%	4	0%	0	28%	44	10%	8	37%	14	49%	22
27				Skipped		1		1		0		1		0		0		0		3		102		21		42		38
28	14		How do you think assigning roles in individuals influences group work?	Imp for all st	22%	11	28%	9	12%	2	38%	5	25%	4	8%		14%	1	44%	7								
28	14			Imp for more able	16%	8	9%	3	29%	5	15%	2	19%	3	23%		0%	0	19%	3								
28	14			Imp for less able	4%	2	0%	0	12%	2	8%	1	0%	0	8%		0%	0	19%	3								
28	14			St are unclear	51%	25	59%	19	35%	6	38%	5	44%	7	62%		71%	5	19%	3								
28	14			More cx	6%	3	3%	1	12%	2	0%	0	13%	2	0%	0	14%	1	0%	0								
28	14			No diff	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0								
				Skipped		5		5		0		0		1				0										
		18	Does being given a role in group work help the group work better or not?	Yes - all time																	27%	32	24%	16	27%	7	35%	9
		18		Yes - most times																	29%	34	30%	20	23%	6	31%	8
		18		Depends on my role																	32%	38	33%	22	39%	10	23%	6
		18		No different																	6%	7	5%	3	12%	3	4%	1
		18		More complicated																	7%	8	9%	6	0%	0	8%	2
		18		Other																		2		1		0		1
		18		Skipped																		140		28		54		57
29	15		How effective are our students at independent learning?	V Good	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	7%	1								
29	15			OK	40%	21	36%	13	47%	8	38%	5	29%	5	38%	6	71%	5	40%	6								
29	15			Imp 7-11	19%	10	19%	7	18%	3	23%	3	12%	2	31%	5	0%	0	40%	6								
29	15			Dec 7-11	17%	9	22%	8	6%	1	0%	0	24%	4	31%	5	0%	0	0%	0								
29	15			Poor	25%	13	22%	8	29%	5	38%	5	35%	6	0%	0	29%	2	13%	2								
29	15			Skipped		1		1	0%	0		1		0		0		0		4								

Te	TA	St			All Teacher (54)		TLR & SLT (37)		Mainscale (17)		Express (14)		Explore (17)		Discover (16)		Reflection (7)		TAs (19)		Students (259)		Year 7 (95)		Year 8 (80)		Year 9 83)	
30	16		How confid to supp st to be more ind?	Conf	67%	35	71%	25	59%	10	58%	7	59%	10	81%	13	71%	5	81%	13								
30	16			A little unsure	33%	17	29%	10	41%	7	42%	5	41%	7	19%	3	29%	2	19%	3								
30	16			Lacking in conf	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0								
30	16			Skipped		2		2		0		2		0		0		0		3								
		19	Do you know what independent learning means?	Yes																	89%	141	88%	68	85%	34	93%	39
		19		No																	6%	9	5%	4	8%	3	5%	2
		19		Not sure what are																	6%	9	7%	5	8%	3	2%	1
		19		Skipped																		100		18		40		41
		20	How good are you at helping yourself?	Very good																	34%	55	34%	26	33%	13	35%	16
		20		Good - try to wk out																	50%	81	49%	38	45%	18	54%	25
		20		OK - ask friends first																	14%	22	17%	13	18%	7	4%	2
		20		No - ask an adult																	3%	5	0%	0	5%	2	7%	3
		20		Skipped																		96		18		40		37
31			Have you seen the 'C3B4ME' idea used in classrooms?	Yes	62%	33	64%	23	59%	10	46%	6	88%	15	56%	9	43	3										
31	17	21		Yes Discovery															21%	3	63%	99	75%	57	77%	30	29%	12
31	17	21		Yes Expression															21%	3	13%	20	13%	10	10%	4	14%	6
31	17	21		Yes Exploration															14%	2	11%	17	13%	10	18%	7	0%	0
31	17	21		Yes but ? Location															14%	2	21%	33	13%	10	15%	6	41%	17
31	17	21		No	38%	20	36%	13	41%	7	54%	7	12%	2	44%	7	57	4	29%	4	13%	20	8%	6	10%	4	24%	10
31	17	21		Skipped		1		1		0		1		0	0%	0		0		5		102		20		41		41
32	18	22	Do you think strategies poster will help	Yes - all	87%	46	97%	35	64%	11	85%	11	94%	16	75%	12	100	7	50%	8	39%	61	36%	27	41%	16	42%	18
32	18	22		LA	4%	2	0%	0	12%	2	0%	0	0%	0	13%	2	0%	0	19%	3								
32	18	22		MA	6%	3	3%	1	12%	2	15%	2	6%	1	0%	0	0%	0	6%	1								
32	18	22		Maybe	4%	2	0%	0	12%	2	0%	0	0%	0	13%	2	0%	0	25%	4	43%	68	51%	38	39%	15	35%	15
32		22		Not sure	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	7%	11	8%	6	3%	1	9%	4
32	18	22		No	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	11%	17	4%	3	18%	7	14%	6
32	18	22		Skipped		1		1		0		1		0		0		0		3		102		21		41		40

Teacher RP2 Q34 & 35	How often do you use these teaching styles?						How confident do you feel about using these teaching styles?			
	Daily	Weekly	Monthly	Termly	Yearly	Never	Very	Quite	Low	None
Individual work	49	2	0	0	0	0	45	5	0	0
Paired work	26	20	4	0	0	0	44	7	0	0
Group work	21	17	4	11	0	0	26	22	1	0
Role play/Drama	2	5	9	14	6	13	8	27	10	4
Creative teaching strategies	6	15	10	6	7	5	15	19	14	2
Teachers using ICT	38	6	3	2	0	1	33	12	4	1
Students using ICT	4	14	17	12	2	0	29	13	7	1
Use of hand held devices	3	8	5	6	5	23	10	13	16	11
Students as researchers	2	14	11	14	8	1	13	31	5	0
Students doing enquiries	6	7	13	15	7	2	10	27	13	0
Kinaesthetic learning styles	18	17	11	5	0	0	26	19	5	0
Learning with skills included	24	10	9	5	1	2	21	21	8	0
Choice of learning locations	0	7	5	8	7	21	5	21	16	8
Choice of learning activities	1	14	12	12	6	5	13	25	10	2
Student leadership	9	6	18	11	6	0	13	29	7	1

TA RP2 Q20 & 21	How commonly do you see these teaching and learning styles used in the lessons you support?						How confident do you feel about supporting these styles?			
	Daily	Weekly	Monthly	Termly	Yearly	Never	Very	Quite	Low	None
Individual work	12	3	0	0	0	0	12	4	0	0
Paired work	6	6	3	0	0	0	12	5	0	0
Group work	4	4	4	3	0	0	11	5	0	0
Role play/Drama	1	4	3	5	0	1	5	7	3	0
Creative teaching strategies	2	5	1	2	0	2	2	8	4	1
Teachers using ICT	8	5	2	0	0	0	5	8	2	0
Students using ICT	3	7	3	2	0	0	4	8	2	0
Use of hand held devices	2	3	1	3	0	3	3	7	4	0
Students as researchers	2	6	3	2	1	0	4	10	0	0
Students doing enquiries	2	5	4	2	1	0	6	8	0	0
Kinaesthetic learning styles	4	6	1	4	0	0	6	8	1	0
Learning with skills included	2	5	2	2	0	1	5	8	1	0
Choice of learning locations	1	4	2	2	0	2	3	10	1	0
Choice of learning activities	1	3	3	3	2	1	4	8	2	0
Student leadership	0	4	4	4	1	0	5	9	0	0

Student RP2 Q24	How often do you learn in these ways at the moment?					
	Daily	Weekly	Monthly	Yearly	Never	
Individual work	140	29	4	33	6	
Paired work	61	100	9	34	7	
Group work	31	90	35	41	8	
Role play/Drama	14	51	57	63	17	
Creative teaching strategies	15	46	38	53	43	
Teachers using ICT	96	47	12	33	12	
Students using ICT	28	67	37	49	12	
Use of hand held devices	15	14	24	47	89	
Students as researchers	35	57	39	49	11	
Students doing enquiries	53	60	20	35	22	
Kinaesthetic learning styles	28	51	31	45	29	
Learning with skills included	38	67	27	39	16	
Choice of learning locations	24	32	25	42	59	
Choice of learning activities	24	36	32	46	50	
Student leadership	22	32	31	48	48	

Appendix 27 Front sheet for the 'What makes a good person' enquiry learning project

Name: _____ Form: _____

Our enquiry question is ... What makes a good person?

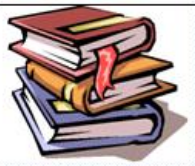
Collaboration	We are focusing on the following C's ...			Creativity
Communication	Construct	Commitment	Care	Confidence

Download!

What sub-questions do you think you might need to ask in order to answer this big question?

-
-
-
-

What resources can I use to help me?



Who are you working with and what roles are they going to have?

Name	Role	Name	Role

Appendix 28 Finalline questionnaire data

Applied to					All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
Te	TA	St	Question	Answers	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No
1			I am a member of teaching staff	With a TLR	58%	41					62%	13	59%	13	48%	11	80%	4										
1				Within SLT	85%	6					10%	2	14%	3	4%	1	0%	0										
1				Neither of the above	34%	24					29%	6	27%	6	48%	11	20%	1										
1				Skipped	0%	0						0		0		0		0										
2	3		I am attached to the following zone	Expression	30%	21					100%	21							13%	4								
2	3			Exploration	31%	22							100%	22					10%	3								
2	3			Discovery	32%	23									100%	23			20%	6								
2	3			Reflection	70%	5											100%	5	27%	8								
2	3			Various	0%														30%	9								
2	3			Skipped	0%	0										0		0		0								
3	1		I have worked within education for	0-5 years	20%	14					10%	2	27%	6	26%	6	0%	0	17%	5								
3	1			6-10 years	23%	16					29%	6	18%	4	26%	6	0%	0	43%	13								
3	1			11-20 years	41%	29					48%	10	41%	9	44%	10	0%	0	37%	11								
3	1			Over 20 years	17%	12					14%	3	14%	3	4%	1	100%	5	3%	1								
3	1			Skipped	0%	0						0		0		0		0		0								
4	2		I have worked at Crown Hills for	0-5 years	30%	21					10%	2	46%	10	35%	8	20%	1	33%	10								
4	2			6-10 years	38%	27					38%	8	32%	7	44%	10	40%	2	33%	10								
4	2			11-20 years	27%	19					48%	10	14%	3	22%	5	20%	1	33%	9								
4	2			Over 20 years	6%	4					9%	1	9%	2	0%	0	20%	1	3%	1								
4	2			Skipped	0%	0						0		0		0		0		0								
8			Do you have a learning space in which you teach/support the majority of your lessons?	Yes	68%	48	60%	28	84%	20	62%	13	77%	17	83%	19	60%	3										
8				No	21%	15	28%	13	8%	2	0%	0	23%	5	17%	4	40%	2										
8				PE learning spaces	11%	8	13%	6	8%	2	38%	8	0%	0	0%	0	0%	0										
8				Yes + PE	8%		73%	34	92%	22	100%	21	77%	22	83%	23	60%	3										
8				Skipped	0%	0		0		0		0		0		0		0										
9			How many lessons a week are you timetabled to teach outside this space?	0	29%	14		10		6		7		3		3												
9				1	21%	10		6		4		5		2		3												
9				2	13%	6		4		2		1		2		3												
9				3	13%	6		4		2		0		2		2												
9				4	6%	3		3				0		2		0		1										
9				5	4%	2		0		2		0		1		1												
9				6	6%	3		3		0		0		0		3												
9				7	2%	1		0		1		0		1		0												
9				8	0%	0		0				0		0		0												
			How many lessons a week do you support in this space?	1-3																								
				4-6																								
				7-10																								
				11-20																								
				21+																								
				Skipped																								

Te	TA	St			All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
10			How do you feel you have made this space your own? Please select as many as apply.	Name on display	4%	2	3%	1	6%	1	0%	0	6%	1	6%	1	0%	0										
10				Displays	69%	33	70%	21	61%	11	69%	9	75%	12	63%	10	67%	2										
10				Organisation	60%	29	60%	18	56%	10	85%	11	50%	8	44%	7	67%	2										
10				Layout	69%	33	63%	19	78%	14	85%	11	69%	11	63%	10	33%	1										
10				Don't feel own space	16%	7	20%	6	6%	1	8%	1	13%	2	25%	4	33%	1										
10				Other (please specify)	17%	8		7	6%	1		3		1				1										
10				Skipped		23		16		6		8		6		7		2										
10				storage of resources		2	3%	1							6%	1												
11		8	Which of the following formats most closely matches the learning space you are most commonly teach in?	Tables individually	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0			14%	37	10%	9	19%	17	12%	11
11		8		Tables in rows	18%	9	29%	5	21%	4	31%	4	20%	3	11%	2	0%	0			60%	160	60%	53	60%	53	59%	54
11		8		Tables in groups	45%	22	76%	13	47%	9	39%	5	60%	9	28%	5	100%	3			79%	213	84%	75	74%	65	80%	73
11				Purpose designed	37%	18	71%	12	32%	6	31%	4	20%	3	61%	11	0%	0										
				None of the above										0														
11		8		Skipped	NA	22		30	NA	5		8		7		5		2				16		6		7		3
12		9	Do you ever change the organisation of the learning space you are working in?	Never	10%	6	12%	5	5%	1	0%	0	14%	4	9%	2		0			16%	43	17%	15	18%	16	13%	12
12		9		Occasionally	53%	33	49%	20	62%	13	46%	6	45%	13	59%	13	20%	1			65%	175	66%	59	59%	51	71%	65
12		9		Often	19%	12	20%	8	19%	4	31%	4	7%	2	9%	2	80%	4			19%	50	17%	15	23%	20	16%	15
12				Fixed facilities	18%	11	20%	8	14%	3	23%	3	10%	3	23%	5		0										
12		9		Skipped		9		6		3		8		0		1		0				16		6		8		2
			Do you know why these changes are made?	No																								
				Yes I know why changed																								
				Skipped																								
13			Why do you never change the layout of your learning space?	Not enough space		0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
13				Too time consuming	40%	2	40%	2	0%	0	0%	0	25%	1	100%	1	0%	0										
13				Replan seating	40%	2	100%	2	0%	0	0%	0	50%	2	0%	0	0%	0										
13				Students chatty		0	40%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
13				misbehaviour increases		0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
13				Other (please specify)				0		0		0		0		0		0										
13				Share all my spaces	100%	5		5	0%	0	0%	0	100%	4	100%	1												
13				Skipped		66		42		24		0		18		22		5										
14			Why do you change the layout of your learning space?	To allow discussion	51%	23	57%	16	44%	7	80%	8	43%	6	47%	7	40%	2										
14				To facilitate group work	78%	35	82%	23	75%	12	90%	9	79%	11	79%	11	80%	4										
14				Share resources	42%	19	46%	13	38%	6	40%	4	36%	5	47%	7	60%	3										
14				To differentiate	53%	24	61%	17	44%	7	80%	8	50%	7	40%	6	60%	3										
14				Deliver different activities	62%	28	68%	19	56%	9	70%	7	57%	8	64%	9	80%	4										
14				To deploy TAs	18%	8	21%	6	12%	2	20%	2	14%	2	21%	3	20%	1										
14				Other (please specify)	7%	3		2		0		1		1		1		0										
14				Behaviour	40%	18	43%	12	38%	6	40%	4	36%	5	47%	7	40%	2										
14				Controlled Assessments	2%	1			6%	1																		
14				Skipped		27		19		8		11		8		8		0										

Te	TA	St			All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
15	4	10	Which would be your preferred learning space layout?	Tables individually	0%	0	0%	0	0%	0	0%	0	0%	0		0	0%	0	10%	2	9%	24	11%	9	6%	5	11%	10
15	4	10		Tables in rows	12%	7	10%	4	15%	3	15%	2	14%	3	10%	2	0%	0	29%	6	11%	29	10%	8	15%	13	9%	8
15	4	10		Tables in groups	45%	27	38%	16	55%	11	23%	3	55%	12	55%	11	20%	1	62%	13	50%	128	45%	38	50%	42	54%	48
15				Flexible tables	25%	15	28%	11	20%	4	31%	4	18%	4	15%	3	80%	4										
15				Purpose designed space	20%	12	25%	10	10%	2	31%	4	14%	3	25%	5	0%	0										
15	4			Other (please specify)	2%	1		1		0		0		0		0		0		5								
15		10		Don't mind																	30%	76	35%	29	29%	24	26%	23
15	4	10		Skipped		11		7		4		8		0		3		0	NA	9		27		11		11		5
17			Which of the following are in the learning space you most commonly teach in? Please tick all that apply. (If you would like to many any additional comments, please also select the 'Any additional comments' option)	Designated teaching desk	98%	59																						
17				Write on board	87%	52																						
17				Display areas	85%	51																						
17				Networked computer	93%	56																						
17				Projector	97%	58																						
17				Interactive Whiteboard	93%	56																						
17				Reliable internet access	68%	41																						
17				Adequate heating	83%	50																						
17				Adequate lighting	88%	53																						
17				Adequate sun protection	80%	48																						
17				Climate control	70%	42																						
17				Any additional comments																								
17				Skipped		11																						
19		11	Has the availability of laptops changed how often you move?	yes - move more	17%	10	18%	7	15%	3	33%	4	18%	4		2	0%	0			69%	177	59%	50	67%	56	82%	71
19				Yes - move less	45%	27	42%	17	50%	10	33%	4	36%	8	62%	13	40%	2										
		11		No difference																	12%	31			18%	16	7%	6
19		11		No	38%	23	40%	16	35%	7	33%	4	45%	10	29%	6	60%	3			19%	48	29%	25	15%	13	11%	10
19		11		Skipped		11		7		4		9		0		2		0				28		10		11		7
		12	Do you ever take large groups of students/whole classes to a different learning space?	Yes																	60%	156	63%	55	52%	43	65%	58
		12		No																	40%	102	37%	32	48%	39	35%	31
				Use varied PE spaces																								
		12		Skipped																		26		8		13		5
	6	16	Where else do you take learning? Tick as many as apply.	Library															4%	1	33%	9	40%	4	25%	2	33%	3
	6			ICT room															0%	0								
		16		Reflection plaza																	52%	14	40%	4	62%	5	56%	5
		16		Reflection classroom																	33%	9	40%	4	25%	2	33%	3
	6			Plaza															38%	9								
	6			Auditoria															0%	0								
	6	16		Other (please specify)															67%	16	30%	8	40%	4	38%	3	11%	1
	6	16		Skipped																6		257		85		87	11%	1
	6	16		mainstream class															38%	9	15%	4	20%	2	12%	1		85
	10	15	Do you withdraw small groups or individual students	Yes															83%	20	13%	34	14%	12	14%	11	12%	11
	10	15		No															17%	4	87%	223	86%	75	86%	69	88%	79
	10	15		Skipped																6		27		8		15		4

Te	TA	St			All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
	11		Where do you normally take them?	Library															31%	5								
	11			LEC															13%	2								
	11			Empty classroom															31%	5								
	11			Meeting room															25%	4								
	11			Office															0%	0								
	11			Plaza															38%	6								
	11			Dining															13%	2								
	11			Other															6%	1								
	12	17	Are these facilities adequate for this purpose?	Yes															61%	17	77%	27	92%	12	58%	7	80%	8
	12	17		No															6%	2	11%	4	0%	0	17%	2	20%	2
	12	17		Don't know															33%	11	11%	4	8%	1	25%	3	0%	0
	12	17		Skipped																0		249		82		83		84
5	32	5	Which learning styles would you like to see in the new school? / Which learning styles are easier to facilitate in the new school?	Individual work	27%	19	26%	12	29%	7	24%	5	27%	6	26%	6	40%	2	41%	9	30%	83	38%	35	24%	23	27%	25
5	32	5		Paired work	37%	26	34%	16	42%	10	24%	5	50%	11	30%	7	60%	3	55%	12	55%	154	51%	47	57%	54	57%	53
5	32	5		Group work	73%	52	72%	34	75%	18	76%	16	82%	18	65%	15	60%	3	86%	19	75%	210	75%	70	73%	69	76%	71
5	32	5		Role play	45%	32	51%	24	33%	8	62%	13	64%	14	8%	2	60%	3	73%	16	48%	133	49%	45	49%	46	44%	41
5	32	5		Creative teaching	30%	21	36%	17	17%	4	33%	7	32%	7	22%	5	40%	2	36%	8	29%	80	31%	29	30%	28	25%	23
5	32	5		Teachers ICT	73%	52	77%	36	67%	16	67%	14	86%	19	70%	16	60%	3	73%	16	45%	125	47%	44	49%	46	38%	35
5	32	5		Students ICT	83%	59	83%	39	83%	20	90%	19	95%	21	71%	16	60%	3	77%	17	71%	199	67%	62	74%	70	72%	67
5	32	5		Hand held devices	44%	31	47%	22	38%	9	33%	7	41%	9	57%	13	40%	2	27%	6	50%	139	51%	47	44%	41	55%	51
5	32	5		Students as researchers	58%	41	60%	28	54%	13	67%	14	64%	14	43%	10	60%	3	55%	12	41%	114	43%	40	39%	37	40%	37
5	32	5		Enquiry learning	61%	43	60%	28	62%	15	52%	11	68%	15	65%	15	40%	2	50%	11	42%	118	56%	52	53%	50	17%	16
5	32	5		Kinaesthetic	54%	38	55%	26	50%	12	57%	12	55%	12	48%	11	60%	3	36%	8	46%	128	44%	41	45%	42	48%	45
5	32	5		Transferable skills	20%	14	23%	11	12%	3	19%	4	32%	7	9%	2	20%	1	14%	3	27%	75	31%	29	21%	20	28%	26
5	32	5		Choice of location	39%	28	47%	22	25%	6	43%	9	36%	8	35%	8	60%	3	36%	8	40%	111	35%	33	39%	17	44%	41
5	32	5		Choice of activities	34%	24	36%	17	29%	7	33%	7	45%	10	22%	5	40%	2	23%	5	58%	162	54%	50	63%	59	57%	53
5	32	5		Student leadership	35%	25	36%	17	33%	8	47%	10	27%	6	30%	7	40%	2	46%	10	33%	93	45%	42	24%	23	30%	28
5	32	5		Skipped		0		0		0		0		0		0		0		0		4		2		1		1
20		18	Have you taught in a plaza or an auditorium?	Yes - timetabled	38%	26	42%	19	30%	7	21%	4	59%	13	36%	8	20%	1			51%	18	5%	7	50%	6	50%	5
20				Yes - enquiry	32%	22	31%	14	35%	8	37%	7	9%	2	59%	13	0%	0										
20				Yes - classes normal	18%	12	16%	7	22%	5	37%	7	14%	3	0%	0	40%	2										
20		18		No	12%	8	11%	5	13%	3	5%	1	18%	4	5%	1	40%	2			34%	12	31%	4	33%	4	40%	4
		18		Don't know																	14%	5	15%	2	17%	2	10%	1
20		18		Skipped		3		2		1		2		0		1		0				249		82		83		84
21	7	19	Advantages of teaching in a plaza?	Multiple classes	52%	31	74%	20	69%	11	53%	10	28%	5	77%	16	0%	0	39%	9	47%	15	42%	5	50%	6	50%	4
21	7			Team teaching	63%	38	90%	26	80%	12	68%	13	44%	8	77%	16	50%	1	44%	10								
		19		Easier to get help																	44%	14	50%	6	42%	5	38%	3
21	7	19		More space	62%	37	80%	24	93%	13	68%	13	72%	13	43%	9	100%	2	70%	16	47%	15	33%	4	50%	6	62%	5
21	7	19		Different learning styles	72%	43	97%	29	88%	14	68%	13	72%	13	71%	15	100%	2	78%	18	41%	13	25%	3	58%	7	38%	3
		19		Work in groups																	41%	13	25%	3	50%	6	50%	4
21	7			Integrates with ICT	57%	34	100%	24	100%	10	63%	12	44%	8	67%	14	0%	0	43%	10								

Te	TA	St			All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
21	7	19	Advantages of teaching in an auditoria?	Multiple classes	63%	38	85%	23	94%	15	79%	15	22%	4	86%	18	50%	1	43%	10								
21	7	19		Team teaching	52%	31	69%	20	73%	11	53%	10	44%	8	62%	13	0%	0	48%	11								
21	7	19		More space	33%	20	50%	15	36%	5	42%	8	39%	7	24%	5	0%	0	30%	7								
21	7	19		Diff learning styles	38%	23	50%	15	50%	8	32%	6	39%	7	43%	9	50%	1	57%	13								
21	7	19		Integrates with ICT	13%	8	17%	4	40%	4	5%	1	17%	3	19%	4	0%	0	30%	7								
21	7	19		Other	7%	4		2		0		3		0		0		1		3	6%	2	8%	1	0%		12%	1
21	7	19		Skipped		11		7		4		2		4		2		3		7		252		83		83		86
22	8		Disadvantages of teaching in a plaza?	Disrupted by movement	86%	48	100%	32	100%	16	83%	15	82%	14	89%	16	100%	3	91%	21								
22	8			Trad pedagogy limited	45%	25	86%	18	78%	7	28%	5	35%	6	67%	12	67%	2	35%	8								
22	8			Difficult teacher laptops	41%	23	77%	17	75%	6	56%	10	35%	6	33%	6	33%	1	30%	7								
22	8			Decline in behaviour	55%	31	65%	23	89%	8	56%	10	35%	6	78%	14	33%	1	52%	12								
22	8			Staff feel on display	20%	11	100%	8	100%	3	22%	4	18%	3	22%	4	0%	0	30%	7								
22	8	20	Disadvantages of teaching in an auditoria?	Disrupted by movement	9%	5	6%	2	19%	3	0%	0	12%	2	17%	3	0%	0	9%	2	60%	18	40%	4	82%	9	56%	5
22	8	20		Trad pedagogy limited	32%	18	52%	11	78%	7	28%	5	24%	4	50%	9	0%	0	26%	6								
22	8			Difficult teacher laptops	29%	16	55%	12	50%	4	33%	6	29%	5	22%	4	33%	1	13%	3								
		20		Difficult to hear teacher																	37%	11	60%	6	36%	4	44%	4
		20		Less organised																	53%	16	40%	4	64%	7	56%	5
22	8	20		Decline in behaviour	34%	19	56%	15	44%	4	6%	1	53%	9	44%	8	33%	1	35%	8	20%	6	10%	1	27%	3	22%	2
22	8	20		feel on display	2%	1	0%	0	33%	1	0%	0	0%	0	6%	1	0%	0	4%	1	20%	6	10%	1	27%	3	22%	2
22	8	20		Other	7%	4		4		0	6%	1	12%	2	6%	1	0%	0	8%	2	7%	2	10%	1	0%	0	11%	1
22	8	20		Skipped		15		10		5		3		5		5		2		7		254		85		84		85
	9		How does supporting in a plaza/auditoria compare to a classroom?	Easier - more space															35%	8								
	9			Easier - flexible seating															26%	6								
	9			Easier generally															13%	3								
	9			Harder - less structure															13%	3								
	9			Harder - less focused															61%	14								
	9			Harder generally															13%	3								
	9			Skipped																7								
24			Have you done any collaborative planning in the last term (excluding theme days)?	Yes	62%	43	65%	30	57%	13	65%	13	55%	12	77%	17	20%	1										
	15			Yes - expression															22%	5								
	15			Yes - exploration															0%	0								
	15			Yes - discovery															0%	0								
24	15			No	38%	26	35%	16	43%	10	35%	7	45%	10	23%	5	80%	4	78%	18								
24	15			Skipped		2		1		1		1		0		1		0		0								
25			Was this collaborative planning within your own faculty, own zone or beyond?	Own faculty	16%	7	15%	4	23%	3	31%	4	7%	1	12%	2	0%	0										
25				Own zone	80%	35	76%	25	77%	10	69%	9	86%	11	88%	15	0%	0										
25				Beyond my zone	5%	2	8%	2	0%	0	0%	0	7%	1	0%	0	100%	1										
25				Don't know	0%	0	8%	2	0%	0	0%	0	0%	0	0%	0	0%	0										
25				Skipped		27		16		11		8		9		6		4										

Te	TA	St			All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
	16		Was this with other support assistants or teachers?	Support assistants															0%	0								
	16			Teachers															20%	1								
	16			Both															80%	4								
	16			Skipped																25								
26	17		What did this collaborative planning involve?	Writing a scheme	76%	32	72%	21	85%	11	50%	6	92%	11	88%	15	0%	0	0%	0								
26	17			Planning individual lessons	62%	26	59%	17	69%	9	58%	7	50%	6	74%	12	100%	1	50%	1								
26	17			Planning assessments	26%	11	28%	8	23%	3	25%	3	33%	4	24%	4	0%	0	0%	0								
26	17			Differentiating	64%	27	66%	19	62%	8	67%	8	50%	6	71%	12	100%	1	100%	2								
26	17			Not linked to enquiry	5%	2	7%	2	0%	0	8%	1	0%	0	6%	1	0%	0	0%	0								
26	17			Other (please specify)	2%	1	3%	1	0%	0	8%	1	0%	0	0%	0	0%	0	50%	1								
26	17			Skipped		29		18		11		9		10		6		4		28								
23	14		Are you clear about the aims of enquiry?	Yes	90%	62	93%	43	83%	19	85%	17	86%	19	100%	22	80%	4	61%	14								
23	14			No	10%	7	7%	3	17%	4	15%	3	14%	3	0%	0	20%	1	39%	9								
23	14			Skipped		2		1		1		1		0		1		0		7								
27			Did you feel prepared for enquiry planning?	Yes	49%	20	50%	14	46%	6	54%	7	45%	5	44%	7	100%	1										
27				No	12%	5	11%	3	16%	2	8%	1	10%	1	19%	3	0%	0										
27				Partly	39%	16	39%	11	38%	5	39%	5	45%	5	38%	6	0%	0										
27				Skipped		30		19		11		8		11		7		4										
28			Did this CP build on work completed prior to the move?	Yes	78%	32	75%	21	86%	11	69%	9	81%	9	81%	13	100%	1										
28				No	12%	9	25%	7	15%	2	31%	4	19%	2	19%	3	0%	0										
28				Skipped		30		19		11		8		11		7		4										
29			When did collaborative planning occur?	Free lessons/ppa	76%	32	76%	22	77%	10	85%	11	75%	9	86%	12	0%	0										
29				Directed time	38%	16	34%	10	46%	6	8%	1	50%	6	56%	9	0%	0										
29				Covered lessons	21%	9	21%	6	23%	3	8%	1	42%	5	19%	3	0%	0										
29				Own time	74%	31	72%	21	77%	10	77%	10	66%	8	86%	12	100%	1										
29				Skipped		29		18		11		8		10		7		4										
30			How easy was it to find time for collaborative planning?	Directed time was enough	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
30				Directed time plus cover	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
30				ppa/free lessons used	24%	10	28%	8	15%	2	39%	5	17%	2	19%	3	0%	0										
30				Had to use own time	55%	23	52%	15	62%	8	54%	7	67%	8	44%	7	100%	1										
30				Planning restricted by time	21%	9	21%	6	23%	3	8%	1	17%	2	38%	6	0%	0										
30				Skipped		29		18		11		8		10		7		4										
33			Have you delivered any cross-curricular learning in the last term (or trialled an enquiry project)?	Yes	85%	11	89%	8	75%	3	0%	0	67%	4	100%	3	100%	4										
		25		Discovery																	23%	56	33%	28	19%	15	15%	13
		25		Exploration																	16%	40	15%	13	16%	13	17%	14
		25		Expression																	11%	26	12%	10	10%	8	10%	8
33		25		No	15%	2	11%	1	25%	1	0%	0	33%	2	0%		0%	0			51%	125	39%	33	54%	43	58%	49
33		25		Skipped		58		38		20		21		16		20		1				37		11		16		10

Te	TA	St			All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
31			Have you been involved in the delivery of enquiry learning?	Yes 1 project	25%	17	27%	12	22%	5	20%	4	23%	5	33%	7	20%	1										
31				Yes 2 projects	47%	32	42%	19	57%	13	75%	15	45%	10	33%	7	0%	0										
31				Yes more than 2 projects	9%	6	11%	5	4%	1	5%	1	4%	1	19%	4	0%	0										
	18			Yes - Discovery															8%	2								
	18			Yes - Exploration															21%	5								
	18			Yes - Expression															46%	11								
31	18			No	19%	13	20%	9	17%	4	0%	0	27%	6	13%	3	80%	4	25%	6								
31	18			Skipped		3		2		1		1		0		2		0		6								
34			What year group did it involve?	1. Year 7	80%	44					80%	16	81%	13	78%	14	100%	1										
34				1. Year 8	27%	15					30%	6	25%	4	28%	5	0%	0										
34				1. Year 9	0%	0					0%	0	0%	0	0%	0	0%	0										
34				2. Year 7	16%	9					15%	3	13%	2	22%	4	0%	0										
34				2. Year 8	53%	29					65%	13	50%	8	44%	8	0%	0										
34				2. Year 9	0%	0					0%	0	0%	0	0%	0	0%	0										
34				All Year 7	55%	53					95%	19	56%	15	58%	18	0%	0										
34				All Year 8	45%	44					95%	19	44%	12	42%	13	0%	0										
34				All Year 9	0%	0					0%		0%	0	0%	0	0%	0										
34				Skipped		16						1		6		5		4										
35			How many classes did it involve?	1. 1 class	2%	1					0%	0	6%	1	0%	0	0%	0										
35				1. 2 classes	53%	29					10%	2	94%	15	44%	8	100%	1										
35				1. 3 classes	16%	9					0%	0	0%	0	50%	9	0%	0										
35				1. more	35%	19					90%	18	0%	0	6%	1	0%	0										
35				2. 1 class	5%	3					10%	2	6%	1	0%	0	0%	0										
35				2. 2 classes	24%	13					5%	1	56%	9	18%	3	0%	0										
35				2. 3 classes	18%	10					10%	2	0%	0	44%	8	0%	0										
35				2. more	22%	12					60%	12	0%	0	0%	0	0%	0										
35				Skipped		16						1		6		5		4										
36			How many lessons did it last?	1. 1-3 lessons	7%	4					5%	1	6%	1	6%	1	100%	1										
36				1. 4-6 lessons	35%	19					15%	3	87%	14	12%	2	0%	0										
36				1. 7-10 lessons	31%	17					65%	13	6%	1	18%	3	0%	0										
36				1. more	27%	15					15%	3	0%	0	67%	12	0%	0										
36				2. 1-3 lessons	4%	2					5%	1	0%	0	6%	1	0%	0										
36				2. 4-6 lessons	24%	13					15%	3	50%	8	12%	2	0%	0										
36				2. 7-10 lessons	20%	11					45%	9	13%	2	0%	0	0%	0										
36				2. more	22%	12					20%	4	0%	0	44%	8	0%	0										
36				Skipped		16						1		6		5		4										
37	19		Do you think a consistent format is important?	Yes	71%	39	67%	24	79%	15	60%	12	94%	15	67%	12	0%	0	50%	9								
37	19			No	16%	9	19%	7	11%	2	20%	4	6%	1	22%	4	0%	0	0%	0								
37	19			Don't know	13%	7	14%	5	11%	2	20%	4	0%	0	11%	2	100%	1	50%	9								
37	19			Skipped		16		11		5		1		6		5		4		12								
38	20		Did the enquiry you delivered use the front sheet?	Yes	58%	32	56%	20	63%	12	80%	16	81%	13	17%	3	0%	0	22%	4								
38	20			No	19%	10	17%	6	21%	4	10%	2		0	44%	8	0%	0	6%	1								
38	20			Not sure	24%	13	28%	10	16%	3	10%	2	19%	3	39%	7	100%	1	72%	13								
38	20			Skipped		16		11		5		1		6		5		4		12								

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42			Has enquiry learning influenced amount of cc learning?	Yes - more now	47%	25	42%	15	59%	10	35%	7	39%	6	75%	12	0%	0										
42				Yes - less now	6%	3	8%	3	0%	0	5%	1	6%	1	7%	1	0%	0										
42				No difference	47%	25	50%	18	41%	7	60%	12	56%	9	18%	3	100%	1										
42				Skipped		18		11		7		1		6		7		4										
		21	Zones done enquiry learning in	Discovery																	53%	18	54%	7	83%	10	11%	1
		21		Exploration																	65%	22	69%	9	58%	7	67%	6
		21		Expression																	44%	15	23%	3	83%	10	22%	2
		21		None																	6%	2	0%	0	0%	0	22%	2
		21		Skipped																		250		82		83		85
		23	Did you enjoy the enquiry more than normal lessons	Yes																	77%	20	64%	7	90%	9	80%	4
		23		No																	23%	6	36%	4	10%	1	20%	1
		23		Skipped																		258		84		85		89
43			Further improvements to enquiry learning	Timetable changes	40%	21	43%	15	33%	6	35%	7	38%	6	47%	8	0%	0										
43				Greater sharing of schemes	57%	30	63%	22	44%	8	65%	13	50%	8	53%	9	0%	0										
43				Methods of assessment	70%	37	80%	28	50%	9	65%	13	75%	12	71%	12	0%	0										
43				Hand over from le to le	70%	37	71%	25	67%	12	75%	15	81%	13	53%	9	0%	0										
43				Students learning skills	79%	42	83%	29	67%	12	75%	15	94%	15	65%	11	0%	0										
43				More skills included	62%	33	66%	23	56%	10	70%	14	69%	11	47%	8	0%	0										
43		24		Other	0%	0	0%	0	5%	1	0%	0	0%	0	0%	0	0%	0			12%	3	20%	2	0%		0%	0
43				Revision after compl	2%	1	2%	1	0%	0	0%	0	0%	0	6%	1	0%	0										
43				Need more lesson time	4%	2	0%	0	12%	2	0%	0	13%	2	0%	0	0%	0										
43				More planning time	11%	6	11%	5	0%	0	15%	3	6%	1	12%	2	0%	0										
43				Differentiation	2%	1	2%	1	0%	0	0%	0	0%	0	0%	0	0%	0										
43				Group work included	2%	1	2%	1	0%	0	5%	1	0%	0	0%	0	0%	0										
		24		Longer																	36%	9	30%	3	50%	5	20%	1
		24		Shorter																	16%	4	30%	3	0%		20%	1
		24		More students																	12%	3	10%	1	0%		40%	2
		24		Less classes																	20%	5	20%	2	20%	2	20%	1
		24		More choice																	16%	4	10%	1	30%	3	0%	0
43		24		Skipped		18		12		6		1		6		6		5				259		85		85		89
32			Have you done any team teaching in the last term?	Yes	38%	5	44%	4	25%	1	0%	0	33%	2	33%	1	50%	2										
32				No	62%	8	56%	5	75%	3	0%	0	67%	4	66%	2	50%	2										
32				Skipped		58		38		20		21		16		20		1										
		1	What year are you in?	Year 7																	33%	95	100%	95				
		1		Year 8																	33%	95			100%	95		
		1		Year 9																	33%	94					100%	94
				Skipped																								
		2	What gender are you?	Male																	56%	160	53%	50	57%	54	60%	56
		2		Female																	44%	124	47%	45	43%	41	40%	38
		2		Skipped																		0		0		0		0
		3	Are you on the SEN register?	Yes																	3%	9	4%	4	2%	2	3%	3
		3		No																	80%	226	69%	66	79%	75	90%	85
		3		Don't know																	17%	49	26%	25	19%	18	6%	6

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		4	Do you usually speak English at home?	Yes																	85%	242	78%	74	91%	86	87%	82
		4		No																	15%	42	22%	21	9%	9	13%	12
44	23	28	Do you think the 7Cs will help students learn?	Yes - all students	65%	43	73%	23	50%	11	80%	16	59%	13	55%	11	75%	3	57%	13	38%	100	53%	44	43%	32	39%	24
		28		Yes - some																	6%	13	14%	7	13%	5	2%	1
44	23	28		Yes - MA students	11%	7	9%	4	14%	3	15%	3	9%	2	10%	2	0%	0	43%	10								
44	23	28		Yes - LA students	9%	6	2%	1	23%	5		0	13%	3	15%	3	0%	0	0%	0								
44	23	28		No/Other	15%	10	16%	7	14%	3	5%	1	18%	4	20%	4	25%	1	0%	0	30%	74	19%	16	39%	32	32%	26
		28		Don't know																	26%	66	28%	22	19%	14	38%	30
44	23	28		Skipped		5		3		2		1		0		3		1		7		27		6		12		13
		29	Do the 7Cs help link ideas across lessons?	Yes																	37%	88	49%	41	38%	29	23%	18
		29		No																	32%	76	20%	17	34%	26	42%	33
		29		Don't know																	31%	74	30%	25	29%	22	35%	27
		29		Skipped																		59		12		18		16
45			Have you used the 7Cs in your teaching this term?	Yes	98%	65	100%	44	86%	21	100%	20	100%	22	100%	20	80%	4										
45				No	2%	1	0%	0	4%	1	0%	0	0%	0	0%	0	20%	1										
45				Skipped		5		3		2		0		0		3		0										
		26	How often do you use the 7Cs	Almost every																	60%	148	70%	59	56%	44	54%	45
		26		About half																	32%	78	19%	16	37%	29	40%	33
		26		occasionally																	8%	19	11%	9	6%	5	6%	5
		26		Skipped																		39		11				11
45	24	27	In what way have you used the 7Cs?	LOs	94%	62	98%	43	86%	19	100%	20	100%	22	85%	17	75%	3	87%	20	74%	174	69%	55	77%	57	78%	62
45	24	27		Assessment criteria	42%	28	39%	17	50%	11	75%	14	27%	6	35%	7	25%	1	26%	6	47%	110	56%	45	49%	36	36%	29
45	24	27		Articulate a task	67%	44	68%	30	64%	14	85%	17	68%	15	50%	10	50%	2	57%	13	43%	101	35%	28	59%	44	36%	29
45	24	27		Skills linked to tasks	53%	35	55%	24	50%	11	75%	15	36%	8	55%	11	25%	1	78%	18	53%	123	54%	43	57%	42	48%	38
45	24	27		Homework projects	53%	35	50%	22	59%	13	40%	8	68%	15	60%	12	0%	0	39%	9	64%	149	58%	46	69%	51	65%	52
45	24	27		Ass. Crit for hwk	27%	18	27%	12	27%	6	30%	6	27%	6	30%	6	0%	0	22%	5	41%	98	41%	33	46%	34	39%	31
45	24	27		Within enquiry	56%	37	59%	26	50%	11	70%	14	55%	12	50%	10	25%	1	65%	15	47%	111	60%	48	68%	50	16%	13
45	24	27		Not used	2%	1	0%	0	5%	1	0%	0	0%	0	0%	0	25%	1	0%	0								
45	24	27		Skipped		5		3		2		1		0		3		1		7		50		15		21		14
46			What has prevented you using the 7Cs this term?	Not sure what they are																								
46				Too complicated	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
46				Don't link to subject	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
46				Struggle to put into LOs	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
46				St don't understand them	100%	1	0%	0	100%	1	0%	0	0%	0	0%	0	100%	1										
46				No time	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
46				Other	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0										
46				Skipped		70		47		23		21		22		23		4										

Te	TA	St			All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
47	25	30	How often do you use group work in lessons?	Daily	38%	25	36%	16	41%	9	60%	12	27%	6	20%	4	75%	3	57%	13	15%	40						
47	25	30		Weekly	35%	23	27%	12	50%	11	30%	6	27%	6	0%	0	25%	1	17%	4	45%	120						
47	25			At least weekly	73%	48	63%	28	91%	20	90%	18	54%	12	50%	10	100%	4	74%	17	60%							
47	25	30		Half term	21%	14	27%	12	9%	2	10%	2	36%	8	20%	4	0%	0	9%	2	20%	53						
47	25	30		Occasionally	6%	4	9%	4	0%	0	0%	0	9%	2	10%	2	0%	0	17%	4	18%	48						
47	25	30		Never	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	3%	8						
47	25	30		Skipped		5		3		2		1		0		3		1		7		17						
48	26		Who do you do group work with?	7	85%	56	82%	36	91%	20	90%	18	86%	19	85%	17	50%	2	68%	13								
48	26			8	88%	58	84%	37	95%	21	95%	19	86%	19	85%	17	75%	3	63%	12								
48	26			9	77%	51	71%	31	91%	20	90%	18	68%	15	75%	15	75%	3	53%	10								
48	26			KS4	65%	43	61%	27	73%	16	80%	16	50%	11	60%	12	100%	4	53%	10								
48	26			Skipped		5		3		2		1		0		3		1		11								
49	27	31	Assigned roles in group work?	Yes	36%	24	34%	15	41%	9	55%	11	41%	9	15%	3	25%	1	47%	9								
49	27			Sometimes	49%	32	57%	25	32%	7	40%	8	55%	12	55%	11	25%	1	47%	9								
				Sometimes +	85%																							
		31		Yes Discovery																	71%	153	87%	67	79%	60	49%	38
		31		Yes Exploration																	78%	172	83%	64	98%	14	59%	45
		31		Yes Expression																	80%	174	92%	71	90%	68	38%	29
49	27	31		No	15%	10	9%	4	32%	7	5%	1	4%	1	30%	6	50%	2	6%	1								
49	27	31		Skipped		5		3		2		1		0		3		1		11		54		18		19		17
50	28		How do you think assigning roles in individuals influences group work?	Imp for all st	20%	13	18%	8	24%	5	20%	4	18%	4	16%	3	50%	2	32%	6								
50	28			Imp for more able	17%	11	14%	6	24%	5	35%	7	0%	0	21%	4	0%	0	16%	3								
50	28			Imp for less able	3%	2	2%	1	5%	1	10%	2	0%	0	0%	0	0%	0	0%	0								
50	28			St are unclear	40%	26	50%	22	19%	4	30%	6	59%	13	32%	6	25%	1	53%	10								
50	28			More cx	17%	11	16%	7	19%	4	5%	1	18%	4	26%	5	25%	1	0%	0								
50	28			No diff	3%	2	0%	0	10%	2	0%	0	4%	1	5%	1	0%	0	0%	0								
50	28			Skipped		6		3		3		1		0		4		1		11								
		32	Does being given a role in group work help the group work better or not?	Yes - all time																	20%	45	23%	18	12%	9	24%	18
		32		Yes - most times																	31%	70	39%	31	35%	26	17%	13
		32		Depends on my role																	29%	67	32%	25	31%	23	25%	19
		32		No different																	8%	19	1%	1	12%	9	12%	9
		32		More complicated																	12%	28	5%	4	9%	7	22%	17
		32		Other																	3%	8	1%	1	3%	2	7%	5
		32		Skipped																		55		16		21		18
51	29		How good are our students at independent learning?	Same as before	52%	35	53%	24	50%	11	40%	8	59%	13	50%	10	80%	4	57%	12								
51	29			Increased	48%	32	47%	21	50%	11	60%	12	41%	9	50%	10	20%	1	43%	9								
51	29			Decreased	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0								
51	29			Skipped		4		2		2		1		0		3		0		9								
		33	Do you know what independent learning means?	Yes																	83%	187	90%	70	75%	55	83%	62
		33		No																	8%	18	4%	3	14%	10	7%	5
		33		Not sure what they are																	9%	21	6%	5	11%	8	11%	8
		33		Skipped																		58		17		22		19

Te	TA	St			All Teacher (71)		TLR & SLT (47)		Mainscale (24)		Express (21)		Explore (22)		Discover (23)		Reflection (5)		TAs (30)		Students (284)		Year 7 (95)		Year 8 (95)		Year 9 (94)	
		34	How good are you at helping yourself?	Very good																	32%	72	31%	24	30%	2	35%	26
		34		Good - try to wk out																	42%	96	44%	34	43%	32	40%	30
		34		OK - ask friends first																	20%	46	17%	13	23%	17	21%	16
		34		No - ask an adult																	5%	12	8%	6	4%	3	4%	3
		34		Skipped																		58		18		21		19
		35	Have you seen the 'C3B4ME' idea used in classrooms?	Yes																								
		35		Yes Discovery																	86%	194	86%	68	90%	62	83%	64
		35		Yes Expression																	84%	190	90%	71	88%	61	75%	58
		35		Yes Exploration																	79%	177	81%	64	84%	58	71%	55
		35		No																	4%	10	1%	1	3%	2	9%	7
		35		Skipped																		59		16		26		17
52	30	37	Do you think strategies poster will help	Yes - all	44%	29	52%	23	27%	6	30%	6	54%	12	50%	10	25%	1	30%	7	20%	44	30%	23	20%	14	9%	7
52	30			LA	11%	7	5%	2	23%	5	25%	5	0%	0	10%	2	0%	0	13%	3								
52	30			MA	18%	12	14%	6	27%	6	5%	1	23%	5	25%	5	25%	1	35%	8								
		37		Maybe																	43%	94	42%	32	49%	34	37%	28
		37		Not sure																	17%	37	11%	8	14%	10	25%	19
52	30	37		No	27%	18	30%	13	23%	5	40%	8	23%	5	15%	3	50%	2	22%	5	21%	46	17%	13	16%	11	29%	22
52	30	37		Skipped		5		3		2		1		0		3		1		7		63		19		26		18
		36	Do you use the poster	Yes																	27%	61	41%	32	29%	20	12%	9
		36		Yes if reminded																	36%	82	41%	32	33%	23	35%	27
		36		No																	36%	82	18%	14	39%	27	53%	41
		36		Skipped																		59		17		25		17
53	31		How often is the poster used?	Every lesson	9%	6	11%	5	5%	1	5%	1	5%	1	20%	4	0%	0	5%	1								
53	31			Most lessons	24%	16	20%	9	32%	7	20%	4	27%	6	30%	6	0%	0	50%	11								
53	31			Once a week	27%	18	32%	14	18%	4	30%	6	23%	5	25%	5	50%	2	12%	3								
53	31			Less	29%	19	25%	11	36%	8	25%	5	41%	9	25%	5	0%	0	32%	7								
53	31			Never	11%	7	11%	5	9%	2	20%	4	5%	1	0%	0	50%	2	0%	0								
53	31			Skipped		5		3		2		1		0		3		1		8								
54	35	38	Are you glad we moved?	Yes	78%	52	76%	34	82%	18	70%	14	86%	19	80%	16	60%	3	80%	16	81%	182	90%	72	81%	57	70%	53
54	35			Mainly	21%	14	24%	11	14%	3	30%	6	14%	3	20%	4	20%	1	20%	4								
54	35	38		No	1%	1	0%	0	5%	1	0%	0	0%	0	0%	0	20%	1	0%	0	19%	44	10%	8	19%	13	30%	23
54	35	38		Skipped		4		2		2		1		0		3		0		10		58		15	NA	25		18

Teacher FL Q6 & 7	How often do you use these teaching styles?						How confident do you feel about using these teaching styles?			
	Daily	Weekly	Monthly	Termly	Yearly	Never	Very	Quite	Low	None
Individual work	67	2	0	0	0	0	68	1	0	0
Paired work	45	24	1	0	0	0	66	3	0	0
Group work	28	26	12	3	0	0	43	24	3	0
Role play/Drama	3	11	19	10	9	14	16	31	19	4
Creative teaching strategies	9	8	14	13	12	8	14	29	23	2
Teachers using ICT	54	8	5	3	0	0	41	25	2	2
Students using ICT	12	26	23	6	2	0	38	26	6	0
Use of hand held devices	5	9	19	10	2	21	23	25	13	7
Students as researchers	8	15	30	11	2	3	22	40	6	0
Students doing enquiries	3	15	27	18	3	3	23	35	11	0
Kinaesthetic learning styles	27	17	17	5	2	0	37	29	4	0
Learning with skills included	29	20	12	4	1	1	32	31	6	0
Choice of learning locations	1	8	14	13	5	25	14	22	28	2
Choice of learning activities	1	15	23	15	8	5	18	33	15	2
Student leadership	11	17	24	9	3	3	26	31	9	1

TA FL Q34 & 33	How commonly do you see these teaching and learning styles used in the lessons you support?						How confident do you feel about supporting these styles?			
	Daily	Weekly	Monthly	Termly	Yearly	Never	Very	Quite	Low	None
Individual work	19	3	0	0	0	0	12	8	1	0
Paired work	12	8	2	0	0	0	12	10	0	0
Group work	10	8	2	1	0	0	11	8	3	0
Role play/Drama	2	8	4	3	0	0	7	8	5	0
Creative teaching strategies	1	7	5	3	1	0	3	8	6	0
Teachers using ICT	14	4	1	1	0	0	4	9	6	0
Students using ICT	10	6	4	0	0	0	4	11	5	0
Use of hand held devices	0	4	6	1	2	5	3	11	4	0
Students as researchers	2	11	8	1	0	0	6	12	2	0
Students doing enquiries	4	6	6	4	0	0	5	13	3	0
Kinaesthetic learning styles	4	13	1	2	0	0	8	11	2	0
Learning with skills included	3	9	3	2	1	0	8	9	3	0
Choice of learning locations	0	3	6	4	2	2	4	11	4	0
Choice of learning activities	1	6	5	3	1	1	6	11	2	0
Student leadership	2	2	11	3	0	0	9	9	1	1

Student FL Q	How often do you learn in these ways at the moment?						How well do these activities help you learn?			
	Daily	Weekly	Monthly	Yearly	Never		Very	Quite	Low	None
Individual work	178	21	5	56	9		57	92	85	16
Paired work	75	116	13	51	5		109	112	24	6
Group work	39	120	53	47	8		126	75	34	11
Role play/Drama	18	58	77	72	25		91	50	58	40
Creative teaching strategies	29	38	57	66	62		38	59	82	57
Teachers using ICT	124	48	16	54	9		81	94	50	15
Students using ICT	27	124	43	46	17		124	76	39	9
Use of hand held devices	25	16	31	49	127		92	61	47	38
Students as researchers	32	86	54	62	14		99	100	34	8
Students doing enquiries	17	17	84	74	53		82	71	46	43
Kinaesthetic learning styles	26	63	63	52	41		88	69	53	27
Learning with skills included	36	80	53	48	26		64	94	60	15
Choice of learning locations	18	27	38	52	114		95	84	43	20
Choice of learning activities	15	33	38	56	103		111	80	32	18
Student leadership	24	36	43	68	77		61	77	58	41

Appendix 29 Amalgamated enquiry learning data

Questionnaire data collected via this study (percentages for comparison)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Respondent
The process was based on an open question (more than one answer)	34%	41%	16%	2%	7%	44
Students discovered ideas, theories, plans etc. for themselves	18%	58%	11%	9%	4%	45
Students took ownership of their own learning	13%	51%	27%	9%	0%	45
The teacher facilitated learning as opposed to telling students what to do next	16%	53%	24%	7%	0%	45
You feel that your subject was well represented in the project	24%	47%	7%	16%	7%	45
You enjoyed working with students in this way	29%	42%	16%	13%	0%	45

Questionnaire data collected for alternative research project (percentages)

49 respondents 16 Discovery, 11 Exploration, 19 Expression, 3 Reflection 33 TLR holders, 16 Mainscale	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Respondent
The process was based on an open question (more than one answer)	14%	50%	2%	7%	0%	44
Students discovered ideas, theories, plans etc. for themselves	9%	68%	14%	7%	2%	44
Students took ownership of their own learning	11%	55%	23%	7%	5%	44
The teacher facilitated learning as opposed to telling students what to do next	11%	66%	14%	5%	5%	44
You feel that your subject was well represented in the project	20%	50%	14%	2%	14%	44
You enjoyed working with students in this way	30%	43%	14%	11%	2%	44

Appendix 30 Behaviour for learning data pre and post school move

Removal from lessons	HT1	HT2	HT3	HT4	HT5	HT6	Total
2012-2013	90	115	57	72	102	75	511
2013-2014	40	106	89	112	59	70	476

Seclusion data	HT1	HT2	HT3	HT4	HT5	HT6	Total
2012-2013	14	33	19	20	27	21	134
2013-2014	12	24	19	19	9	27	110

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