THE INTERPLAY BETWEEN CREATIVITY AND ASSESSMENT

IN INITIAL TEACHER EDUCATION

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The overall aim of the research was to develop a better understanding of creativity in assessment, in order to facilitate achievement of the programme aim of developing creative teachers. This illuminative evaluation, within an interpretivist, social constructivist paradigm, was undertaken as practitioner research on an undergraduate primary education programme. During my reading and initial research I developed the Creativity Pyramid, which combined a wide range of phrases drawn from definitions of creativity, set in four hierarchical layers.

I analysed existing assignment documents and school placement booklets for phrases related to creativity, using my Creativity Pyramid. In order to discover perceptions about creativity in campus-based assignments and school placement, I interviewed tutors (n=9) and students (n=7), held a virtual focus group and used semi-structured questionnaires with two year groups (Year 2, n=32; Year 1, n=55). I used an inductive approach to coding this data before identifying themes.

The research showed there were opportunities for creativity in assessment on the programme, except in exams. Assessment for learning, which was more prevalent in school placement, was found to promote creativity. The campus-based assignments which were perceived as more creative were often those which required engaging an audience, such as presentations and creating resources. These assignments also had stronger constructive alignment of creativity aspects between the assignment brief and marking grid. Using the findings I developed the Creativity Cascade, which indicates facilitators and inhibitors of creativity in the cascade from tutor and teacher-mentor to student-teacher to pupil. The main recommendations were to establish a shared definition of creativity, to use this to ensure constructive alignment in all aspects of assessment, to review the core subject assignments and to increase the use of assessment for learning.

ACKNOWLEDGEMENTS

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ACRONYMS LIST AND GLOSSARY

AfL	Assessment for Learning
AOIR	Association of Internet Researchers
ARG	Assessment Reform Group
ASKe	Assessment Standards Knowledge exchange
BA (Hons)	Bachelor of Arts Honours degree
BCB	Beyond the Curriculum Boundaries, a module that involves a group display to teach about a distant place and develop thinking skills
BEI	British Education Index
BERA	British Educational Research Association
BG	Bishop Grosseteste University College Lincoln
Big C	Big C creativity refers to genius level, world changing creative products, systems or ideas
Blackboard®	The virtual learning environment used at BG
CLA	Creative Learning Assessment (a project to help primary teachers assess creative learning)
CPD	Continuing Professional Development
Creativity Pyramid	A hierarchical model of creativity I developed as an analytical framework for this research
DCMS	Department of Culture, Media and Sport
DCSF	Department for Children, Schools and Families
DfE	Department for Education
DfEE	Department for Education and Employment
DfES	Department for Education and Schools
EdD	Education Doctorate
ESRC	Economic and Social Research Council
EYFS	Early Years Foundation Stage (the curriculum for children birth to five, although schools focus mainly on 3 – 5 year olds)
FHEQ	Framework for Higher Education Qualifications
Foundation Stage	Nursery and Reception, children aged 3 – 5

Grade bands	A* 80+ A 70 – 79 B 60 – 69 C 50 – 59 D 40 – 49 E 35 – 39 F <35
HE	Higher Education (university sector)
HEA	Higher Education Academy
HM Treasury	Her Majesty's Treasury
ICT	Information and Communication Technology
IEP	Individual Education Plan
ITE	Initial Teacher Education
ITT	Initial Teacher Training (the term used by the TDA and some other groups for ITE)
IWB	Interactive white board
Key Stage 1 (KS1)	Years 1 and 2, children aged 5 – 7
Key Stage 2 (KS2)	Years 3 – 6, children aged 7 – 11
Key Stage 3 (KS3)	Years 7 – 9, children aged 11 – 14
lcc	Little c creativity refers to everyday creativity that all people can access in various aspects of their lives; relates to democratic creativity
MMU	Manchester Metropolitan University
NACCCE	National Advisory Committee on Creativity and Culture in Education
NC	National Curriculum (a curriculum for all children in state schools in England and Wales, initially introduced in 1988 but revised several times, most references are to the 1999 version)
NTF	National Teaching Fellows (an award by the HEA for good teaching in HE)
Ofsted	Office for Standards in Education
PE101 etc.	Module codes for the programme; PE stands for Primary

	Education; the first number indicates whether it is Year 1, 2 or 3; the second number is 1 for the revalidated programme and 0 for the former programme Tables 1.1 and 1.2 give the full list of codes and module titles
PIVOT	Purposeful, imaginative, valuable, originality and time (categories for observations of school placement)
PNS	Primary National Strategy (this provided advice and materials for teaching English and mathematics but also covered wider issues such as assessment and cross-curricular skills)
Pro-C	Professional creativity (Kaufman and Beghetto, 2009 described this as creativity which results in originality at a professional but not world changing level)
QAA	Quality Assurance Agency – oversees Higher Education in the UK
QCA	Qualifications and Curriculum Agency
QCDA	Qualifications and Curriculum Development Agency
QTS	Qualified Teacher Status
RPD	Record of Professional Development
SATs	Statutory Assessment Tasks (previously these were for English and mathematics at KS1; English, mathematics and science at KS2 and KS3 but by 2010 only KS2 English and mathematics were used with the others dealt with by teacher assessment)
SEEC	Southern England Education Consortium
SoW	Scheme of Work or Sequence of Work (terms used for medium term planning in school)
SSS	Student Support Seminars (groups which include students from Years 1, 2 and 3 for mutual support)
TA	Teaching assistant
TDA	Training and Development Agency (the agency that oversees initial teacher education and sets standards for teachers at various stages in their careers)
UK	United Kingdom

UoL	University of Leicester
VLE	Virtual Learning Environment
Y1	Year One
Y2	Year Two
Y3	Year Three

CHAPTER 1 – INTRODUCTION

IMPORTANCE OF THIS STUDY

This thesis stems from a personal interest in creativity and its role in education but the importance of the study extends considerably beyond this. As will be demonstrated in the literature review, there have been calls for creativity in primary education (NACCCE, 1999), in higher education (Jackson and Sinclair, 2006) and in society at large (DCMS, 2001). By investigating the interplay between creativity and assessment in a programme of Initial Teacher Education (ITE) I hope to come to a better understanding of creativity, with an ultimate view of modifying the assessments on this programme to maximise the scope for creativity. In this way it will have an immediate impact on my students and the programme on which I teach. However, by disseminating my findings I also hope to have an impact on other programmes within the university college, other Higher Education (HE) and other ITE institutions. Although it is beyond the remit of this study there could be a much wider impact once these students graduate and become teachers, spreading to the children they teach and the teaching profession.

Nature of the Research Problem

I teach on an undergraduate primary education degree, leading to Qualified Teacher Status (QTS). During revalidation we confirmed that one of our programme outcomes is to produce creative teachers (BG, 2008a). As tutors

we are responsible for providing a learning environment that facilitates achievement of the outcomes. This includes the ethos we establish, the way we teach, the experiences we provide for the students, as well as their assessments and our feedback on these. Therefore, if our outcome is to produce creative teachers we need to consider how these different aspects contribute to this outcome. Unfortunately the path from intention to outcome is complex. In addition to the individual elements there is the question of the interplay among them. There is also the issue that the same conditions can impact differently on different students because of their personal histories and circumstances.

Creativity in ITE can have many different components:

- creative teaching from tutors;

- teaching by tutors to develop creativity in students;

- establishing a creative environment within which students can learn;

- promoting creativity in students as learners;

- promoting creativity in students as trainee teachers;

- encouraging students to establish a creative environment in their classrooms;

- encouraging students to develop creativity in their pupils.

This can be seen as a creativity cascade (Figure 1.1), an analogy that will be developed through the research. In this cascade creative teaching by tutors potentially leads to creative learning by students and then creative teaching by students to their pupils. There may also be additional feeder streams outside the control of the institution, such as students' past experiences with creativity.
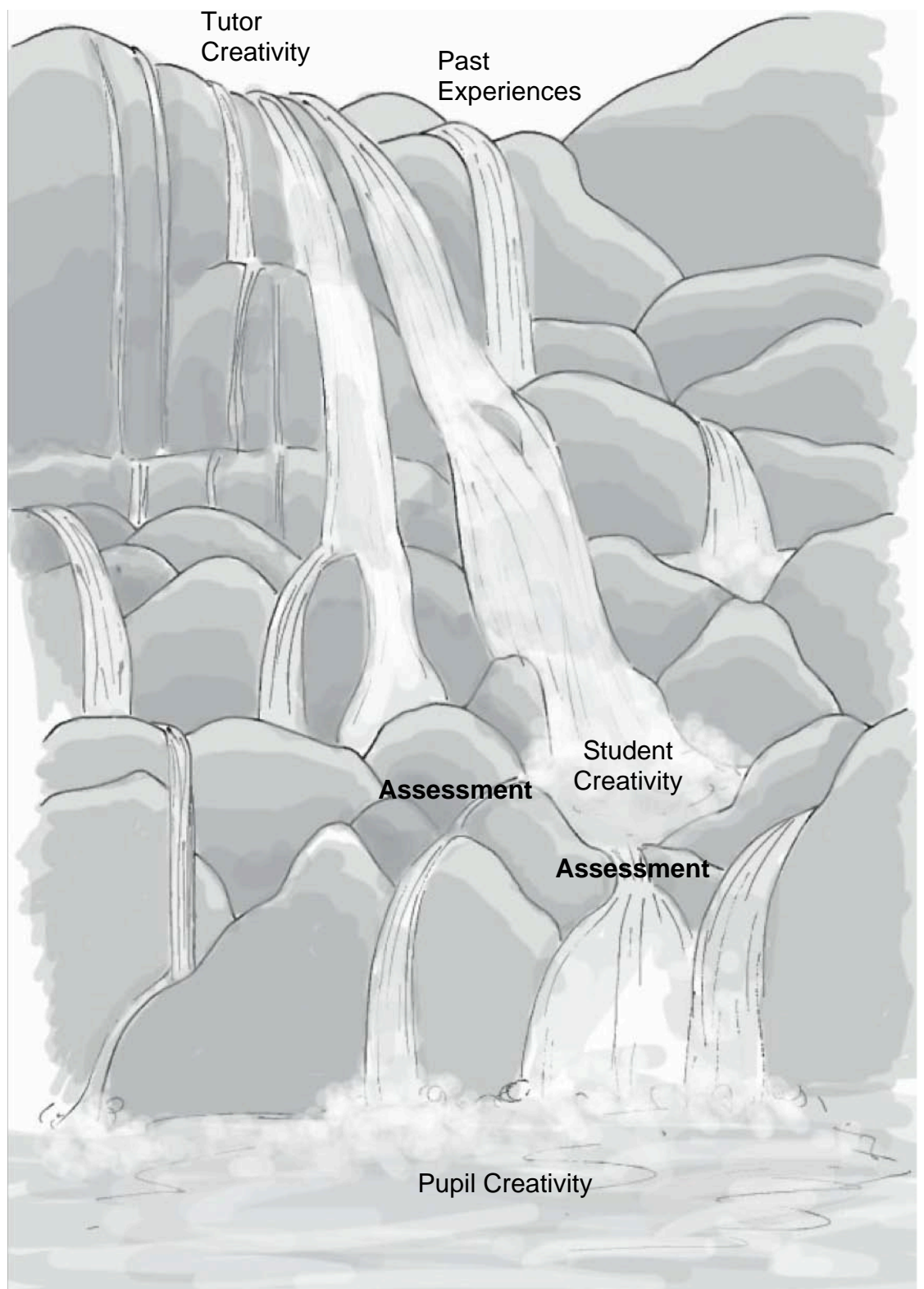
Figure 1.1 Creativity Cascade

Unfortunately teaching does not guarantee learning so the cascade can also end up in rock pools or dry up altogether, with creative teaching having limited or no impact on students and their teaching. One aspect of education which could have a big impact is assessment, the rocks in the cascade. These rocks might result in fast flowing rapids, encouraging and focusing creativity, or could act as a dam, blocking creativity entirely. It is these assessment rocks that were the focus of this study because I believed them to be the most problematic aspect. Within this aspect there are many questions. Are assessment and creativity compatible? Since we have to have assessment is it realistic to expect creativity? What impact does assessment have on students? Is it the same for all types of assessment? When assignments are marked they are awarded marks in different grade bands, from A* (marks 80+) to F (marks below 35). Is there a difference in creativity in different grade bands? These questions were then refined into the aim, objectives and researchable questions.

RESEARCH AIM, OBJECTIVES AND QUESTIONS

The overall aim of the research is to develop a better understanding of creativity in assessment, in order to facilitate achievement of the programme aim of developing creative teachers. This will be achieved through the following objectives and key questions:

1. To understand the meaning and scope of the word 'creativity' for tutors and students on this programme
    a) What are the meanings of the word 'creativity' for tutors and students on this programme?

b) Is creativity relevant to all grade bands?

2. To explore the current practice and perceptions of creativity in summative assessment, from the viewpoints of both tutors and students

a) What are the perceptions of creativity in the assessment process?

b) How is creativity apparent in assignment briefs and marking grids?

c) How is creativity represented in the marking grids and feedback in different grade bands?

3. To explore the current practice and perceptions of creativity in school placement assessment, from the viewpoints of both tutors and students

a) What are the perceptions of creativity in school placement?

b) How is creativity made visible in the school placement documentation?

DESCRIPTION OF THE PROGRAMME

Since this research is an evaluation of a specific programme it is important to have a picture of that programme. As is discussed in the ethics section of the Methodology chapter, it is common for evaluation research to identify the relevant programme. Bishop Grosseteste University College Lincoln (BG) has a long history of teacher education, with a religious foundation. Although the institution has an increasingly diverse portfolio, initial and continuing teacher education are still a key part of the university college, forming one of the two schools, while education studies dominates the other.

The institution provides a number of routes into teaching. The three year Primary Education BA (Hons) with recommendation for QTS is designed for

those who come to HE knowing they want to be teachers. It is an intensive full-time route that combines an undergraduate degree with a professional qualification.

Lincoln is a small city in the East Midlands in a largely rural area but with some other larger cities within 100 km. A large proportion of our students are local and many stay in the region, teaching in local schools. The student and staff population reflect the ethnic make-up of the area, being predominantly white, British. The diversity of the region is changing due to recent immigration, particularly from Eastern Europe, but this is not yet reflected in the programme. Women outnumber men on the programme, although the percentage of male students has been increasing annually from 14.6% in 2007 to 22.4% in 2010, outstripping the 12% of male primary teachers in schools (GTCE, 2010). Most students have come straight from secondary school, although some are 'mature entrants' who have had a few years out of education or are coming to university after another career or raising a family. At the time of the research the team consisted of nine tutors, five female and four male. There was an age range of approximately 20 years. The tutors on the programme have all been primary teachers. Several have been headteachers of primary schools and several have been advisory teachers for local authorities.

School placements are an important part of the programme, taking nearly one third of the time. School placements are supervised by a tutor and a teacher-mentor jointly. Because of student numbers, the core team of tutors is supplemented by associate tutors for school placement supervision.

The programme was revalidated in 2008. During revalidation, tutors worked with students, former students and partnership schools to review the aims, outcomes, structure and assessment of the programme. This resulted in modules being organised in three conceptual strands with school placement modules bridging all three strands, as an opportunity to integrate them and put them into practice. The three conceptual strands were: approaches to learning; creating a learning culture; reflection and research. This reflected the ethos of the programme with an emphasis on learning rather than teaching, with thinking teachers who have developed their own educational philosophy. This is demonstrated in these programme aims:

> To create confident, creative, enthusiastic, effective, reflective and professional teachers who exceed the criteria for QTS, currently described in the TDA document 'Professional Standards for Teachers'
> To create students who are reflective, academic, independent, analytical and critical; able to ally theory to practice and take initiatives, thus enabling them to devise and express their own educational philosophy, grounded in theory, research and experience;

(BG, 2008a:2)

Table 1.1 gives an overview of the programme but during the research some year groups were still following the previously validated programme (Table 1.2). The complete assignment briefs that were used during the research period are included on the accompanying disc. However, Table 1.3 provides a brief description of the 'unusual' assignment, those which are not essays or exams.

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Table 1.1 Overview of modules

Summative assessments in italics.

Approaches to Learning	Creating a Learning Culture	Reflection and Research
Level 4 / Year 1 – 6 modules of 20 credits each		
PE111 Introduction to Learning *Starting point book 100%*	PE112 Introduction to Teaching *Learning journal 100%*	PE113 Introduction to the Curriculum *Exam 50%* *Audit and Action plan 50%*
PE114 School placement *School Placement 50%* *Assessed group discussion 50%*		
PE115 Developing skills and attitudes *Group Performance 50%* *PE evaluation 50%*	*PE116 Environmental Enquiry* *Sequence of Work essay 100%*	
Level 5 / Year 2 - 6 modules of 20 credits each		
PE211 Targeting Learning *Exam 100%* *IEP evaluation 50%*	PE212 Communication, Culture & Citizenship *Equality Essay 50%* *Group presentation 50%*	PE213 Investigating Child Development *Child development study 100%*
PE214 Solo School placement *School Placement 100%*		
PE215 Contextualising the Core Curriculum *Sequence of Work evaluation 100%*	PE216 People, Place & Perception *Group display 50%* *Rationale and Reflection 50%*	
Level 6 / Year 3 - 4 modules of 30 credits each		
PE311 Leading Learning *Exam 50%* *Designing a policy 50%*	PE312 Perspectives on Practice *Learning journal 50%* *Individual presentation 50%*	PE313 The Researching Teacher *Research project 100%*
*PE314 Final school placement *School Placement 100%* * PE315 Non-QTS Placement (30 credits) may be taken in lieu of PE314.		

Table 1.2 Modules in the previous validation

Summative assessments in italics.

*Assignments in **bold** have a similar revalidated counterpart.*

Level 4 / Year 1	Level 5 / Year 2	Level 6 / Year 3
PE101 Introduction to the National Curriculum ***Exam 50%*** *Portfolio of Tasks 50%*	PE201 Investigating the core *Investigations essay 50%* ***Evaluating a Science SoW** 50%*	PE301 English in Education *Speaking and Listening SoW 50%* *Exam 50%*
PE102 Introduction to the Foundation Subjects *Group Display 50%* *Group **Audit and Action Plan** through Blackboard 50%*	PE202 Subject Leadership ***Group presentation** 50%* *Subject Leadership Framework 50%*	PE302 Research *Research proposal 10%* ***Research project** 90%*
PE103 Introduction to Teaching and Learning ***Starting Point book** 50%* ***Learning Journal** 50%*	PE203 The Whole Child ***Child Study** 60%* ***Evaluating an IEP** 40%*	PE303 Working with Others ***Learning journal** 50%* ***Individual presentation** 50%*
PE104 ***School placement 100%***	PE204 ***School placement 100%***	PE304 (30 credits) ***School placement 100%***
PE105 Developing Concepts *Exam 50%* *Story Sack 50%*	PE205 Beyond the Curriculum Boundaries (BCB) ***BCB group display and resource pack** 50%* ***Equality essay** 50%*	PE305 Transitional placement (10 credits) *Learning portfolio 100%*
PE106 The Arts ***Group Performance** 50%* *Art SoW 50%*	PE206 ***School placement 100%***	PE306 Maths in education *Own investigations 50%* *Pupil investigations 50%*

Table 1.3 Details of Unusual Assignments

Assignment	Detail
Starting Point Book PE111, PE103	Students explore a natural object using observation and investigation. They reflect on the learning processes involved and relate these to teaching. The written reflection is marked rather than the investigational work, although that is included when the hand-made Starting Point book is submitted.
Audit and Action Plan PE113, PE102	Students audit their knowledge, skills and attitudes across the curriculum. They create an action plan to develop their identified needs.
Group Performance PE115, PE106	Small groups put on a 5 minute performance of singing, drama or dance, which may be original or an existing piece. The performance is part of a Sequence of Work (SoW), designed by the students, for a specific age group.
Group Presentation PE212, PE202	Small groups present a half-hour, in-service style session to other year groups who help the tutors assess it.
Group Display PE205, PE216	Groups present an interactive display of resources which help to teach about a distant place, while also addressing wider issues such as thinking skills and sustainability.
Subject Leadership Framework PE202	Students design a whole school curriculum framework for their chosen subject.
Speaking and Listening SoW PE301	Students design a SoW to use on final placement addressing speaking and listening discretely or through other subject(s).
Individual Presentation PE303	A 10 minute presentation on any professional issue, assessed by a panel of headteachers and tutors.
Own Investigations PE306	Two mathematical investigations at own level, accompanied by reflections on the learning process and implications for teaching.
Pupil Investigations PE306	A series of mathematics investigations for pupils to be used on final placement

During revalidation the overall programme aims and outcomes, the individual module outcomes and assessment criteria were informed by a range of documentation, including:

- Education Studies subject benchmark statement (QAA, 2007)

- Southern England Education Consortium (SEEC) level descriptors (Gosling and Moon, 2002)

- Framework for Higher Education Qualifications (FHEQ) descriptors (QAA, 2008)

- QTS standards (TDA, 2008)

- Every Child Matters (DfES, 2004)

- Common Core Skills and Knowledge for the Children's Workforce (DfES, 2005)

Assessment criteria relate directly to outcomes for that module. Assignment briefs are written specifically for each assignment. Each assignment also has a marking grid written specifically for it, which describes the grade bands from A* to F. While the assessment criteria are informed by the SEEC (Gosling and Moon, 2002) and FHEQ (QAA, 2008) levels, the delineation of the grade bands is determined by the tutors writing the grids. The appropriateness of the grade band divisions is scrutinised through the internal moderation and external examiners processes.

Each school placement has a booklet containing tasks for students to complete during the placement. This is used by student, tutor and teacher-mentor to monitor and reflect on progress. Each placement is part of an assessed module and the three solo placements are all assessed. This is on a pass / fail basis in Year 1 but the placements in Years 2 and 3 in the revalidated programme are marked using marking grids like campus based assignments.

The programme has been praised by external examiners for the variety in assignments and tutors are proud of this range. It was a deliberate attempt to

address a range of learning preferences, hopefully providing all students with a chance to demonstrate their strengths while broadening the students' experiences. Because students learn from the hidden curriculum as well as from overt instruction, tutors felt it was important to demonstrate that summative assessment did not have to take the form of an exam or an essay, so the students' thinking would not be limited to these when assessing their pupils.

CHALLENGES TO THE RESEARCH

I have indicated above that tutors are aware of the impact of the programme on students' professional practice. However, the practice that students see in primary schools, in government strategies and documentation also impacts on their practice, as well as on their academic work. While tutors try to accommodate this, it is one of many elements beyond the tutors' control. For this reason, the literature review about creativity and assessment includes primary education, rather than just focusing on higher education.

Students are also influenced by their past experiences. As individuals, students will react differently to their experiences. These factors make it very difficult to determine which aspects influence students and what impact any changes might have. To this end I have relied on students self-reporting about influences and have been cautious in terms of generalisations. Practitioner research presents challenges in terms of objectivity versus subjectivity and relationship issues with the participants. These issues will be discussed further in the methodology chapter.

One the main challenges to this research is that the concept of creativity, while popular, is not well defined or understood. There is considerable variation in the ways people perceive creativity, which will be explored in the literature review.

OUTLINE OF THE THESIS

The literature review combines the areas of creativity and assessment, sometimes separately but also considering the interplay between them. This is followed by the methodology chapter which establishes the rationale behind the research and the specific methods applied. With primarily qualitative data it is difficult to present findings without performing some analysis so the findings chapter integrates presentation of the findings with analysis and synthesis for each research question. The discussion chapter goes beyond the individual research questions to consider overarching themes and to develop the creativity cascade metaphor. The final chapter presents the conclusions, including recommendations for the programme and areas for further research. The accompanying CD contains further information, such as full assignment briefs, literature search and sample permission sheets, which the reader may wish to access.

CHAPTER 2 - LITERATURE REVIEW

INTRODUCTION

In undertaking a study of creativity and assessment there are two immense bodies of relevant literature to examine. Since the literature is vast it was necessary to be selective and employ specific strategies to find and exclude studies, as will be explained below. This literature review will be split into several sections that all contribute to the conceptual framework of this thesis:

- the concept of creativity;

- the development of the Creativity Pyramid as an analytical frame;

- creativity and assessment within the primary sector in England;

- creativity and assessment within higher education in England.

I am including both primary and higher education because my study relates to students in higher education who are studying to become primary teachers and their assessments are rooted in primary practice. My initial intention was to have separate chapters for creativity and assessment since both are major areas. However, it became apparent that the two concepts were so intertwined that separating them into two chapters would create an artificial and unhelpful division.

Creativity is a nebulous concept, so it is quite common for books and articles about creativity to start with an overview of ways of defining creativity. Upon beginning my study I felt it was important that I was explicit about my own

understanding of creativity so that my findings would be transparent and trustworthy. I followed the approach of other creativity researchers in reviewing existing definitions and developing a definition that was applicable to my situation. The first part of the literature review concentrates on the Creativity Pyramid I developed from the literature and initial research as the analytical framework for creativity in my study.

The next section of the literature review will examine how the concept of creativity has been applied within primary education in England and how this relates to assessment. This includes a historical picture of swings to and from creativity, as well as analysis of current use. It will demonstrate that the term creativity is used in a wide variety of ways and discuss the implications of this disparity. The final section of this chapter involves creativity and assessment within higher education and initial teacher education. These all relate to my research aim about perceptions of creativity, but also contribute to the second and third aims of examining creativity in the assessment process.

Search Strategy

A Google search (21/03/09) using 'creativity AND education' resulted in over 22 million hits. Using Google scholar reduced this substantially, but there were still over three hundred thousand entries. Clearly, deciding on strategies to exclude works was necessary. For the British Education Index (BEI) I initially restricted the search to English language but repeating the search without restricting language produced the same number of hits. This demonstrates that all of the

items uncovered in the search were in English which probably reflects the Western dominance of the creativity field. The accompanying disc includes a table which gives an overview of the main search strategies, with sources, search terms and exclusions.

Main sources:

- Bishop Grosseteste University College and University of Leicester libraries
    - Including hand searching paper and on-line journals from 2005
- On-line searches through Athens
    - E.g. Ingenta, BEI
- On-line searches of research organisations
    - E.g. British Educational Research Association (BERA)
- On-line searches of HE organisations
    - E.g. ESCalate, Higher Education Academy (HEA), Training and Development Agency (TDA), ASKe (Assessment Standards Knowledge exchange)
- On-line searches of government publications focused on education sites
    - E.g. National Curriculum, Primary National Strategy (PNS), Ofsted
- Amazon on-line bookshop
- References from other sources

Many articles were discarded because their titles and abstracts made it clear that 'creative' was being used as a positive adjective without being central to the article. I decided to exclude research on developing creativity within specific

subjects, because this was beyond the remit of my study. I also searched for assessment in primary and higher education, paying particular attention to sources that discussed creativity and assessment together.

DEFINING CREATIVITY

In her meta-analysis of creativity research Craft (2001a) found a wide range of definitions in use. It is generally agreed that this lack of an agreed definition for creativity has caused problems for both research and practice (e.g. Bleakley, 2004; Gibson, 2005; Mindham, 2005; Sawyer, 2006). Unlike Torrance (1988) who was comfortable with this situation, Bleakley (2004: 465) felt that the lack of consensus about creativity despite considerable research indicated that the concept itself was "unstable". However, my own reading into research paradigms, methodology and methods has demonstrated that there are few, if any, uncontested terms in the world of research and yet research itself is not considered unstable. Also, despite the fact that there is not complete agreement about the definition of creativity there are several aspects that are common to many definitions of creativity, although none is universal.

Originality

Probably the most common aspect of creativity definitions is the idea of originality or novelty (e.g. Amabile, 1996; Cropley, 2001; Csikszentmihalyi, 1997; NACCCE, 1999), although Bailin (1994) questioned whether anything can be called original since the antecedents can always be traced. Sawyer (2006)

also challenged the role of originality in creativity, stating that nothing is completely novel and that originality is balanced with imitation and convention. Craft (2008) warned of the danger of valuing originality and innovation for their own sakes, resulting in a throw-away society always in search of the new. Those theorists who do value originality often describe it, using varying terminology, as occurring at two levels (Table 2.1). The basic split is between originality which is new to the world and originality which is merely new to that person. The exception is the NACCCE (1999) definition which has three levels: historic, relative and individual.

Table 2.1: Levels of originality in creativity

Lytton (1971)	Objective	Subjective
Sternberg (1999)	Societal	Individual
NACCCE (1999)	Historic	Relative or individual
Cropley (2001)	Sublime	Everyday
Boden (2004)	Historical (h-creative)	Psychological (p-creative)
Bowkett (2005)	Global	Individual
Weisberg (2006)	World	Person

I think that originality is an important element of creativity but that what constitutes originality is problematic. The split into levels of creativity helps with this but does not fully address it. In this section I outline the development of the Creativity Pyramid (Figure 2.7) from the conceptual framework of creativity literature. I first developed it as part of an assignment in 2005, with four levels of creativity, building on the two and three level models I had encountered.

This fits with Sawyer's (2006) idea of original aspects building on existing entities since it is a modification of existing models rather than an entirely new model. This model was presented at a conference (Compton, 2006), published in a textbook (Johnston and Nahmad-Williams, 2009) and a peer-reviewed journal article (Compton, 2010) so has gone beyond the personal level of creativity. Later I encountered a similar four level model of creativity by two American psychologists (Kaufman and Beghetto, 2009). I had not encountered their model before I had created my own and it is unlikely that they were aware of mine. Does the fact that we came up with similar models nullify the originality of both? If one of these models becomes influential in the field of creativity does that make the other one less original or less creative? This personal example demonstrates that originality is not a simple thing to define.

Levels of Creativity

The levels of novelty relate to ideas about levels of creativity more generally. NACCCE (1999) referred to these levels as elite and democratic definitions of creativity but they are also referred to as Big C Creativity and little c creativity (lcc). Big C Creativity (Csikszentmihalyi, 1997; Gardner, 1993) represents major innovations in society and depends on the approval of the field of the creative product. Little c creativity (Craft, 2001b; Gardner, 1993) does not depend on genius but is the creativity accessible to all people in all aspects of life, ultimately leading to self-actualisation (Maslow, 1970), involving choices made by ordinary people. Elite definitions of creativity that emphasise genius are less relevant to schools than democratic ones that consider originality in terms of the

individual or local peer group. Beetlestone (1998) had three tiers of creativity, with the first tier emphasizing self-expression, the second about creative thinking, but still at the individual level, and the third about genius level creativity. Kaufman and Beghetto (2009) extended the Big C and little c model to include mini-c and Pro-c creativity. Mini-c creativity involved exploring, close observation, making decisions and creating at the level of a learner. This type of creativity was quite personal and might not be externalized, very similar to Beetlestone's (1998) first tier. Pro-c creativity was at a professional level, which involved expertise within the domain resulting in innovation but which did not achieve world-class level. Kaufman and Beghetto (2009) described this four C model of creativity as developmental, but not necessarily a simple linear development. I believe that Kaufman and Beghetto's (2009) two additional levels are important in accounting for many aspects and levels of creativity that were not accounted for in the simpler models. Although I did not give them the same names, the first and third layers of my creativity pyramid addressed very similar aspects, as will be described below.

Value

Many definitions of creativity have further conditions on originality besides the level. Sternberg (1999) demanded that the novelty be appropriate. Similarly, Cropley (2001) stipulated that the novelty was effective, but also demanded it was ethical. Others feel that the ethical (Craft, 2008) or moral dimension (Claxton, 2008) is an important consideration but not a defining factor. Many definitions have required that the original outcome have value (Amabile, 1996;

Csikszentmihalyi, 1997; Fisher and Williams, 2004; NACCCE, 1999), while Boden (2004) also required that the outcome was surprising. This goes beyond monetary value and raises questions about who determines the value. Csikszentmihalyi (1997) stated that value should be determined by experts in the domain, who he described as the field. This is really aimed at Big C creativity, with the experts deciding whether the outcome or process is truly original and valuable and whether the domain itself has been changed as a result. This could result in disagreements about whether something was creative or not. Amabile (1996) described this as consensual. This model means that Shakespeare could be considered creative in some time periods but not in others. Weisberg (2006) saw this as problematic and felt strongly that value should not be part of creativity definitions, keeping instead to novelty and intentionality.

Since I am developing my definition with the intention of relating it to assessment, questions of value are important. As teacher educators marking assignments and assessing school placements the tutors are the experts or field in terms of student creativity in teaching. However, I do not believe that the field is the sole judge of value; the creator also has a part to play in determining value through self-evaluation of the product. Sefton-Green and Sinker (2000) noted that a key feature of creative practitioners was their ability to self-evaluate. Robinson (2001) broke creativity into two phases, the generative phase, which comes up with ideas, and the evaluative phase, which makes judgements about the ideas generated. These are both important in brainstorming (DeBono, 1992; Runco, 2007). Robinson (2001) felt that

exercising critical judgement was an essential part of the creative process and an aspect that could be developed. Boden (2001) and Fisher and Williams (2004) also emphasised the importance of evaluating your own work, while Bowkett (2005) talked of self-awareness. On the Primary Education programme this idea of self-awareness and self-evaluation is encapsulated in the term 'reflective' which features in two of the three aims for the programme and is prominent in both campus based assignments and school placements. Therefore, this was an important element to include in the pyramid.

The recipients of the creativity, who might be called the audience, are also potential judges. In the case of teaching this might be the children being taught who deem whether the teaching they are receiving is creative or not. They are not the experts but have a vested interest. Craft (2005) suggested that the learner, the teacher and the expert could all judge the originality and value of work, although they would bring different levels of knowledge to their judgements. Sawyer (2006) talked about performance creativity and said that communication with the audience was a key part of this and in fact integral to all types of creativity. Anyone who has performed in a play, dance or music group will be aware that the responses of the audience have an impact on the performance. Therefore, as well as being judges of the creativity, the members of the audience are, to an extent, co-creators of it. Teaching as a performance (Fischman et al, 2006) is a metaphor that we use with the students, although Sawyer (2004) emphasised that this should be improvisational performance rather than scripted performance. Engaging the audience is a vital component of an effective performance. Within teaching the requirements of creativity are

not only engaging the pupils but also challenging them (Lucas, 2001; QCDA,

2010). This complicates pupils judging creativity because they might find the

challenge uncomfortable and therefore perceive the experience as negative.

Therefore, it might be best to follow Craft's (2005) suggestion of having multiple

layers of judges.

Children and Creativity

There has been some dispute among creativity writers as to whether children

can be considered creative. Cropley (2001) felt that children's inexperience was

beneficial to creativity because it allowed them to explore without preconceived

ideas. However, others have taken the opposite view, that children cannot be

creative because they lack sufficient knowledge or consciousness in their

actions (Csikszentmihalyi,1997; Pickard, 1979; Shapiro, 1976). Cropley (2001)

did acknowledge that much of children's artwork might be original without being

effective, which would not meet his definition of creativity. Craft (2000) required

intentional action for something to be creative. Csikszentmihalyi (1997) stated

that children could not be creative because creativity required mastering the

existing rules fully before changing them to something new and improved.

Boden (2001) referred to this as transformational creativity. Gardner (1982)

acknowledged that children were not aware of the existing conventions and

rules so he deemed deviations from these rules as less significant than the

more conscious creativity of adults, but did not deny the children's creativity

completely. An important aspect of the mini-c model of creativity (Kaufman and

Beghetto, 2009) is that it is open to children, as well as adults, by incorporating

creativity with little or no knowledge of the field. It does not require originality or

effectiveness. Discussions about creativity in the English education context

include children in creativity (e.g. Craft, 2006; McMillan, 1923; NACCCE, 1999;

Ofsted, 2010; Roberts, 2006), although the definition of creativity in the English

curriculum is not clear, as shall be demonstrated. I believe that creativity is

open to all people, regardless of age or experience, but that it occurs at

different levels. This echoes the views of Boden (2004:1) who said that, "Every

one of us is creative, to a degree." However, I would extend this by saying that

each person has several degrees of creativity, depending on the domain, levels

of interest and the circumstances.

DEVELOPING THE CREATIVITY PYRAMID

Amabile (1996:38) believed that creativity exists in a continuum from ordinary

people doing things that are "somewhat novel" to geniuses transforming their

field, although she acknowledged that this concept is contested. Craft (2002)

also described creativity as a continuum, going from lcc to Big C. I agree that

creativity exists in a continuum; however, my background in teaching with the

English National Curriculum and teaching in UK higher education has

predisposed me to think in terms of levels of attainment. Therefore, I developed

my Creativity Pyramid (Figure 2.1) to demonstrate this continuum in terms of

hierarchical layers (Compton, 2010). I used the term layers rather than levels to

avoid confusion with levels in the National Curriculum and HE. The pyramid

was based initially on Beetlestone's (1998) three tier model so started with self-

expression and making things, followed by making connections, but then had

an additional layer for originality which was significant to the peer group or local area, before the top layer which had global impact. It may seem somewhat arbitrary to place making connections above self-expression and making things in a hierarchy of creativity but I think that this represents an increasing level of consciousness about the creative process. In fact this distinction between layers one and two matches the progression from mini-c to little c creativity in Kaufman and Beghetto's (2009) four C model of creativity, while layers three and four match the Pro-C and Big C creativity.

Having established the structure of the pyramid, I wanted the pyramid to represent a broad definition of creativity so I included, in the different layers, additional terms commonly used in defining creativity. This involved a 'best fit' approach to put the additional terms in layers with similar existing terms. Outside of her tier model Beetlestone (1998: 2) described a broader definition in her six-fold "construct of creativity" (Figure 2.1). The following figures demonstrate how this construct relates to other definitions of creativity that were incorporated into the Creativity Pyramid (Figure 2.7).
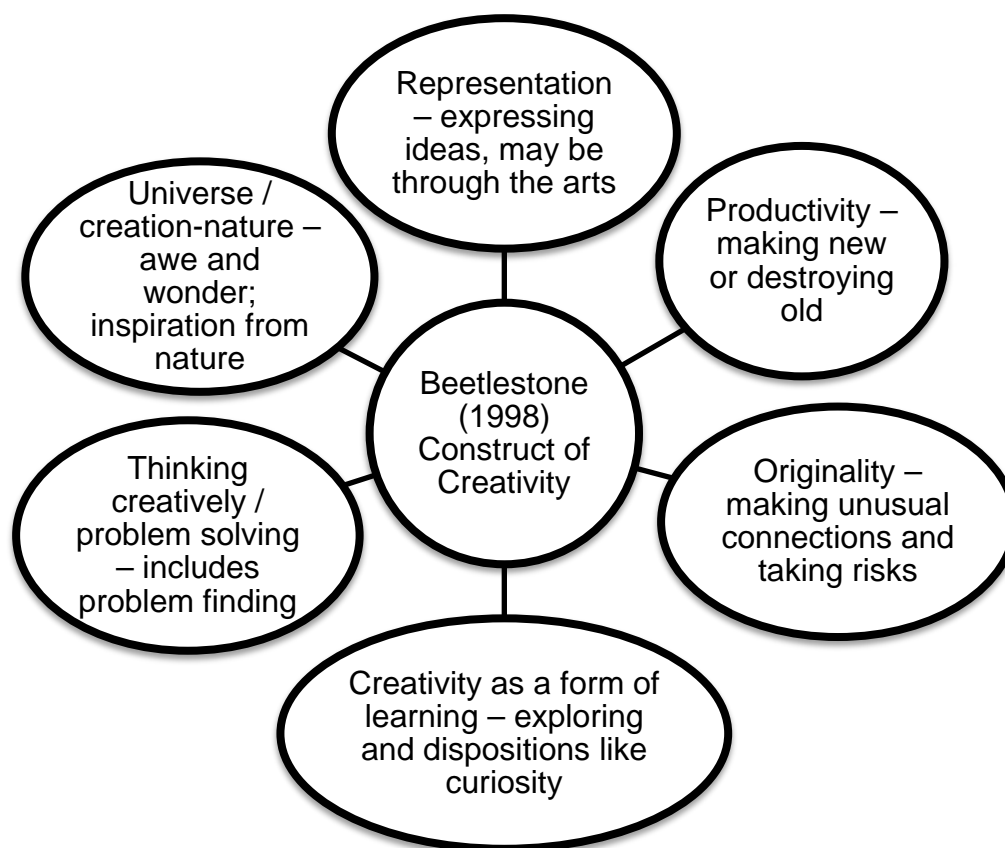
Figure 2.1 Beetlestone's Construct of Creativity

Wonder

One aspect of Beetlestone's (1998) construct is universe / creation-nature. This
is about awe and wonder, becoming engaged with the natural processes of
creation and growth that surround us. This has links to Gardner's (1999)
naturalistic intelligence. Currently there is a worry that children are losing touch
with nature and suffering from nature deficit disorder, where they are missing
out on this awe and wonder and sense of the natural world (Louv, 2007;
National Trust, 2010). Learning outside the classroom has been promoted
(DCSF, 2009; Ofsted, 2008b), with our students encouraged to find
opportunities for their pupils to learn outside the classroom. Beetlestone
(1998:4) said that this aspect was related to inspiration and that the creative

process, "… involves an emotional interaction between the individual and the environment." While I can personally relate to the powerful awe and wonder that nature can evoke and appreciate that this can provide inspiration for creativity, I do not see how this engagement with nature is in itself creative. This is also an aspect that has met with considerable scepticism from students on undergraduate and masters sessions I have taught. Therefore, I have not included it in the Creativity Pyramid, although it is relevant to the analysis of creative teaching.

Representation - expressing ideas

"…the creation of some kind of a permanent work in a symbolic system" (Policastro and Gardner, 1999:221)

evidence some people equate this to the arts (Cochrane and Cockett, 2007; Ofsted, 2003)

applies to all domains (e.g. Beetlestone, 1998; Csikszentmihalyi, 1997; NACCCE, 1999; Ofsted, 2010; Roberts, 2006)

the term 'creative arts' unhelpful in developing thinking about creativity (Ofsted, 2003)

tension between creativity and the arts (Sefton-Green and Sinker, 2000)

Figure 2.2 Representation

Figure 2.2 includes the tension between creativity and the arts that I found in my research and within the curriculum. I did not want to constrain the definition of creativity by including words from specific domains. Therefore, art-related terms, like painting and singing, were not included in the pyramid to avoid

creativity being seen as particularly about the arts. However, I also did not want to deny that the arts can be creative so statements related to representation or performing an existing work (Policastro and Gardner, 1999) were considered separately when using the creativity pyramid to analyse documents.

```
┌─────────────────────────┐
│     Productivity –       │
│     making new or        │
│     destroying old       │
└─────────────────────────┘
```

creativity includes a product (Csikszentmihalyi, 1997; NACCCE, 1999)

both product and process involved (Reid and Petocz, 2004)

product may be physical or an idea, e.g. theory building (Policastro and Gardner, 1999)

process more important than product (Robinson, 2001)

physical product or problem solving (Sternberg, 1999)

valuing process means rejecting product (Bailin, 1994)

Figure 2.3 Product

Layer 1 – Making

Making (Figure 2.3) was incorporated into the first layer of the pyramid,
although depending on the originality and value of the product it could also
relate to the third and fourth layers. On placement the students make teaching
materials and resources and provide making opportunities for the pupils.
However, I think the process is also creative and believe Bailin (1994) made a
false dichotomy. The nature of the assessments on the Primary Education
programme means that the focus of the marker is on the product, but reflections
on the process are often part of this product. On school placements students
are encouraged to emphasise and celebrate the processes involved in making
things. I think that the process of making, whether a product is completed or
not, is sufficient to garner a place on the first layer of the creativity pyramid,
although I feel the third layer requires a product.

Layer 1 – Dispositions for Creativity

The overlap between creativity and learning generally is highlighted by the
terms in Figure 2.4. These terms relate to mini-C (Kaufman and Beghetto,
2009) and the first layer of my pyramid. However, I did not include all of these
words because I felt that several of the dispositions, like curiosity and patience,
would be difficult, if not impossible, to identify in assessed pieces of work. They
are, however, aspects which students would have the opportunity to observe
and reward in the pupils they teach. Processes which could be demonstrated
more easily in assignments, such as exploring, observing and questioning, were

included in the pyramid since the purpose of the Creativity Pyramid is to help analyse creativity within summative assessments.

```
                    ┌─────────────────────────┐
                    │   Creativity as a form of│
                    │  learning – exploring and│
                    │ dispositions like curiosity│
                    └─────────────────────────┘
         ┌──────────────────────┐      ┌──────────────────────┐
         │ Exploratory creativity│      │ dispositions for      │
         │   (Boden, 2004)       │      │ creativity            │
         │                       │      │ (Claxton, 2004)       │
         └──────────────────────┘      └──────────────────────┘
```

Exploratory creativity (Boden, 2004)

questioning, investigating, exploring, researching (Boden, 2004; Bowkett , 2005; Craft, 2001b)

constructing new knowledge through making connections (Craft, 2005)

noticing, observing (Boden, 2004; Bowkett et al, 2007; Claxton, 2004)

metacognition (Bowkett et al, 2007)

imagining, playfulness (Boden, 2004; Bowkett, 2005; Claxton, 2004; NACCCE, 1999)

play with risk taking main components of the generative phase (Robinson, 2001)

possibility thinking (Craft, 2000; Fisher and Williams, 2004)

dispositions for creativity (Claxton, 2004)

being interested, curiosity (Claxton, 2004; Bowkett, 2005; Craft, 2001b; Fisher, 2004)

patience and perseverance (Claxton, 2004)

Figure 2.4 Form of Learning

Layer 1 – Choices

One aspect of creativity that is not accounted for in Beetlestone's (1998) construct is making choices. Craft (2003b) positioned making choices as a central part of lcc and possibility thinking, and a vital life skill (Craft, 2006), while Runco (2007:322) said that choice was, "…a critical factor in creative action." Ellis et al (2007) included making choices in their assessment scale of creativity for children. Making choices is part of experimenting and exploring (Craft et al, 2006) so is related to the first layer of the Creativity Pyramid. Allowing choices in education promotes autonomy (Barnes and Shirley, 2005; Beghetto, 2006) and is important in creative teaching (Craft et al, 2006; NACCCE, 1999; Ofsted, 2010; Robinson and Koshy, 2004). The opportunity to make choices promotes individuality rather than conformity.

Layer 2 – Creative Thinking / Problem Solving

Creative thinking and problem solving are common aspects of creativity definitions (e.g. Guilford, 1959; Sternberg, 1999; Weisberg, 2006). Our students encounter complex problems (Cropley, 2001) during school placements; therefore, problem solving (Figure 2.5) was an appropriate aspect to add to the pyramid. It seemed to fit best with the thinking focused second layer. This includes evaluating (Robinson, 2001), since both problem finding and solving rely on evaluation, the former of the initial situation and the latter of the proposed ideas.
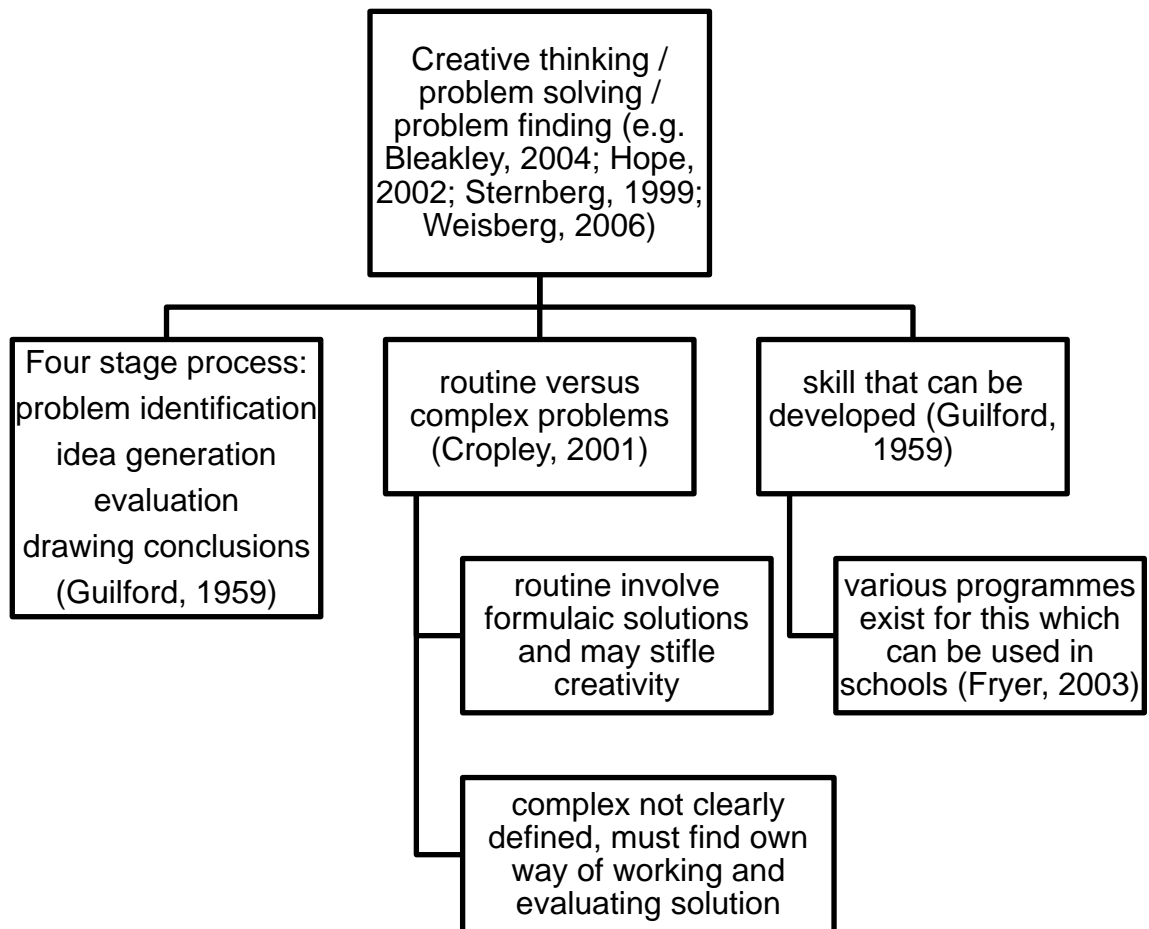
Figure 2.5 Creative Thinking / Problem Solving

```
                    ┌─────────────────────────┐
                    │      Originality –       │
                    │ making unusual connections│
                    │     and taking risks     │
                    └─────────────────────────┘
                              │
              ┌───────────────┴───────────────┐
   ┌──────────────────────┐      ┌──────────────────────┐
   │ Making connections (e.g.│    │ Risk taking (e.g. Barlex,│
   │ Boden, 2004; Bowkett, 2005;│  │ 2004; Cochrane and   │
   │ Duffy, 2006; Grainger et al,│ │ Cockett, 2007; Craft, 2001b;│
   │ 2004)                │       │ Robinson, 2001)      │
   └──────────────────────┘      └──────────────────────┘
```

Originality –
making unusual connections
and taking risks

Making connections (e.g. Boden, 2004; Bowkett, 2005; Duffy, 2006; Grainger et al, 2004)

Risk taking (e.g. Barlex, 2004; Cochrane and Cockett, 2007; Craft, 2001b; Robinson, 2001)

new to the individual (Duffy, 2006; Fisher and Williams, 2004; Grainger et al, 2004)

high risk - high stakes performance, e.g. Ghandi's salt march (Policastro and Gardner, 1999)

new to the group (Lucas, 2001)

medium risk - questioning assumptions (Lucas, 2001); challenging status quo (Craft, 2005)

Combinational Creativity - combining old ideas in new ways; relating; linking; comparing / contrasting; synthesizing (Boden, 2004)

lower risk - developing own style (Beetlestone, 1998); unconventionality (Craft, 2000); independence (Bowkett, 2005)

constructing new knowledge through making connections (Craft, 2005)

Figure 2.6 Making Connections and Risk Taking

Layer 2 – Making Connections

Making connections and the related terms (Figure 2.6) fit with the thinking aspects of the second layer of the pyramid, though if the connections are both original and valuable to the group they could be in the third. Askew (2002) found that the most effective teachers of mathematics were those who emphasized connections rather than teaching different aspects in isolation. As mathematics is one of my main responsibilities this has influenced my teaching but I am aware that it applies across the curriculum as well (Ofsted, 2010). However, the connections involved in this type of teaching are probably new to the individual (layer 2) rather than unique and valuable to the group (layer 3).

Layer 2 – Risk taking

Risk taking and its related terms (Figure 2.5) also went into layer 2. Although the term risk taking is not used, some of these associated elements are included with the programme; one of the aims of the Primary Education programme includes students being independent, while one of the intellectual skills is challenging preconceptions. In conversations with ITE colleagues it has been clear that risk taking is something that tutors want from students, especially on teaching placements, but that many students are loathe to engage in it when they are being observed and assessed. Risk taking is named as a "noticeable characteristic" of outstanding trainees by Ofsted (2008a:36) in their criteria for assessing trainee teachers. What is not clear is whether a student

needs to be generally outstanding before being able to take risks or whether

taking risks is what has made the student outstanding.

Layers 3 and 4

The emphasis so far has been on the first two layers of the creativity pyramid,

though most of these aspects could merit placement in the third or fourth layers

if sufficiently original and valuable. The fourth layer was based on Beetlestone's

(1998) third tier, supplemented with ideas from genius level creativity

(Csikszentmihalyi, 1997; Gardner, 1993). While it is unlikely that students are

going to produce world changing creativity (layer 4) while at university, many

are creative at the third layer, related to Kaufman and Beghetto's (2009)

professional creativity. It is not uncommon for the students to produce

resources or use teaching approaches that are considered both new and

valuable by their teacher-mentors and the schools where they are teaching.

This is particularly true of the use of ICT, since the students often have a

greater familiarity with the technology than their teacher-mentors. I have added

original thinking and innovative approach to the third layer to underscore that

the creative product might be an idea rather than a physical product, as

discussed above. I have also included challenging and engaging the audience

(Sawyer, 2006) in this layer as part of the way that the value and originality of

the creativity are judged. The ideas of challenging and engaging are both

important for creative teaching as well (Lucas, 2001; Ofsted, 2010).

Layer 4
making something new and valuable to society as a whole, working at the pinnacle of the field in skills, knowledge, understanding and vision

Layer 3
using skills, knowledge and imagination to make something new and valuable to the peer group / local community; challenging and engaging an audience; original thinking; innovating

Layer 2
making connections; relating; showing insight; synthesising; developing own style; independent thinking; solving problems; transforming; exercising judgement / evaluating; challenging; taking risks

Layer 1
noticing; taking an interest; observing; exploring; questioning; investigating; researching; expressing thoughts and feelings; imagining; making choices; creating; making

Figure 2.7 Creativity Pyramid

Having established the conceptual framework and how this helped in the development of the Creativity Pyramid, I am now going to discuss how this applies to education. The students on this programme are at university learning to become primary school teachers. Therefore, creativity in both primary and higher education in England are relevant to them and are likely to impact on their perceptions of creativity. Although the students are using the current curriculum frameworks, I also need to consider past curricula which will have influenced the teacher-mentors and the practices in schools.

CREATIVITY AND ASSESSMENT IN ENGLISH PRIMARY EDUCATION

"Fostering creativity is an integral part of education and should be a guiding principle for teaching all children" (Cropley, 2001:151)

This sentiment has been officially sanctioned in English primary education (Troman and Jeffrey, 2008) and is my position. At the beginning of the 21st century the Labour government in the UK promoted creativity as part of a ten year plan in which creativity was portrayed as a kind of panacea, "…providing opportunities for employment, in enriching peoples' lives, in overcoming social exclusion, and in offering a source of joy and fulfillment (DCMS, 2001:10)." It should be noted that the majority of this plan focused on the arts and museums so may have been equating creativity with the arts. However, the All Our Futures report (NACCCE, 1999), which was commissioned by the government to provide recommendations about creativity and culture, took a much wider view of creativity, applying it to all areas of life and all people. This democratic, non-elite view of creativity was also apparent in the ten year plan, which is perhaps unsurprising given the political views of the Labour party. This wider view of creativity was put forward by Derek Twigg, Parliamentary Under Secretary for schools, "Creativity is central to all aspects of education, whether it is learning, teaching, organisation or policy, and there has never been a better time to promote creative thinking (Twigg quoted in Anderson et al, 2005:5)." Craft and Jeffrey (2008) believed that the official interest in creativity in education was the result of three factors: the democratic definition of creativity and the conflation of creativity with culture, discussed above, but also the link

between creativity and the economy. However, the call for creativity in education is not limited to the UK (Burnard and White, 2008; Kampylis et al, 2009; Reid and Petocz, 2004; Sage et al, 2004).

Table 2.2: Creativity related terms in the English Primary Curriculum

Hadow (1931)	Plowden (1967)	E & E (2003)
Enquiry	Enquiry	Enquiry
Experiment		Problem solving
Creative imagination	Imagination	
		A way of learning
The arts	Learning through the arts	The arts
Play	Play	Play
Cross-curricular projects	Cross-curricular projects	Cross-curricular projects
Teachers	*Teachers*	*Headteachers*
Initiative	Develop own creativity	Creative use of staff
Originality		Organise to combine creativity with strong teaching in the basics

Historic Picture

There have been several periods in English primary education when creativity has been particularly promoted, followed by periods of decline. I reviewed English education documents since 1891, which revealed three main documents promoting creativity: The Hadow Report (1931), the Plowden Report (1967) and Excellence and Enjoyment (DfES, 2003). An analysis of the creativity related terms used in these documents demonstrated considerable similarities in their approaches (see Table 2.2). Although each emphasised the arts, creativity was not limited to these subjects. Hadow (1931) and Plowden (1967) both had expectations of teacher creativity, as well as developing this in

the pupils. Excellence and Enjoyment (DfES, 2003) focused instead on headteachers organising their schools creatively.

Current Curricula

I also searched for explicit references to creativity in the current curriculum documents. Children up to the age of five years old are catered for with the Early Years Foundation Stage (EYFS). The EYFS was organised under four themes, each with four commitments. Creativity is most relevant to the theme Learning and Development, whose commitments are: play and exploration; active learning; creativity and critical thinking; areas of learning and development. The guidance for Creativity and Critical Thinking emphasised that creativity is about the whole curriculum, involves making connections, may focus on process or product and requires opportunities for individual expression (DCSF, 2008). There are six Areas of Learning and Development, one of which is called Creative Development. The requirements for Creative Development related creativity to curiosity, exploration and play across the curriculum but the content of Creative Development mainly focused on art, music, drama and dance. These requirements match the Creativity and Critical Thinking guidance but naming this particular area of learning 'creative' sends a mixed message as to whether creativity equates to the arts or is broader. This is particularly problematic since my experience of working with students and teachers has been that they focus on the curriculum content and rarely even read the introductions and surrounding documentation.

Many elements of the Creativity Pyramid are included in the section describing "What Creative Development means for children" (DCSF, 2008:106):

Layer 1

- exploring

- expressing their ideas

- making and transforming things

- making choices and decisions

- initiating own learning (taking an interest / questioning)

Layer 2

- taking risks

- making connections

Layer3

- representing experiences in unique and valuable ways

As well as being listed in this introduction to Creative Development, all of these terms (except taking risks), along with the terms 'curiosity' and 'play' from the requirements, are found in the curriculum content of all six areas of learning. This is consistent with the message that these should be developed across the curriculum but I fear the heading Creative Development will focus the practitioners' ideas about creativity on a limited subject group. Taking risks only appeared in the context of Physical Development. Most of the references to risk throughout the document were about practitioners making risk assessments to keep children safe. Words in the creat* string (create, creative, creation, creativity) also appeared in the curriculum content for all six areas of learning,

with both the practitioner and the child creating. This is positive since the curriculum content pages are the ones that practitioners read the most. However, the practitioners might not make the connection between these individual terms and the overarching concept of creativity when seeing them outside of the context of Creative Development.

National Curriculum

After EYFS children move to the National Curriculum (DfEE/QCA, 1999), where creativity is embedded into the first aim of the curriculum. Creativity is not a subject in the National Curriculum but part of 'Learning across the Curriculum', which mirrors the spirit, if not the organisation, of the EYFS. The National Curriculum (DfEE/QCA, 1999) included creative thinking as one of a collection of thinking skills. Creative thinking involved using imagination, generating ideas and innovation. This is a narrower description than that of the EYFS but it still addresses the first three layers of the Creativity Pyramid. In addition to creative thinking, the thinking skills list included enquiry skills and evaluation skills and the key skills collection contained problem solving, all of which fit into the broader conception of creativity in the Creativity Pyramid. The National Curriculum website (QCDA, 2010) added a section on creativity, defining it and providing suggestions on how to encourage it. The definition comes from the four characteristics put forward by NACCCE (1999): imagination; purpose; originality and value. The materials on the site have come from the *Creativity: Find it, promote it* website (QCA, 2003) which had been an outcome of the NACCCE recommendations but which no longer exists. The website went

beyond the initial definition to describe what creativity entails: exploring ideas; possibility thinking; questioning; challenging; making connections; and evaluating. These pull together the different thinking and key skills mentioned above and are a closer match to the EYFS list. Putting creativity under the heading learning across the curriculum makes it clear that it is not just about the arts. However, it also moves it away from the curriculum content pages into the rarely read general introduction section.

The primary curriculum underwent further reviews in 2009: the government commissioned Rose Review and the independent Cambridge Primary Review. It is interesting that the two reviews have been led by Jim Rose and Robin Alexander, two of the 'three wise men' whose earlier report is discussed below as a threat to creativity. Nevertheless, both reviews supported creativity, the role of play in learning, the importance of creative thinking and problem solving and the benefits of cross-curricular learning (Alexander, 2009; Rose, 2009), echoing the messages from Hadow (1931), Plowden (1967) and Excellence and Enjoyment (DfES, 2003). Part of the remit of the Rose Review was to design a curriculum that encouraged creativity (Rose, 2009), while the Cambridge Review stated that, "Creativity and imaginative activity must inform teaching and learning across the curriculum (Alexander, 2009:23)."

Threats to Creativity in Schools

The similarities among these documents could lead one to think that there had been a consistent message about creativity and teaching since 1931. However,

in between these reports there have been backlashes against creativity. These have been related to:

- economic factors,

- curriculum factors,

- a lack of understanding about creativity and

- a technicist view of teaching.

Economic factors

Limited funding and resources for schools, resulting from the Depression and World War II, had an adverse effect on the implementation of Hadow's recommendations (Batho, 1989). Post-Plowden there was a series of economic recessions in the UK, again reducing the monies available for education. Considerable government money was put into promoting creativity in education in the early 21st century, with initiatives such as Creative Partnerships. However, continuation of this funding is in doubt (Ofsted, 2003) and the current economic recession is likely to result in cuts. The Department of Culture, Media and Sport budget was cut by 24% (HM Treasury, 2010), which will impact on many of the Creative Partnerships 'partners'. Although the Spending Review (HM Treasury, 2010) promised to increase spending to schools, there have been counterclaims that 75% of schools will suffer spending cuts (Stewart, 2010), endangering creativity again.

Curriculum Factors

Hadow (1931) warned about an over-emphasis on English and arithmetic, because these subjects were examined, and a lack of time for the arts subjects. This has been a recurring theme with the various incarnations of the National Curriculum. The introduction of the subject based National Curriculum has been blamed for the demise of cross-curricular project work (Sage et al, 2004). The Three Wise Men report (Alexander et al, 1992) criticised the cross-curricular approach of the years following Plowden and called for a return to discrete subject teaching with a greater emphasis on literacy and numeracy. The dominance of English and mathematics, two of the three 'core' subjects, was further embedded with the introduction of the National Literacy (DfEE, 1998) and Numeracy (DfEE, 1999) strategies. Their importance was underscored by having statutory assessment tasks (SATs), whose results were published in public league tables. Ellis et al (2007) reported that the statutory assessments of the core subjects resulted in the arts being undervalued. The Labour government had produced a new curriculum based on the Rose Review (2009), but this was rejected by the Conservative-Liberal Democrat coalition government. The coalition government, with familiar echoes, have promised a new curriculum that is based around discrete subjects and that "…will ensure a relentless focus on the basics (DfE, 2010a)". This runs contrary to Ofsted's findings that successful schools had a broad curriculum, enriched by a range of experiences, rather than a narrow focus on the core subjects (Ofsted, 2002).

Unfortunately Gross (2010) has claimed that teachers see knowledge as antithetical to creativity. An emphasis on basic skills does not have to be antithetical to creativity, since many authors believe that creativity needs to be grounded in skills and knowledge (e.g. Boden, 2001; NACCCE, 1999; Ofsted, 2010; Roberts, 2006). This is true for the teacher as well as the pupils; Edmonds (2004) found that teachers who lacked confidence in the science subject knowledge were less creative in their approach to science teaching. Ofsted (2008c, 2010) also found that a lack of teacher subject knowledge resulted in pupils having fewer opportunities to be creative, not just in science but across the curriculum.

Thus, it is not the focus on the basic skills themselves that threaten creativity, but the prescriptive climate of a detailed, subject-based curriculum saying what to teach, accompanied by detailed guidance on how to teach (e.g. Anderson et al, 2005; Burnard and White, 2008; Cochrane and Cockett, 2007; Wyse and Dowson, 2009). In their report NACCCE (1999:8) acknowledged that, "Many schools are doing exciting and demanding work but often they see themselves doing this in spite, not because, of the existing climate." However, they questioned whether this perception of the existing climate was accurate. In seeming agreement, Fisher and Williams (2004) and Wyse and Dowson (2009) advocated the need for confidence to take risks and claim the freedom to adapt the curriculum. Woodfield (2008) agreed that these freedoms were needed for new teachers to be successful but felt that the school improvement culture ran counter to freedoms.

Misunderstanding Creativity

Following the Plowden report, criticism about creativity appeared in The Black Papers on Education. Creativity was associated with a laissez faire attitude and a lack of basic skills (Amis and Conquest, 1971) and was seen as an excuse for, if not encouragement of, sloppiness in both thought and product that would drive down standards (Burt ,1969). There have been more recent reports of politicians and newspapers holding similar views (Marshall, 2001; Prentice, 2000; Robinson, 2001). While this could be seen as concern about maintaining standards, it could also be viewed as a lack of understanding about what creativity is. It has already been demonstrated that creativity does not have a simple, agreed definition so it is hardly surprising if there is confusion. While it is good practice for school staff to have a shared understanding of creativity (Anderson et al, 2005; QCA, 2003) that is embedded in the ethos of the school (DCMS, 2006), Ofsted (2003) found this was only true of a small minority of the schools in their study. Aljughaiman and Mowrer-Reynolds (2005) found that a lack of shared understanding of creativity inhibited creativity despite the teachers believing they were promoting it.

Cochrane and Cockett (2007) found a range of definitions in school with headteachers, men and science teachers at the critical thinking end while women and art teachers were more at self-expression end. Since the majority of primary teachers are women this could mean that a self-expression view of creativity dominates in primary schools, which could be a problem since Ofsted (2003) found that an over-emphasis on self-expression often resulted in

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insufficiently challenging, superficial work. My tutor interviews demonstrated that both the female and male tutors focused more on the critical thinking aspects of creativity. It may be that the tutors had more in common with the headteachers, irrespective of their gender, or may indicate a difference between primary and HE definitions.

Technicist View

One of the criticisms in the Three Wise Men report blamed the poor state of education on those who followed the Plowden report without understanding. Unfortunately, this is likely to be a problem again, with teachers taking a mechanistic approach to creativity initiatives. This fear is related to the concern that teachers are being viewed as technicians who deliver pre-packaged materials rather than as thinking, questioning professionals (e.g. Burnard and White, 2008; Craft, 2005; Haringman, 2001; Lucas, 2001). Burnett (2006) found that the ITT standards resulted in an approach to knowledge that promoted the technician model of teaching. While her research was based on the 02/02 ITT standards, the 2007 ITT standards were fundamentally the same. Research by Davies et al (2006) reported that the heads and deputies interviewed felt there was too much emphasis in ITT on using the published strategies and schemes. Although the DCMS (2006:8) claimed that the Primary Strategy has actually provided teachers with "a basis for new and innovative approaches to teaching", this was disputed by Burnard and White (2008) who felt the proliferation of government produced schemes of work and lesson plans promoted the teacher as technician model. My experiences with our students and teachers in school

are that more would agree the guidance has been binding rather than liberating.

Bassey (1999) stated that teachers needed freedom to make their own

judgements and decisions before they could develop creativity in their pupils.

Based on research with teachers from eleven European countries, Davies

(2006) determined that for creative teaching teachers needed to have freedom

to innovate, feeling they had control over the curriculum they taught. This will

not occur with a technician model of teaching. A study of ITE students revealed

that some of them felt that creativity could not be assessed because there was

no official guidance on how to do it (Rogers and Fasciato, 2005). The teachers-

as-technicians have become used to being told how to teach; however, there is

no recipe for creative teaching (Joubert, 2001; Sternberg, 1997). In fact,

Sternberg said,

...if they want a recipe for creativity, they won't find it. Moreover,

someone who wants to be told exactly what to do is not likely to

model a creative style, no matter how much they may wish to

do so.

(Sternberg, 1997:87)

Unfortunately, this has not prevented people from trying to produce recipes;

chapter six of *Letting the Buggers be Creative* is called "Blueprints for

Creativity" (Cowley, 2005). Nevertheless, it is still possible for teachers to re-

professionalise. Troman and Jeffrey (2008:6) found some evidence of teachers

breaking out of the technicist model to develop a "…more creative professional

identity", by going beyond the standardised approaches through creative projects.

Performativity

There has been a performativity culture in English schools (e.g. Burnard and White, 2008; Craft and Jeffrey, 2008; Troman, 2008). This includes testing, especially in the form of SATs, Ofsted inspections, imposed target setting, league tables, threshold assessments and performance management policies, all of which put pressure on teachers to achieve certain results with their pupils (e.g. Elliott and Kushner, 2007; Ellis et al, 2007; Nicholl and McLellan, 2008; Troman et al, 2007) and reinforces a technicist view of teaching (Craft and Jeffrey, 2008). When the National Curriculum was being designed the government was advised to emphasise formative assessment but this was rejected in favour of summative assessment and accountability (Daugherty and Ecclestone, 2006).

It is recognised that assessment has a major impact on learning in school (Harlen, 2007) and can be used to promote effective learning (ARG, 1999) but that an over-emphasis on high stakes summative assessment is more likely to have a negative impact (Harlen and Deakin Crick, 2002) and result in a surface approach that focuses on passing rather than learning (Harlen, 2006). Harlen (2007) acknowledged that accountability is an inevitable facet of assessment but this has resulted in over-emphasis on summative assessment at the expense of assessment for learning (ARG, 1999). This has resulted in more

transmission style teaching, a restricted curriculum (Harlen and Deakin Crick, 2002) and more focus on test practice (ARG, 1999; Harlen, 2007). Summative tests can be used in formative ways (Black and Wiliam, 2006; Harlen, 2007) but the emphasis on grades, such as in the SATs, acts as an inhibitor to learning (ARG, 1999).

Assessment for learning (AfL) focuses on providing feedback to help pupils make progress, including an emphasis on developing autonomy through peer and self-assessment (ARG, 2002; Harlen, 2007). Black and Wiliam (2006) found that peer assessment was particularly useful in developing self-assessment skills because of the common language of the peers rather than the more remote language of the teacher. The stress on autonomy and developing evaluation skills fits well with conceptions of creativity. It is interesting to note that the promotion of AfL in primary schools coincided with the most recent promotion of creativity. Although formative assessment, in the guise of AfL was accepted as part of official curriculum strategies, as part of personalised learning in 2003 / 4, the emphasis on performativity remained (Daugherty and Ecclestone, 2006).

A performativity culture results in considerable stress on teachers (Ellis et al, 2007; Troman, 2008), which can lead to teachers playing safe, avoiding risk and being less creative (Elliott and Kushner, 2007; Ellis et al, 2007; Fisher, 2004), resulting in a tension between the performativity and creativity policies (Burnard and White, 2008; Craft and Jeffrey, 2008; McDonald, 2005; Ofsted, 2003; Wyse and Dowson, 2009). Nevertheless, there is some evidence that

teachers feel performativity and creativity cultures can co-exist and work together to raise standards; Roberts (2006) found some headteachers who saw creativity as a way of increasing attainment. The research of Troman et al (2007) and Troman and Jeffrey (2008) into performativity and creativity in primary schools found that creativity was perceived as an antidote to the prescriptive curriculum and testing culture. However, most of the examples they provided were a bolt-on approach to creativity, focused on special events or projects (Troman et al, 2007; Troman and Jeffrey, 2008). There is contesting evidence from a study of secondary design and technology teachers, which demonstrated that the testing regime resulted in a reduced focus on creativity, despite the teachers' professed view of the importance of creativity (Nicholl and McLellan, 2008). This difference may be due to the fact that the primary teachers were engaging in creativity outside of the testing regime and as "…breaks from the National Curriculum" (Troman and Jeffrey, 2008: 6), while the secondary teachers were discussing creativity within the context of the testing structures. Given the pressures that teachers are under from the performativity culture it may seem surprising that some make extra efforts to be creative. However, both Troman and Jeffrey (2008) and Fischman et al (2006) had evidence from interviews that teachers found engaging in creativity emotionally rewarding.

Creative Teaching

In their creativity guide for headteachers, Lloyd and Smith (2004) equated the signs of creativity with effective learning. This was also demonstrated previously

when discussing aspects of the Creativity Pyramid. Given the overlap between aspects of creativity and features of learning, Craft (2005:4) asked the very pertinent question, "…how is promoting creativity in the classroom distinct from good teaching?" The question is made more complex by considering the range of terms in use: creative teaching, creative learning and teaching for creativity.

Beetlestone (1998) felt that creative teaching was good teaching but that not all good teaching was creative. This implies that all creative teaching is good. Coultas (2008:143) described effective teachers as those who evaluate and adapt their practice and "…make teaching a highly creative experience." It is not clear from this statement whether the evaluation and adapting are precursors to the creativity or an integral part of it. Since Craft (2005) defined creative teaching as interesting, imaginative and effective, it must be good teaching by her definition. Each of these aspects was highlighted in other definitions of creative teaching. Interesting and the similar words exciting, engaging, memorable and motivating, often presented in combination, featured in definitions by Anderson et al (2005), Davies (2006), Jeffrey and Craft (2004) and NACCCE (1999). Imaginative approaches were noted by Anderson et al (2005) and NACCCE (1999), while Jeffrey (2006) referred to teacher innovation. The requirement that the teaching be effective was less common but was part of the NACCCE (1999) criteria. I think that it would be difficult to call any teaching good that was not interesting and effective but do believe that good teaching can be unimaginative, drawing on tried and tested approaches copied from someone else. The combination of engaging, innovative and effective would place creative teaching in the third layer of the Creativity

Pyramid and this application of innovation in a professional context makes it fit with Kaufman and Beghetto's (2009) Pro-C. According to Wyse and Dowson's (2009:11), "Creative learning is learning that leads to new or original thinking that is accepted by appropriate observers as being of value." That would place creative learning solidly alongside creative teaching in the third layer.

However, these are not the only characteristics associated with creative teaching. Ensuring the teaching is relevant to the pupils and passing ownership and control from the teacher to the learner were described as key characteristics of both creative teaching and creative learning (Jeffrey, 2006) and as features of teaching for creativity by Craft (2005), Jeffrey and Craft (2004) and Wyse and Dowson (2009). Harrington (1990) also called for pupil ownership but included the teacher's responsibility in engaging the pupils. Similar to giving pupils ownership and control, Cropley (2001), NACCCE (1999) and QCA (2003) talked about independent learning and developing autonomy. Developing independent learning and autonomy are also features of AfL.

Making cross-curricular links was identified as part of creative teaching by Anderson et al (2005:24) and Lloyd and Smith (2003). Although they did not specify cross-curricular approaches, as part of teaching for creativity, Ellis et al (2007) and Cropley (2001) talked about integrative teaching, while several authors focused on encouraging pupils to see connections (e.g. Fisher and Williams, 2004; QCA, 2003; Reid and Petocz, 2004).

Another aspect that has been acknowledged as part of both creative teaching (Cochrane and Cockett, 2007) and teaching for creativity (Beetlestone, 1998; Jeffrey and Craft, 2004; Prentice, 2000; QCA, 2003) is being sensitive to the needs of the learner and the context and adapting teaching in consequence.

These characteristics relate more to the second layer of the Creativity Pyramid. Promoting learner autonomy could be seen as risk-taking by the teacher and as developing the independent thinking of the pupils. Making connections fits with cross-curricular and integrative teaching. Adapting lessons relates to transforming but might be part of the third layer if the adaptations are sufficiently innovative and effective.

Teaching for Creativity

NACCCE (1999) and Anderson et al (2005) made a distinction between teaching creatively and teaching for creativity. Cochrane and Cockett (2007) made the same distinction, although they called them professional creativity (creative teaching) and experiential creativity (teaching for creativity). In their research Cochrane and Cockett (2007) found professional creativity more prevalent, with teachers finding the experiential creativity more difficult. Harrington (1990) set out a creative ecosystem, an environment that would support creativity. This bridges the creative teaching / teaching for creativity divide by including aspects such as presenting activities in exciting and unusual ways (creative teaching) and encouraging play, experimentation and idea generation in a non-threatening environment where risk taking is promoted and

mistakes are valued (teaching for creativity). Jeffrey and Craft (2004) concluded that the distinction between these two was not as helpful as an integrated view. Given the overlap in the characteristics of creative teaching with teaching for creativity I feel that an integrated view would be more beneficial. It has been suggested that teaching for creativity is more likely to happen when teachers are teaching creatively (Jeffrey and Craft, 2004; Craft, 2005; NACCCE, 1999). This may be because when they teach creatively, teachers are modelling creativity, which has been recommended as an important factor in developing pupils' creativity (e.g. Cropley, 2002; Fischman et al, 2006; NACCCE, 1999; Sternberg, 1997).

Teaching for creativity encompasses many more elements than those involved in creative teaching discussed above. Some refer to skills to be developed, some to attitudes and several to environment factors. It may be that teaching for creativity is so broad because the range of definitions of creativity is so broad. Nearly all aspects of layers one and two of the Creativity Pyramid are accounted for in the various descriptions of teaching for creativity, with some references to layer three. The only aspect not particularly emphasised was making, although this could be implied in calls for innovation.

NACCCE (1999) described three facets of teaching for creativity: encouraging, identifying and fostering. 'Encouraging' was mainly to do with establishing a classroom environment and pupil attitudes that support creativity. 'Identifying' was about helping the pupils to ascertain their own creative strengths. 'Fostering' was about developing the relevant skills, providing appropriate

opportunities to be creative and teaching pupils about the creative process. The encouraging and fostering facets are well represented in the discussions about teaching for creativity but little mention is made of identifying specific talents, although this was a feature in the 'cultural entitlement' of the Children's Plan (DCSF, 2007), which mentioned creativity only in terms of ensuring economic well-being.

Jeffrey and Craft (2004) agreed with these three facets of teaching for creativity but added a fourth which involved ownership of learning and self-evaluation. Ownership of learning was discussed above as part of both creative teaching and teaching for creativity. Developing self-evaluation was prevalent in many descriptions of teaching for creativity (e.g. Anderson et al, 2005; Cropley, 2001; NACCE, 1999; Robinson, 2001), although NACCCE (1999) also talked about deferring judgement when producing ideas, in a brainstorming model. Developing self-evaluation is closely linked to the ideas of autonomy and independent learning discussed above. If the pupils can self-evaluate their processes and products then they are less reliant on the teacher. This again links teaching for creativity with the goals of AfL. Self-evaluation is part of layer two of the Creativity Pyramid and is required of our students throughout the degree.

Several authors recommended encouraging problem solving as part of teaching for creativity (e.g. Fisher and Williams, 2004; Lloyd and Smith, 2003; QCA, 2003), another aspect of layer two of the Creativity Pyramid. This included developing the thinking skills for problem solving (Anderson et al, 2005) and

problem identification (Cropley and Cropley, 2008). This also involved developing a climate that accepted alternative solutions (Cropley, 2002) and encouraged pupils to find their own solutions rather than just following taught procedures (Cropley and Cropley, 2008). The latter is particularly relevant to mathematics, with pupils encouraged to use their own informal methods rather than simply following standards algorithms. This approach was encouraged by the National Numeracy Strategy (1999), which provides some support to the DCMS (2006) assertion that the strategy supports creative teaching. My experiences of working with both students and teachers in school is that many of them still see the formal algorithms as preferable, partly because that is the method they were taught themselves, so it may be the teachers themselves who are reducing creativity in mathematics rather than the strategy.

Questioning was another key aspect and related to skill, attitude and environment. Both teachers and pupils need to develop their questioning skills for an enquiry based learning approach (QCA, 2003), with open, unusual and challenging questions (Anderson et al, 2005; Fisher and Williams, 2004), and teachers using the curriculum to provoke questions (Anderson et al, 2005; Lloyd and Smith, 2003). The key attitude is promoting curiosity (Fisher, 2004; Jeffrey and Craft, 2004; NACCCE, 1999). Fisher (2004) advised that curiosity could be developed by encouraging questioning and close observation. These are the main concepts behind the Starting Point assignment the students undertake in Year 1. The classroom environment needed to support this is one where questions are taken seriously (Cropley, 2001) and encouraged (Craft, 2005;

NACCCE, 1999). Asking questions is part of layer one of the Creativity Pyramid.

Another aspect of layer one that is part of teaching for creativity is imagination (Craft, 2005; Fisher, 2004; Lloyd and Smith, 2003; NACCCE, 1999). Imagination helps with possibility thinking (Cropley and Cropley, 2008; QCA, 2003) and being able to see things from multiple perspectives (Craft, 2005). NACCCE (1999) stated that there needed to be a positive attitude towards imagination in the classroom.

Conditions for Creativity

Promoting positive attitudes towards creativity is part of developing a supportive emotional climate in the classroom. Cropley and Cropley (2008) talked about valuing novelty, ingenuity and boldness, while Craft (2005) discussed celebrating courage to be different. Less positively, Beetlestone (1998) said that teachers needed to protect pupils from ridicule when they were being creative. Similarly, if there is to be originality, pupils need to be protected from pressure to conform (Cropley, 2001). All of these contribute to a climate of respect and trust where pupils' opinions are valued (Lloyd and Smith, 2003; Harrington, 1990). Within such a climate teachers can encourage purposeful self-expression (Cochrane and Cockett, 2007; NACCCE, 1999).

Lucas (2001) set out four key conditions for creative learning in school, all of which directly relate to the emotional climate:

1. The need to be challenged

2. The elimination of negative stress

3. The capacity to live with uncertainty

4. Feedback

Fisher (2004) and Lloyd and Smith (2003) also highlighted the need for challenge, while Anderson et al (2005) and NACCCE (1999) talked about challenging pupils within a supportive environment. There does seem to be some contradiction between the elimination of negative stress and living with uncertainty, since many people find uncertainty very stressful. Fisher (2004:19) also talked about being open to uncertainty and claimed that creativity happened when people were "out of the comfort zone", which implies a degree of stress. Prentice (2000) said that teachers needed to support pupils through the messiness of the creative process, while Haste (2008) emphasised that pupils needed to become comfortable with ambiguity. Part of the uncertainty is being open to chance (Fisher, 2004), unusual ideas (Wyse and Dowson, 2009; QCA, 2003) and keeping options open (QCA, 2003). This can be difficult in an educational climate that is dominated by pre-determined learning outcomes.

Feedback is an important part of AfL, giving a sense of progress and indications of how to develop (ARG, 2002; Black and Wiliam, 2006; Harlen and Deakin Crick, 2002). It can be in the form of praise and encouragement for experimentation and originality, as discussed above, but perhaps a more important aspect is how feedback responds to errors. Errors can be viewed positively as learning opportunities (Anderson et al, 2005; Cropley, 2002;

Cropley and Cropley, 2008), an attitude I promote to the students. Fisher (2004) said it was important that pupils had the confidence to make mistakes. To this end teachers should tolerate bold errors (Cropley, 2001) and reward the courage involved in trying (Cropley, 2001; Wyse and Dowson, 2009), encouraging risk taking. It is common to talk about pupils taking risks in teaching for creativity (Anderson et al, 2005; Barlex, 2004; DCMS, 2006; Robinson, 2001) but Lloyd and Smith (2003) stated teachers should take risks. Barlex (2004) said that management of risk was one of the teacher's roles but there is a fine line between managing the risk and removing it altogether. He said that without the possibility of failure there cannot be creativity. This is a particular challenge in the performativity culture discussed previously, where pupil achievement is directly linked to teacher and school success and where there is a low tolerance for failure.

There are other environmental factors to support teaching for creativity, in addition to the emotional climate. The resources available and the way they are organised impacts on the degree of learner autonomy (Wyse and Dowson, 2009). Harrington (1990) emphasised the need to provide students with choices of both resources and methods. While having a wealth of resources can stimulate creativity, there is also truth in the saying 'necessity is the mother of invention'. Therefore it is not easy to recommend the ideal type and quantity of resources for creativity. However, one particularly valuable resource is time. Time is needed for pupils to explore, experiment and play with ideas (e.g. Cochrane and Cockett, 2007; Craft, 2005; NACCCE, 1999; Wyse and Dowson, 2009). Additionally, time is needed for incubation (Craft, 2005; Wallas, 1945)

and reflection (Ellis et al, 2007). These can only happen if sustained time is provided to undertake extended pieces of work (Ellis et al, 2007; Fisher, 2004; Lloyd and Smith, 2003). Unfortunately this is at odds with an educational environment that has literacy hours and daily mathematics lessons broken down into bite sized chunks.

Another responsibility of the teacher is setting a clear purpose for the work (Craft, 2005; QCA, 2003), while providing opportunities for pupils to be innovative and original (Craft, 2005; NACCCE, 1999; Wyse and Dowson, 2009). The requirement for pupils to be original can seem quite threatening so some authors have used the less daunting concept of pupils including elements of surprise in their work (Cropley, 2002; Reid and Petocz, 2004), although Cropley (2002) required that the surprise be effective rather than random.

The final role of the teacher in teaching for creativity is ensuring pupils have sufficient subject knowledge and skills to be creative (e.g. Craft, 2005; Cropley, 2001; QCA, 2003; Robinson, 2001). Reid and Petocz (2004) emphasised the importance of pupils understanding the underlying essence of the topics as well as the details. This can be done by teaching in a variety of ways, using first-hand experience and visitors, with children working both individually and in groups (Lloyd and Smith, 2003; QCA, 2003). Several authors have advised that children should be encouraged to work in different ways (Anderson et al, 2005; Cropley, 2001; Fisher and Williams, 2004; Lloyd and Smith, 2003), while QCA (2003) emphasised that children should have some choice in the way they worked. In AfL this includes choice in assessment (ARG, 2002; Harlen and Deakin Crick, 2002). In addition to subject knowledge, fostering creativity

(NACCCE, 1999) involved knowledge about creativity. Robinson (2001) found it was important that teachers knew about the creative process, while Fisher (2004) and Jeffrey and Craft (2004) joined NACCCE (1999) in recommending that pupils be taught about the creative process. They do not specify what this creative process entails, although the Wallas (1945) four stage process of preparation, incubation, illumination and verification is commonly cited. Teachers can clearly contribute to the preparation and verification stages and can provide the time needed for incubation. The role of the teacher in the illumination stage is less clear if it is truly to be the pupil's own idea. However, Wallas (1945) said that the wider your knowledge base the more possible connections you could make, leading to that eureka moment, so the teacher role for this phase involves prior teaching of subject knowledge. From their work with university engineering students Cropley and Cropley (2008) expanded on this model by splitting incubation into two phases of activation and cogitation and adding another two phases: communication and validation. In the school context it is up to the teacher to provide opportunities for communication, while validation will probably involve the teacher assessing the work. Providing opportunities for communication may give pupils extra incentives to complete their work (Wyse and Dowson, 2009). Cropley and Cropley (2008) felt that the phase model would help the teacher to analyse pupil behaviour in the different phases and then give targeted feedback to encourage creativity.

Assessing Creativity

In her review of creativity research and literature, Craft (2001a) found that there was little written about the assessment of pupils' creativity, although this has been the focus of some Creative Partnerships projects in the past decade (Ellis et al, 2007; Redmond, 2005). Davies (2006) found that teachers in several European countries did not feel there was much encouragement to assess creativity in schools. Rogers and Fasciato (2005) reported that some of the ITE students they interviewed worried that assessing creativity might discourage the pupils, while Lawrence and Ellis (2008) stated that some teachers did not see assessing creativity as either appropriate or possible.

Nevertheless, the Primary National Strategy published an expected level of creativity for Year 6 pupils at the end of Key Stage 2:

> By the end of Key Stage 2, children working at or above age-related expectations can create original and often unexpected outcomes or ideas. These are purposeful as well as imaginative. They are able to speculate about possibilities. They challenge conventions and their own and others' assumptions. They are prepared to take risks, and they keep an open mind, adapting, reviewing and modifying their ideas to achieve creative results. They can reflect critically on ideas and outcomes.
>
> (PNS, 2004)

This statement shows the influences of the NACCCE (1999) definition of creativity and several of the characteristics listed by the QCA (2003). However, it would be quite difficult to use as assessment guidance since there is nothing which indicates the level at which these various aspects take place. I could just as easily apply these expectations to my university students. Intriguingly, the section on creative thinking which contained this level statement is no longer part of the document that is available on the PNS website.

The Creative Learning Assessment (CLA) project aimed to aid assessment, using levels 1 to 5, of learning in the creative arts in primary schools, although the teachers involved in the project felt that the scale could be applied to learning in all subjects (Ellis et al, 2007). It was broken down into four areas: creativity; strategies and skills; knowledge and understanding; reflection and evaluation (Ellis et al, 2007). The creativity strand included many of the terms included in the Creativity Pyramid, such as play, express feelings and ideas, develop imagination, explore, investigate, choose, create, combine, select. The level 1 statements fit entirely in the first layer of the pyramid, while elements of the second layer gradually appeared in levels 2 to 5. Lawrence and Ellis (2008) reported that using the CLA changed normal assessment practice, resulting in the teacher focusing on different things, highlighting specific aspects of creativity which helped in providing feedback to develop these. It also changed teaching practice because they identified the importance of the teacher stepping back, allowing the children to make more choices and have more independence (Lawrence and Ellis, 2008). The most significant strand of the

CLA was found to be evaluation, with the teachers first modelling the language of evaluation for the pupils (Lawrence and Ellis, 2008).

An emphasis on evaluation was also prevalent in the Creativity Wheel, a tool designed for self-assessment by Key Stage 2 pupils (Redmond, 2005). Like the PNS (2004) statement, the Creativity Wheel used the NACCCE (1999) definition of creativity and had three segments: purposeful imagination; originality and value (Redmond, 2005). Each segment was further subdivided into slices which had more specific aspects of creativity that were written in both pupil and teacher language. For example, "take risks" in teacher language equated to "I am prepared to try things out even if they might not work," in pupil language (Redmond, 2005:11). The Creativity Wheel was designed to be assessment as learning, where the pupils would learn about creativity through the process of assessing themselves. There was also a formative aspect for the teachers and the school to learn how to promote creativity in the classroom generally and how to help develop the creativity of individual pupils (Redmond, 2005).

Although these tools for assessing creativity in primary schools exist, I am not aware of many schools using them. However, I have seen considerable evidence of schools adopting the more general principles of AfL, which Cochrane and Cockett (2007) felt was ideal for assessing creativity, especially providing feedback, engaging pupils in their learning and personalised approach. However, they noted that there was a clash between open-ended creative activities and the culture of pre-determined learning outcomes and

prescribed targets (Cochrane and Cockett, 2007), bringing us back to the conflict with performativity.

CREATIVITY AND ASSESSMENT IN HE AND ITE

The issues around creativity in HE and ITE are very similar to those in schools: defining creativity; teaching for creativity; performativity; assessment and creativity. Although Robinson (2001:4) said, "University degrees aren't designed to make people creative," it has been noted that creativity is a focus in HE (Phipps, 2010; Swirski et al, 2008). There is a belief that creativity is an important aspect in HE in order to prepare graduates to cope with a supercomplex world (Barnett, 2007; Bryan and Clegg, 2006; Crozier, 2005). In 2010 there was a symposium on creativity in HE (Coate, 2010) indicating that this is a current area of interest, while Kleiman (2005) has called for more research into conceptualisations of creativity and the processes of creativity in HE. However, there are fewer books about creativity in university than there are for schools. In his introduction to a book about creativity in HE, Csikszentmihalyi (2006) said that, as far as he knew, it was the first book of its type. In the same year, Davies et al (2006) stated that there were no books about creativity and ITE. There are, however, a range of journal articles on creativity in both HE and ITE, including research projects, some of which will be discussed below.

Assessment structures in HE

Swirski et al (2008) called for teaching and learning to be aligned to promote creativity, while Reid and Petocz (2004:60) stated that, "The total learning

environment can only be enhanced when ideas of student learning, assessment and creativity are integrated." These fit with the idea of constructive alignment, where a programme is designed so that the intended learning outcomes, the teaching approach and the assessment strategy all work together to a common goal (Biggs and Tang, 2007). This is particularly important since there is general agreement that what is assessed and how it is assessed are the main influences on how, what and when students learn, more so than teaching (e.g. Bloxham and Boyd, 2007; Boud and Falchikov, 2007; Bryan and Clegg, 2006; Gibbs, 2006). AfL was discussed earlier in relation to schools, but is also relevant to HE. A subset of assessment **for** learning is assessment **as** learning (Bloxham and Boyd, 2007; Dochy et al, 2007), which describes the learning achieved by students while completing assignments, through processing information and making connections. Therefore, assessments have to be designed carefully so that they direct students to the learning you want them to achieve (Biggs and Tang, 2007; Moon, 2002). HE in England has an academic infrastructure which includes subject benchmark statements, the QAA code of practice for academic quality and standards and level descriptors, such as SEEC (Gosling and Moon, 2002) and FHEQ (QAA, 2008), which should work together to help institutions produce programme specifications with programme outcomes (Butcher et al, 2006; Moon, 2002); these then lead to module descriptions, which include learning outcomes, teaching strategy, assessment criteria and assessment methods (Gosling and Moon, 2002; Moon, 2002).

Constructive Alignment

All of the above elements are intended to work together in constructive alignment (Gosling and Moon, 2002), especially the link between intended learning outcomes and assessment (e.g. Butcher et al, 2006; Joughin and Macdonald, 2004; Knight, 2007; QAA, 2008). Despite this range of support, Kvale (2007) felt that the potential for assessment to drive learning was being underutilised in HE.

I found two studies demonstrating a lack of coherence between assessment and learning outcome, although neither of these were in English HE. Ogunleye (2006) analysed a range of syllabi for FE qualifications in England and found that many included aspects of creativity in their curricula but very few included this in their assessment criteria. Since he was only focusing on creativity it may be that other aspects of the curriculum were better aligned. Hawe (2007) compared two courses on an ITE programme in New Zealand. She found that the drama course was well aligned, with students helping to design the assessment criteria and the tutor providing frequent formative feedback throughout taught sessions. However, she discovered that the mathematics course was not aligned; the taught sessions focused on different knowledge and skills than the assignment, while discussions about the assignment and the feedback on it focused on superficial aspects such as presentation rather than substantive issues. Hawe's (2007) findings imply that constructive alignment may depend on the individual tutor, rather than be assured by an institutional approach.

Some worry that constructive alignment limits learning and inhibits creativity by pre-determining learning outcomes (Balchin, 2006; Kleiman, 2005). However, promoters of constructive alignment stress that it is important to remain open to unexpected learning, with intended learning outcomes merely setting a threshold level which can be exceeded (Biggs and Tang, 2007; Moon, 2002). The grading system provides an incentive for students to exceed these threshold expectations (Biggs and Tang, 2007; Gosling and Moon, 2002; Moon, 2002). Biggs and Tang (2007) specifically mentioned that outcomes-based learning can be compatible with creativity because the outcomes can use terms such as design and create which are open-ended processes. Therefore it is up to the tutor to word outcomes carefully to open up possibilities rather than close them down. Some other concerns about intended learning outcomes relate to their wording. Knight (2007) worried about the difficulty in capturing complex higher order skills, like creativity, in the language of intended outcomes, while Butcher et al (2006) expressed concern that some verbs used in intended learning outcomes, such as analyse, are used in secondary schools as well as HE, making their level unclear. Since it has already been demonstrated that creativity is very hard to define precisely, Knight's concern seems justified. Gosling and Moon (2002) highlighted a similar danger: focusing on the easy to define and measure outcomes rather than the more complex higher order skills. Lomas (2007) reported one lecture's criticism of constructive alignment that it focused on teaching rather than learning, assuming that one guaranteed the other. Although I agree that teaching does not guarantee learning, since teaching is the aspect that tutors can control it seems sensible for them to focus on this.

During revalidation we started with the programme aims and outcomes, considered alongside the Education Studies benchmark statement. According to Gosling and Moon (2002) programme outcomes are much broader than module outcomes and may include aspects that might not be assessed within the programme but become evident in later professional practice. While I hope that we achieve the programme outcomes for all students, I agree that these will become more evident with further experience as employed teachers. Moon (2002:142) stated that programme outcomes may involve the students' engagement with the programme as a whole, including the interaction of different modules, such that "…the whole may be greater than the sum of its parts." The programme aims for the Primary Education degree included developing creative teachers (BG, 2008a). Following the above models this is not a simple outcome related to a specific module but hopefully will be achieved from the interaction of all the modules and, as such, does not have to be assessed (Moon, 2002). However, given the impact of assessment on learning discussed above, we should still consider how this relates to the module assessments. In planning modules we took a constructive alignment approach, starting with the intended learning outcomes, informed by the QTS standards (TDA, 2008), the SEEC (Gosling and Moon, 2002) and FHEQ (QAA, 2008) descriptors, before deciding on the assessment strategy. In addition to considering the assessment types for each module we thought about the range and balance of assessments across the programme.

Assessment Balance

It is important to consider the balance of assessment because of workload issues and how students respond to these (Joughin and Macdonald, 2004). Several authors have noted that moving to modular degree programmes resulted in increased assessment loads, with more tasks to be completed in less time (Crozier, 2005; Irons, 2008; Knight and Yorke, 2003). This often resulted in bunching assignments into assessment weeks, with students leaving their learning until the assignment is due (Bloxham and Boyd, 2007) and leading to surface rather than deep learning (Butcher et al, 2006). Workload pressures have resulted in reduction of formative assessments to compensate for increased summative load (Knight and Yorke, 2003), especially since students are reluctant to complete assessments that do not contribute directly to their degree classification (Irons, 2008; Prowse et al, 2007). These views certainly tally with my experiences of the change to a modular programme. We had fewer teaching weeks, dedicated assessment weeks and more summative assessments. This coincided with an increased reluctance from students to complete formative tasks. However, other factors such as the introduction of top-up fees for university tuition and the arrival of the National Curriculum generation at university may also have contributed to this attitude.

Formative Assessment

Murphy (2006) commented on the divergence between assessment in HE and assessment in schools. However, I perceive similarities: calls for more formative

assessment; a predominance of high stakes summative assessment; and performativity. NACCCE (1999) noted that ITT had similar pressures to schools, related to an over-full curriculum and high stakes testing. Irons (2008) felt that a greater proportion of formative assessments would increase motivation and create a better learning environment, despite conceding that strategic approaches made the students resistant to formative assignments. Wisdom (2006) also recommended greater emphasis on AfL, suggesting it would support teaching for creativity. Much has been written about assessment as a motivator for learning (e.g. Biggs and Tang, 2007; Bloxham and Boyd, 2007; Boud and Falchikov, 2007; Moon, 2002) and therefore the importance of designing assignments that direct learning. Bloxham and Boyd (2007) claimed that good assessments are intrinsically motivating and resulted in better retention of information.

Kvale (2007) stated that apprenticeships provided a model of good assessments. In apprenticeships there is a gradual assessment process, which includes self and peer assessment, as well as assessment by the expert and often by the end-user of the product. When the apprentice has demonstrated sufficient skill and knowledge she or he is given greater responsibility. There is a constant feedback loop of learning, doing and evaluation. Unfortunately, Kvale (2007) felt that this apprenticeship model of assessment for learning is under-utilised in HE. I agree with the advantages of this apprenticeship model and believe that it is present in ITE for students on school placement, although less common in campus based assessments. Hewitt and Smith (2007) demonstrated that ITE school placements differed from other HE work

placements, especially in terms of the emphasis on formative assessment. They found that the ITE students valued being able to link theory and practice. The frequent feedback, both formal and informal, the self-evaluation and the opportunity to enter into formative dialogue all supported trying things out, even though there was a final summative judgement. Hewitt and Smith (2007) found that the on-going formative assessments students experienced on school placement helped them develop their self-assessment skills. The students recognised that learning was more than just getting a grade and reported feeling "…like real teachers" (Hewitt and Smith, 2007:107).

Feedback

Feedback is an important part of both formative and summative assessment (Bloxham and Boyd, 2007; Irons, 2008). As well as helping students improve, formative feedback helps tutors to improve the course (Biggs and Tang, 2007; Butcher et al, 2006, Irons, 2008, Lomas, 2007). Gibbs (2006) stated that feedback to students needs to be frequent, prompt, detailed, focused on learning related to the criteria rather than marks, understood by the students and acted on by them. Unfortunately there are barriers to all of these aspects.

Just as student workload has increased, so has tutor workload. Bunching assignments for students means bunching marking for tutors, which mitigates against frequent, quick and detailed feedback. There are also quality assurance measures, such as second marking and moderation, which slow down the process. At my institution we are supposed to return work with feedback 20

working days after the hand-in date. This is not particularly quick but the process generally requires most of this time. One approach to overcoming these difficulties is to encourage self and peer assessment (Irons, 2008). Self and peer assessment are recommended in terms of promoting subject learning (Bloxham and Boyd, 2007; Butcher et al, 2006; Moon, 2002) and learning about assessment in HE, including understanding assessment criteria (Bloxham and West, 2007; Hawe, 2007). However, Bloxham and West (2007) reported that the students in their project objected to peer assessment because they felt it was the tutor's job. They said they did not want to be teachers. Since my students do want to be teachers this objection is less likely to arise. While generally supporting peer assessment, Knight and Yorke (2003) warned that peer assessment could be damaging if the peers do not know enough and give bad advice, akin to the blind leading the blind. This danger could be reduced by having more than one peer involved in the assessment and having a tutor check the assessment, although that contributes again to workload.

Problems with Feedback

Hawe's (2007) study demonstrated that feedback which focused on surface features, such as presentation, rather than substantive issues, resulted in a more superficial approach to subsequent assignments. The constructive alignment approach, discussed above, should result in a closer relationship between substantive outcomes, assessment criteria and feedback. However, intended outcomes derived from the SEEC level descriptors (Gosling and Moon, 2002) may include ones that focus on the quality of communication and it

is often easy to comment on this aspect. I know some of the feedback I have written for students has over-emphasised the communication aspects.

Even when the feedback is detailed, prompt and insightful, there is no guarantee that the students will make good use of it or even understand it. Pickford and Brown (2006) found that many students were poor at using feedback and were more interested in the mark than the comments to improve. Prowse et al (2007) also found that students were more focused on the grade. Irons (2008) found there was a gap between the academic language used by the tutor in feedback and the language understood by the student, which my students have reported. This problem was exacerbated when the students had not actually understood the assignment or the assessment criteria (Irons, 2008). Other HE tutors and researchers have also found that students struggle to understand assessment criteria (Gosling and Moon, 2002; Joughin and Macdonald, 2004; Moon, 2002; Norton, 2007b). However, it should be noted that Moon (2002) doubted whether tutors always had a clear understanding of the terms, like critical analysis, that were used in assessment criteria.

Bloxham and West (2007) found that students liked having assignments explained orally because this involved translating from academic language into language the students understood. They also found that including grade descriptors in the assignment briefs encouraged students to consider these when completing their assignments. Although use of grade descriptors indicated some understanding of the criteria, there was also some evidence of students using them mechanistically, like a cloze procedure for their

assignments. Pickford and Brown (2006:7) also warned that being too specific in the assignment brief could lead students to think that there was a "…fail-safe recipe for success".

Develop Shared Understanding

Mentkowski (2006) worked on developing a common language about criteria so that tutors and students all understood it. This language was then used to develop self-assessment skills. Price and O'Donovan (2006) reported on various initiatives related to increasing students' understanding of assessment criteria. Many of these involved trying to make the assessment criteria and grade descriptors more explicit but they found that it was more important for students to construct their own understanding of the criteria by becoming assessors themselves. This fits with Bloxham and West's (2007) research that students who had worked with the assessment criteria in self and peer assessments seemed to have a clearer understanding of the criteria and actually used it when undertaking assignments. Prowse et al (2007) developed an innovative assessment that included a viva where students had to respond to feedback, demonstrating their understanding and how they would use it to improve their assignments. Prowse et al (2007) said that this resulted in negotiated meaning and ensured student engagement with the feedback.

Cowan (2006) described an innovative approach to assessment that involved students defining their own levels of creativity and then keeping a journal of their progress through them. They argued only the creator can truly judge the

originality of a work. This learning journey was then assessed by peers, intriguingly to ensure that it conformed to the procedures dictated by the tutors. There seemed to be a disjuncture in this process between an emphasis on originality in the work but conformity in the way it was presented. A different approach was described by Kleiman (2005), in which students negotiated the assessment of creativity with the tutor but this was also based on the idea that only the creator is aware of the process.

Another way of making assessment criteria clearer is by having models or exemplars (Bloxham and West, 2007; Gibbs, 2006; Pickford and Brown, 2006). I have noticed a growing expectation from students for exemplars. In some modules we keep good examples from past students that we allow the students to read. We also have student support groups, mixing students from all three years, where students can share their past assignments as models. Several tutors have expressed concerns that this encourages imitation rather than originality. Irons (2008) recognised this danger and warned that providing model answers can result in students believing that anything which deviates from the model is wrong.

Summative Assessment

Although formative assessment emphasises feedback, most of the feedback discussed above related to summative assessments. According to Kvale (2007) the predominance of summative assessments results from a variety of factors, including accountability, selection, knowledge control and historic practice. The

quality assurance element of assessment is well recognised (e.g. Biggs and Tang, 2007; Butcher et al, 2006; Gosling and Moon, 2002; Lomas, 2007). Quality assurance makes assessments high stakes for the institution and promotes conformity and compliance rather than risk taking (e.g. Cowdroy and deGraaff, 2005; Joughin and Macdonald, 2004; Kleiman, 2005; Knight and Yorke, 2003). Lomas (2007) warned that this climate can result in creativity being stifled. Summative assessments are also high stakes for students because they determine degree classification and whether they graduate (Biggs and Tang, 2007; Boud, 2006; Butcher et al, 2006). Biggs and Tang presented a stark view of the contrast between summative and formative assessments:

That result, the grade, is final. Students fear this outcome; futures hinge on it. They will be singularly unwilling to admit their mistakes. Error no longer is there to instruct, as in formative assessment; error now signals punishment.

(Biggs and Tang, 2007:164)

This view implies that high stakes summative assessments will discourage risk taking in students.

The term assessment is used quite broadly to represent a range of types and purposes of assessment (Biggs and Tang, 2007; Knight, 2007). This can cause confusion since there may be different interpretations of how the term is being used. The ARG (1999) found that ITE students were influenced by their previous experiences of assessment as pupils and therefore equated the term with summative assessment.

Types of Assignments

Students are also influenced by their past experiences of different types of assignments. Boud (2006) recommended using innovative assignments so that the students would not have preconceived approaches to the assignment. In contrast, Long (2008) worried that innovative assignments could disadvantage students because they would not be familiar. Bryan and Clegg (2006) had a more positive view towards innovative assessment, believing that it would promote autonomy. Falchikov and Boud (2007) felt that developing autonomy was important but warned that not all students are ready for autonomy. Gibbs and Dunbat-Goddet (2007) found that many of the students in their study struggled with the autonomy promoted by the open-ended assignment. The students kept asking for guidance and clarification from the tutors only to be told that it was down to their own interpretation. Some of the students were able to cope with this autonomy but some of them could not overcome their confusion and performed badly. This was part of the reason that Gibbs and Dunbat-Goddet (2007) recommended there should be limited variety in assessment. However, several researchers have called for variety and choice in assessments (Butcher et al, 2006; Knight and Yorke, 2003; Long, 2008; Pickford and Brown, 2006).

Essays and exams have been common in HE. However, there are criticisms that these can promote surface rather than deep learning (Bloxham and Boyd, 2007; Kleiman, 2005; O'Donovan, 2003; Norton, 2007b). Biggs and Tang

(2007) reported a diary entry from a student who had been involved in a portfolio assessment as part of a constructive alignment project:

> All [the teacher] said was 'show me the evidence of your learning that has taken place' and we have to ponder, reflect and project the theories we have learnt into our own teaching…How brilliant! If it had only been an exam or an essay, we would have probably just repeated his ideas to him and continued to teach the same way as we always do!
>
> (Biggs and Tang, 2007:51)

The implication is that this assignment resulted in deeper learning than the previous essays and exams. Butcher et al (2006) suggested that deeper learning could be achieved by actively engaging the students, giving collaborative assignments as an example. Gibbs (2006) suggested that collaborative assignments, and those with a real audience, such as presentations, were more engaging. O'Donovan (2003) also found that presentations pushed the students to engage the audience. She found that the engagement extended to the feedback she provided, making it more of a dialogue. Knight and Yorke (2003) stated that live assessments, such as presentations, provide the marker with additional cues which makes it easier to personalise the feedback, compared with more detached assignments like essays. O'Donovan (2003) felt that this engagement made the presentation assignments more memorable for both the student and tutor.

CREATIVITY IN HE AND ITE

There have been many explorations of definitions of creativity in HE (e.g. Fryer, 2006; Harvey et al, 2008; Jackson and Shaw, 2005; McGoldrick, 2002) and ITE (Davies et al, 2006; Kampylis et al, 2009; Loveless et al, 2006). Bleakley (2004) described ten different types of creativity that were relevant to HE, picking up on the range of definitions discussed earlier in this chapter. Kleiman's (2008) phenomenographic research with twelve tutors resulted in 30 variations of creativity which he reduced to five categories. Others have also reported tutors and HE students having a wide range of definitions for creativity (e.g. Donnelly, 2004; Jackson, 2006b; Loveless et al, 2006; Swirski et al, 2008), again relating to the previously discussed definitions. Swirski et al (2008) felt that this range had the advantage of being flexible, so that it could apply to many situations, but the disadvantage of making it hard to categorise and assess. Some researchers found creativity meant different things in different disciplines (Oliver, 2002; Reid and Petocz, 2004). The discipline-specific approach was also noted in UK policy discourse where Smith-Bingham (2006) reported that there were three main applications of creativity: culture (the arts); business (innovation and the creative industries); and education (deep and personalised learning). Davies et al (2006) found that the new primary teacher trainees they studied initially had an arts-based view of creativity which developed into a broader conception as they progressed through the programme. Some definitions included the NACCCE (1999) ideas of originality, value and purpose (Jackson, 2006b; Kleiman, 2008; Loveless et al, 2006; McGoldrick, 2002), but Harvey et al (2008) were vehemently opposed to associating creativity with

value or purpose, preferring ideas of rebellion. This non-conformist approach to creativity was not commonly expressed. Howard-Jones (2008), who used small scale action research to analyse student creativity and relate it to current brain research, described that creativity involved switching between generative and analytical thinking. He determined that these adult students found generative thinking more daunting than children but were better at the evaluation involved in the analytical periods. A similar cyclic pattern was put forward in Jackson's (2002) six stages of creativity, although there was only one stage of generation and two of evaluation. Both of these emphasise the importance of combining phases of idea generation and evaluation, as discussed previously.

Using the Creativity Pyramid as an analytical framework I examined the SEEC (Gosling and Moon, 2002) and FHEQ (QAA, 2008) descriptors, the QTS standards (TDA, 2008) and the Ofsted (2008a) criteria for assessing trainee teachers. Table 2.3 demonstrates that both idea generation, especially in the form of problem solving, and evaluation are included in HE and ITT. There are many similar terms used across the four documents. It is interesting to note that the third layer of the pyramid, which involves significant achievement with respect to the peer group, was only used for the outstanding students by Ofsted, for honours level by SEEC and for post-graduate study in the FHEQ. By contrast the QTS standards, which are written at a threshold level, did not have any terms related to layer three. This suggests that original thinking is only expected of the most able and most advanced, although creativity generally is included for all.

Table 2.3 Creativity related terms in HE and ITT Assessment Documents

Layer of Creativity Pyramid	SEEC level descriptors (Gosling and Moon, 2002)	FHEQ descriptors (QAA, 2008)	QTS standards (TDA, 2008)	Ofsted ITT inspection criteria (Ofsted, 2008a)
Layer 1	Research; investigate Select / choose	Decision-making	Design	Explore possibilities Choose Design *Intrinsic passion for learning
Layer 2	Evaluation; self-evaluation Develop own criteria and judgement Synthesis Autonomy; challenge received opinion Flexible; reformat; transform Problem solving	Evaluate Make judgements Problem solving +New insights ++Adjust design	Evaluate Constructively critical approach Adapt; modify Relate	Evaluation; self-evaluation Change approach Flexible; adapting; changing Linking; matched Problem solving *Take risks
Layer 3	^Design novel solutions ^Can engage effectively	+Originality ++Creating new knowledge through original research that extends the discipline and is worthy of publication	N/A	*Demonstrate innovation / innovative approach *Innovative and creative thinking
Teaching for Creativity	N/A	N/A	Promote independence Enable children to apply new learning Ask questions	Challenge pupils Engage pupils; *make teaching interesting *Seize the moment and deal with the unexpected High quality questions

^ honours / level 6; + masters / level 7; ++doctoral / level 8 ; * outstanding grade

There have been calls for universities to teach for creativity (e.g. Fryer, 2006; Csikszentmihalyi, 2006; Jackson and Sinclair, 2006; McGoldrick, 2002) and for developing creativity in initial teacher education students (e.g. Barnes and Shirley, 2005; Davies et al, 2008; Fettes, 2005; Robson et al, 2008). Table 2.3 demonstrates that the ITT infrastructure promotes teaching for creativity, although this was not obvious in the HE documents. As with primary education, there are questions over whether teaching for creativity is the same as good teaching (Harvey et al, 2008; Jackson, 2006a). The same question arises in terms of students. Over several years Moon (2002) asked tutors on CPD courses about the characteristics of good learners. Many of the characteristics they listed were key features of creativity: asking questions; challenging; being interested; being motivated; taking risks, making connections. This is similar to the list of indicators of primary children being creative (QCDA, 2010).

Teaching for Creativity

Donnelly (2004), Jackson and Sinclair (2006) and Wisdom (2006) have set out models for teaching for creativity in HE. The main points present in all three models are: the tutor modelling creativity; establishing a challenging but supportive environment for creativity; and engaging the student actively in creativity.

Just as primary teachers are encouraged to model creativity for their pupils, tutors are advised to model creative approaches for their students (e.g. Donnelly, 2004; Howard-Jones, 2008; Jackson and Sinclair, 2006; Wisdom,

2006). Fettes (2005) did an evaluation of a programme where tutors were modelling creativity and making connections to the students. The students were engaged by these methods but found it difficult to use the same approaches themselves because the tutors had made it look too easy. Partly this was due to the deeper and broader knowledge that the tutors possessed. I have experienced this when modelling cross-curricular planning to the students. My greater knowledge and experience helped me to generate ideas more easily and make a broader range of connections. Several researchers have found that a combination of confidence and depth of knowledge, including pedagogical knowledge (Jackson, 2006b), classroom management knowledge (Fettes, 2005) and knowledge about creativity itself (Jackson and Sinclair, 2005; Walker and Gleaves, 2008), is important for creativity, especially to making connections (e.g. Donnelly, 2004; Grainger et al, 2004; Howard-Jones, 2008; Kleiman, 2008). Cowdroy and deGraaff (2005) presented an apprentice model for developing creativity, with the students learning creativity from the tutor. Clegg and Bryan (2006) also discussed an apprentice model but noted that apprentices tend to copy while the masters produce original work. This presents a danger of modelling, that the students will copy the tutor rather than being inspired to innovate themselves.

Conditions for Creativity

The challenging but supportive environment for creativity in HE is also similar to the conditions for creativity in primary school. These include encouraging risk-taking, valuing mistakes as learning opportunities and providing freedom to try

things out (Biggs and Tang, 2007; Donnelly, 2004; Jackson, 2006b). Hayes (2002) found that the emotional environment was important, particularly anxiety. Prowse et al (2007) found that anxiety worked against creativity and recommended frequent formative feedback to alleviate the anxiety, while Crozier (2005) suggested that anxiety could be reduced by encouraging students to embrace the chaos and uncertainty involved in the creative process. However, Hayes (2002) found that identical emotional environments would promote creativity in some students while encouraging others to conform. Similarly, Kleiman's (2008) research showed that constraints can be a cause of creativity or an inhibitor depending on the circumstances and the people involved. Likewise, Smith-Bingham (2006) found that while management can inhibit creativity, structure can facilitate it. The performativity culture of primary schools is also present in HE (Clouder et al, 2008; Phipps, 2010) but there are different views on its impact on creativity. Although Phipps (2010) felt that performativity and creativity were antithetical, Clouder et al (2008) found that the relationship between them was more complex and that performativity could be an incentive for creativity, as long the ethos valued mistakes as learning opportunities.

Loveless et al (2006) recommended the use of ICT in developing creativity because their research found that it allowed students to try things out and then discard or change them easily. Harvey et al (2008) also picked up on the use of ICT as a theme in creative teaching. Often the teaching innovations presented by staff involved using new forms of ICT to enhance teaching.

In ITE, tutors need to consider the conditions for student creativity on school placements, as well as on campus. Hayes (2002) found that some students experienced pressure to conform to the school's approach to planning and creativity. The role of the teacher mentor in supporting creativity was important. Loveless et al (2006) found that the school context was important in facilitating students' creativity while on placement. Some schools allowed students freedom in planning daily lessons, while others reserved experimentation for clubs or one-off events. However, Mutton et al (2010) in researching the learner identity of ITE students determined that it was the student's attitude to the context that was important, whether they accepted the context and capitalised on it or whether they saw the context as constraining them. The chief constraints were expectations of the school, pressure to conform to the school approach, lack of power within the school and lack of subject knowledge and expertise. Although this study was about learning to teach generally, the findings resonate with creativity. My experiences with ITE students correspond with these studies. My students often encounter or perceive restrictions to their teaching. Some students capitulate to these restrictions while others employ more ingenuity to circumnavigate the obstacles.

Just as schools sometimes use special events to focus on creativity, HE and ITE institutions sometimes use special events or weeks to engage students in creativity. Barnes and Shirley (2005) evaluated an ITE arts project where the students worked with pupils. The students found it difficult to get the balance of handing control over to the pupils while still intervening at appropriate times to ensure high quality work. Davies et al (2008) undertook a multi-method

evaluation of an intervention programme based in a performing arts and culture week in ITE. They found that the programme raised student confidence and engendered a positive view of creativity. They talked about HEIs being afraid to give time to the arts rather than the core subjects so it interesting that they decided to focus the promotion of creativity in this arts project rather than in the core subjects which dominated the timetable.

RELEVANT STUDIES

There are several studies in HE and ITE which directly relate to aspects of my research. These include analysis of subject benchmark statements for creativity (Jackson and Shaw, 2005; Jackson and Shaw, 2006; Shaw, 2005); research into module design and creativity (Donnelly, 2004; McGoldrick, 2002; Oliver, 2002); research into HE tutors' views on creativity and assessment (Balchin, 2006; Fryer, 2006); evaluations of programmes promoting creativity through assessment (Cowan, 2006; Walker and Greaves, 2008); a project encouraging ITE students to plan for creativity (Robson et al, 2008) and surveys of ITE students' views of creativity (Davies et al, 2006; Kampylis et al, 2009; Rogers and Fasciato, 2005).

Subject Benchmark Statements and Creativity

Jackson and Shaw (Jackson and Shaw, 2005; Jackson and Shaw, 2006; Shaw, 2005) undertook a document analysis of 18 benchmark statements, supported by an e-mail survey of 55 HE tutors. They started by searching directly for the

term creativity in the benchmark statements. Since most benchmark statements did not mention creativity directly they then devised an analytical framework of 18 indicators of creativity, such as imagination, problem solving, original thinking, evaluating ideas, to search for creativity indirectly. This was very similar to my Creativity Pyramid in both content and purpose. They felt that a lack of creativity indicators in the benchmark statement suggested that creativity was not valued in that subject. Many of the tutors surveyed stated that they personally valued creativity but felt it was not truly valued in their subject. Education Studies had only four indicators of creativity, the second lowest of the subjects analysed. While Education Studies is not the same as ITE this benchmark statement is the one adapted for undergraduate ITE as the closest available. My own analysis of the QTS standards (TDA, 2008) and the Ofsted criteria for ITT students (Ofsted, 2008a) demonstrated that these do include indicators for creativity so it may be that creativity is valued more in ITE than in Education Studies, possibly because of the applied nature of ITE. The tutors surveyed described three types of problem working that related to the teaching and assessment of creativity: open problems with few constraints on how and when; specific briefs with constraints on how and when; real problems working with clients in real time. The second and third types are the ones I am concerned with in this research because they relate to the summative assessments which come with assignment briefs and to the real situation of working with teachers and pupils on school placement.

Module Design and Creativity

Oliver (2002) and McGoldrick (2002) both researched creativity in module design through interviews with about ten academics, although McGoldrick also interviewed some students who had graduated from the programme. Both found that more creativity was expected of students as they moved from level 4 to level 6 in the degree but both also found that the hidden curriculum impacted on the students increasingly as they learned to conform and 'play the game'. The final year students were felt to have a deeper knowledge of the subject and greater confidence to challenge existing ideas. McGoldrick (2002:20) found that most assessment criteria contained "… features of creative behaviours such as 'independent thinking', 'insightful work', 'original interpretations'." In contrast, Oliver (2002) found that creativity was not included in the objectives and was not valued in assessment. Oliver (2002) said that giving a choice of topic in assessment was part of creativity, while McGoldrick (2002) highlighted both choice and discernment. Donnelly (2004) evaluated a CPD module for tutors designed to help them be more creative in their teaching. She also identified choice as an important factor and emphasised the need for a combination of freedom and safety. The analysis of assessments for features of creativity and aspects that promote creativity is an important part of my research.

HE Tutors, Creativity and Assessment

Fryer (2006) researched National Teaching Fellows' (NTF) views on creativity in HE (e-mail survey, n=90; interviews, n=21). These are HE tutors recognised as

particularly skilled at teaching. She asked about definitions of creativity, teaching for creativity and the interactions of assessment and creativity. The tutors produced a range of definitions similar to those discussed earlier in the chapter. The surprising finding for Fryer (2006) was that 71% of the NTF believed that creativity was accessible for all, which was the opposite to her survey of over 1000 teachers in 1989. It may be that the NTF were different because they were working at university level or because they had all been identified as excellent teachers rather than representing a cross-section. However, it may have resulted from the increasing emphasis on democratic creativity in English education in the last two decades (Craft, 2001a). Another difference between the two studies was that the majority of the NTF described themselves as creative, unlike the teachers.

The majority of NTF wanted to develop student creativity and felt creativity was important in making their teaching interesting and relevant. Some of the factors which supported teaching for creativity were low tutor workload, good resources, tutor autonomy, tutor creativity, student motivation and a supportive ethos; factors which inhibited teaching for creativity included over-large classes, lack of preparation time, administrative workload and inappropriate room allocation (Fryer, 2006). These factors were also identified by Hockings (2005) in an evaluation of an HE tutor attempting to teach for creativity. Hockings (2005) also found that student beliefs about teaching, learning and assessment were influential, especially the students only valuing learning which was linked directly to summative assessments.

Fryer (2006) reported that 75% of the NTF participants believed that creativity enhances academic performance but only 13.5% said that the students with the best marks were the most creative. This relates to my question about whether creativity applies to all grade bands. She found the relationships between creativity and assessment were complex. It was felt that requiring creativity in assessment was an important aspect of teaching for creativity but one third of the participants felt that assessments limited creativity. They questioned whether assessment criteria inhibited risk taking and encouraged conformity. The emphasis on not failing and the high stakes nature of the summative assessments were seen as particularly problematic. Although some tutors reported that creativity did not always fit with the assessment criteria, others were able to identify relevant phrases in the criteria, such as "prepared to take risks", "problem-solving ability", "engagement" and "originality" (Fryer, 2006:85). In analysing the assignments in this thesis I have used the majority of the terms Fryer identified, with the exception of entrepreneurship.

Balchin (2006) also noted the dilemma between high stakes summative assessments which did not allow failure and a drive for creativity and risk taking. Jackson (2006a) agreed that assessments can limit creativity. Balchin (2006) found that HE tutors had a range of views about creativity and assessment. The majority view was that creativity was not assessed enough, while the minority view was that students' creativity was being explicitly assessed. In between these were groups that valued creativity but did not know how to assess it; those who believed it was too subjective to assess; and those who feared that assessing creativity would make it disappear. The latter view

was also reported in schools by Cochrane and Cockett (2007). Acknowledging that assessment can focus learning, Balchin (2006) called for more formative assessment and self-assessment of creativity rather than summative.

Programme Evaluations

Research by Walker and Gleaves (2008) involved students on an Art & Design with Education Studies programme working with tutors to design their own assessment criteria for creativity, using the Jackson and Shaw analysis of benchmark statements. They used a combination of interviews, focus groups, diaries, weblogs and analysis of assignments. They found that students lacked understanding of and a vocabulary for creativity which hindered the process. The students reported worrying about what their peers had done and that being creative would result in low marks. This was in juxtaposition to the students' views that only 1st class work was creative and their experiences of having creativity mentioned in the feedback when they got good marks. There were also concerns that good marks could only be achieved by addressing all the given criteria, making this a 'paint by numbers' approach rather than creative. The research centred around two assessed pieces of work, one of which was a collaborative digital video. Some of the students found that this format allowed them to express themselves more creatively than a standard written piece of work, but this was not universal. This study relates to my interest in students' perceptions of creativity and assessment, especially with respect to whether creativity applies to all grade bands.

There have also been some relevant research studies in ITE, although these are fewer. Robson et al (2008) undertook a research project with ITE students to promote planning for creativity in primary teaching. They analysed the QTS standards and then wrote questions to prompt the planning process for groups of standards. They felt that Q8 ["Have a creative and constructively critical approach towards innovation, being prepared to adapt their practice where benefits and improvements are identified." (TDA, 2008)] was an explicit call for creativity. I question this conclusion, perhaps cynically, because I feel the emphasis is on responding to official innovations rather than the individual teacher being innovative. However, I did include the constructively critical aspect in my analysis above. Their research involved observing lessons. The observer was to give feedback on risk taking and PIVOT, which stood for purposeful, imaginative, valuable, originality and time. The first four of these indicate that they were using the NACCCE (1999) definition for creativity. The time feedback related to whether pupils were given enough time to develop their creativity. The survey of students demonstrated that experiencing creative lessons themselves was an important precursor to teaching for creativity. Contrary to the Kampylis et al (2009) and Davies et al (2006) studies discussed below, the students did not believe creativity was about specific subjects. Students stated that one of the conditions for a creative classroom was having non-threatening, open-minded teacher mentors. Some concepts they identified in creative teaching were making it interesting, engaging, being flexible, adapting and experimenting. These fit well with Harrington's (1990) creative

ecosystem model. The lesson observation aspect is less relevant to my study, although I am looking at feedback from lesson observations. The student survey is similar to the questionnaire I gave to students.

Kampylis et al (2009) analysed curriculum documents in Greece for creativity and conducted questionnaires with 70 teachers and 62 ITE students. The participants believed that creativity could be in many subjects but they listed the arts subjects as having the most creative potential. They stated that Greek teaching was dominated by textbook use in many subjects and they noted that the subjects deemed most creative were those that did not use textbooks. Similar results were found in England by Davies et al (2006) who used a range of research approaches with ITE students at several institutions. The students at Bath Spa (n=128) had to choose two subjects for lesson observations, one that they expected to be creative and one that expected to be uncreative. Mathematics was chosen as the subject least likely to be creative by 73% of the students, while arts subjects were chosen as most likely to be creative. Although English teaching is less textbook dominated than Greek teaching, there is heavy textbook or 'scheme' usage in mathematics so this could be a factor in the English results. Other evidence of an arts-based view of creativity came in the equipment that students at Manchester Metropolitan (n=112) and Goldsmiths (n=23) drew for their Draw a Creative Person task.

Both Kampylis et al (2009) and Davies et al (2006) found that ITE students felt unprepared to teach creativity, lacking in both confidence and skills. NACCCE (1999) had reported that many primary NQTs lacked confidence in teaching the

arts subjects and that nearly all felt they had spent too little time on these subjects during their ITE programmes. Since the Davies et al (2006) study showed that the ITE students associated creativity with the arts, this deficit will have a big impact on creativity. In their ten year plan at the beginning of the century the government expressed their intention to "…strengthen initial teacher training (ITT) and continuing professional development to ensure that teachers are given practical guidance on developing children's creativity (DCMS, 2001:27)." This may have been why the performing arts were included in the subject list in the 02/02 set of QTS standards, although it was not a National Curriculum subject. These studies are relevant because they are about student teachers' perceptions of creativity and its application to teaching.

Rogers and Fasciato (2005) undertook practitioner research in ITT with 65 students at Goldsmith and 250 at Manchester Metropolitan University (MMU). They used a questionnaire that asked students about their definition of creativity, to which subjects it applied, how the school could support it and whether it can be assessed. This is similar to my study, except that I am not looking at the assessment of creativity in schools. The students were also asked to provide an example of creativity in their teaching, as I have done on my questionnaire. The results demonstrated distinct differences between the students at the two institutions. 43% of the students at Goldsmiths said that creativity could be assessed versus only 12% from MMU. Approximately a third of the MMU students said it could not; elaborations on this answer indicated that some of these students felt that creativity was part of an individual's personality and therefore should not be assessed, while others said that the

lack of official guidance and level descriptors indicated that it could not be assessed. Some trainees suggested using techniques such as video and photographs to assess creativity, although these are really recording techniques rather than assessment. Others believed that creativity could be commented upon but not assessed. These responses imply that the students had a limited understanding of assessment that may have hindered their ability to answer this question. Furthermore, Rogers and Fasciato (2005) concluded that many of the trainees were focusing on whether creativity *should* rather than *can* be assessed.

As I have established in this literature review there is a considerable body of literature regarding creativity in education and assessment and I have only presented a small proportion of what has been published. Much more has been written about primary education than higher education, with even less for initial teacher education. This is one reason that more research into creativity in ITE is needed. Reid and Petocz (2004:48) said there was a need to identify "…the ranges of creativity found within an educational environment and in consequence change that environment to support individual / group processes or products of creativity that will result in high quality learning." This is one of the underlying ideas of my research. In this chapter I have presented several studies that touch on different aspects of this, from definitions of creativity, to the presence of creativity indicators in documentation and issues related to creativity and assessment. However, there are also points of departure. My research is different because it is a programme evaluation, looking for indicators of creativity in assessments across the programme, including on

school placement, as well as gathering the perceptions of creativity and assessment from both tutors and students on the programme. Details on how this was carried out are in the following chapter.

CHAPTER 3 - RESEARCH DESIGN AND METHODOLOGY

The research will take the form of an illuminative evaluation undertaken as practitioner research. It sits within an interpretivist, social constructivist paradigm. In this chapter I shall set out the rationale behind these choices.

With my first child my parenting choices were largely intuitive, informed by my experiences as a child, the parenting choices of friends and relatives and influenced by some reading. With my second child I read more about parenting styles and discovered I had been mostly following attachment parenting. Knowing about attachment parenting did not change many of my decisions with my second child but it did lead me to think about the cohesion of my choices and how they represented an underlying belief system about parenting, childhood, discipline and child development. It made me think more about the implications of the choices I had made and whether they worked together to send consistent signals to my children. I did not follow every tenet of attachment parenting but when I deviated from the model it was done consciously, with thought about the reasons for and the potential consequences of my alternative choices.

This analogy has helped me develop an understanding of methodology, that my research choices must be consistent with my overall paradigm and values. Mason (2002:30) defined methodology as "…the logic which underpins the way you design your research project"; this logic involves the researcher's philosophical stance but also influences the small practical decisions about

carrying out specific methods. Clough and Nutbrown (2007: 35) stated that methodology involves a 'critical design attitude', taking into account ontology and epistemology and the assumptions underpinning the study, related to these. My understanding of methodology, as developed in the analogy above, is aligned with Mason (2002) and Clough and Nutbrown (2007), and will be the basis for discussion in this chapter, where I will discuss my critical design attitude and explain the decisions that I made and expose the assumptions underpinning them.

ONTOLOGY, EPISTEMOLOGY, AXIOLOGY AND PARADIGM

Ontology has been described as a question about the nature of reality (e.g. Cohen et al, 2007; Elton and Johnston, 2002; Guba and Lincoln, 2005). However, I do not believe that this question necessarily has a simple answer. I do not have a single view of ontology. My undergraduate degree was in chemistry and my research experiences were in the positivist paradigm, with quantitative evidence derived from observation and measurement of controlled experiments. I acknowledge that there is a place in the social world for positivist research but do not believe it is appropriate for all aspects of social world. I do not believe that there is an external reality that is creativity. Csikszentmihalyi (1997) provided examples, such as Bach, Raphael and Mendel, whose accomplishments have been deemed creative in some periods but old-fashioned and non-creative in other periods. If creativity has an external reality surely it would be immutable and this could not occur. As I demonstrated in the literature review, creativity is a disputed term (e.g. Bleakley, 2004; Davies,

2006; Gibson, 2005), subject to social construction. I believe that creativity has multiple realities, which impacts on my epistemology and overall paradigm for studying it.

Some authors have defined epistemology as being about the type of knowledge or evidence (Cohen et al, 2007; Kirschner, 2009; Mason, 2002; Stake, 1976), whereas others have defined epistemology as the relationship between the researcher and that which is researched (Creswell, 2007; Elton and Johnston, 2002; Guba and Lincoln 2005). I will consider both aspects.

My epistemology is influenced by my background as a teacher, particularly in my belief in constructivism (Bruner, 1967; Piaget, 1954; Vygotsky, 1978). Kintsch (2009) defined constructivism as the construction of knowledge through an active learning process. I view research as a learning process and therefore, as a researcher I am constructing knowledge alongside the participants in the research. I acknowledge that my interpretations will be subjective and may reflect my values and biases and so need to state my own position and examine the analysis for evidence of bias (Creswell, 2007; Fox et al, 2007). Fox et al (2007) identified four forms of professional knowledge that impact upon our interpretations, both as practitioners and as researchers: propositional, process, personal and value-based knowledge.

My propositional knowledge includes:
- teaching and learning theory, particularly social constructivism and experiential learning;

- assessment theory, formative, summative and diagnostic, both in primary schools and in higher education;
- definitions of and research into creativity.

My process knowledge includes:

- teaching;
- composing assignments and marking grids;
- marking assignments;
- giving feedback;
- conducting tutorials;
- evaluating lessons and modules.

My personal knowledge includes:

- undertaking assignments myself;
- having been a primary teacher;
- being a parent;
- being a polymath - a background that combines mathematics, science, humanities and the arts;
- self-confidence.

My value-based knowledge includes the following beliefs:

- that creativity is a good thing;
- that creativity has a role in teaching and learning and that creative teachers will be more effective;
- a democratic view of creativity, that all people can be creative;

- that creativity relates to all areas of life;

- that creativity is a trait which can be encouraged and developed;

- that creativity is not easily defined or measured;

- that summative assessments give a limited picture of a person's capabilities;

- that what and how we assess has an impact on students' learning;

- that practitioners have a duty to examine their own practice to develop it;

- that the views of both students and tutors are important in evaluating teaching and learning.

Like Smyth and Holian (2008) I question the idea of an objective observer since all researchers are influenced by their background, values and knowledge of theories. Instead I see myself as a "passionate participant" (Guba and Lincoln, 2005:196). Because I have already acknowledged that I believe in multiple realities, the types of evidence that I accept as valid need to represent this diversity; therefore, I am interested in people's perceptions and their own accounts. I do not consider the people involved in my research as subjects but as research participants and, in some cases, consultants (Fox et al, 2007). Language is important in social constructivism (Brown and Baker, 2007; Fox et al, 2007) so the actual words used will be an important source of evidence, both in speech and documents.

Research into creativity has been undertaken in both positivist and interpretivist paradigms. In the 1960s and 1970s tests were developed that attempted to quantify creativity (Guilford, 1967; Torrance, 1974) and were related to a period

of large-scale positivist studies (Craft, 2001a). In order to measure something a precise definition is needed, providing specific measurable quantities (Pring, 2000) but, as was discussed previously, creativity does not have a precise definition. Bleakley (2004) stated that creativity tests were in fact defining creativity through their measurement. The validity of such creativity tests has been questioned (Feldman and Benjamin, 2006; Gardner, 1993), which may indicate that the definition these tests constructed did not fulfil a broader understanding of creativity.

In the 1990s a shift towards interpretivist studies began that focused on a broader understanding of the nature of creativity rather than focusing on measuring it (Craft, 2003a). However, examination of Volume 22, issue 2 (2010) of the Creativity Research Journal demonstrated that there are still many positivist creativity studies, particularly those undertaken by American psychologists. The increasing prevalence of interpretivist research that Craft reported may be related to increasing interest in creativity in education in the United Kingdom, since there has been a "reinvigoration of qualitative approaches" in educational research in the UK (Freebody, 2003:viii). I do not believe that creativity is an easily measurable construct but rather I am seeking a better understanding of perceptions of creativity. My research takes a naturalistic approach in that it is examining a phenomenon within its natural setting (Brown and Baker, 2007) and is within an interpretivist paradigm (Cousin, 2009; Mason 2002), which is combined with constructivism (Creswell, 2007; Fox et al, 2007; Guba and Lincoln, 2005), in that it is seeking

understanding of the complexity of views in the world in which I and the participants work.

Brown and Baker (2007) stated that in addition to considering their own values researchers need to consider the values which underlie the research strategy. Guba and Lincoln (2005) demonstrated that values permeate all aspects of research, including the choice of paradigm and research question; decisions about the individual methods of collecting and analysing data; and questions about style of writing. I have already stated some of my values and related these to my choice of paradigm. The discussions about individual methods later in this chapter will also be related to my values. Because I am positioning myself within the research, I am writing in the first person (Creswell, 2007; Cousin, 2009). This attempts to make explicit my role in the research process, rather than implying that the person of the researcher is irrelevant (Bassey, 1999).

PRACTITIONER RESEARCH

One aspect of my position as a researcher is the fact that I am a practitioner researcher. Practitioner research is undertaken by insiders using their own setting as the site of the research (Anderson et al, 1994; Fox et al, 2007). Although the term practitioner research can indicate a form of action research (Fox et al, 2007), I am using the term in its broader sense. Reflection on one's own practice is seen as an integral facet of teaching and undertaking practitioner research is a way to do this in a thorough and systematic way

(Anderson et al, 1994; Cochran-Smith and Lytle, 2007; Drake and Heath, 2008). Barber (2006:24) went as far as to say that, "Without research, practice becomes sterile." Being an insider allows the researcher to integrate the research into the practice, bridging theory and professional knowledge (Drake and Heath, 2008; Fox et al, 2007), with the research questions coming from this theory-practice nexus (Cochran-Smith and Lytle, 2007).

The insider knowledge has several advantages. It means that the researcher already has a detailed knowledge of the organisation, events, structures, rules and people involved, which can help the practitioner research go more quickly to the central issues (Fox et al, 2007; Drake and Heath, 2008; Smyth and Holian, 2008). However, this comes with the disadvantage that the insider may be unduly swayed by pre-existing assumptions that hinder rather than help the research process (Drake and Heath, 2008; Smyth and Holian, 2008). Since I led on the last programme revalidation, both these advantages and disadvantages could be relevant. Insider knowledge also helps the practitioner researcher understand the language used by participants (Drake and Heath, 2008). When transcribing interviews with tutors and students I found evidence of this shared language, with terms such as 'Starting Point' being fraught with meaning that would be hidden from an outsider. However, the disadvantage of this shared language is that the 'shared' meaning may not be as identical as the researcher may assume, due to the role of constructivism in language discussed previously. Another potential disadvantage is that the practitioner researcher might not make such shared language sufficiently clear to readers of the research who are not from the research setting.

Barber (2006) highlighted existing relationships between researcher and practitioner as an important facet of practitioner research, which can help with the rapport needed to encourage disclosure (Cousin, 2009). I did find when undertaking my pilot study that there was a marked difference in willingness to participate in the research between the year group of students who did not know me and the other year groups who did. However, the existing relationships between researcher and participants can be problematic as well as advantageous.

Fox et al (2007) identified role conflict as a problem for practitioner researchers. However, I do not feel that there is role conflict in the aim of my research, since one of my roles is to evaluate my teaching and its impact on the students' learning and this research is looking at a specific aspect of this, although it extends beyond my own teaching. In terms of conducting the research I have tried to minimise role conflict by keeping data collection overt and distinct from my teaching role, although the thinking involved in analysis cannot be so easily separated.

Creswell (2007) warned against practitioner research, stating that there were dangers regarding imbalances of power and potential risks to the researcher, research participants and the organisation, especially the danger of the researcher being fired if there are negative outcomes to the study. I do not fear being fired because the aspect of practice that I am researching, while I believe it is an important element of teaching, is not a high-stakes area that is likely to damage the university college's reputation or status if the findings are negative.

I am more concerned about the power issues with respect to the research participants, which will be discussed further in the ethics section.

NAMED METHODOLOGIES / RESEARCH STRATEGIES

There are several named methodologies which can work within the interpretive paradigm. Freebody (2003) and Cohen et al (2007) listed ethnography, action research and case study as common strategies for educational research. Creswell (2007) also included phenomenology. In addition to these approaches, Cousin (2009) discussed evaluation research. She noted that some people question whether evaluation can be a form of research, which may be why the other authors did not include it. Bassey (1999:41) asserted that evaluation studies were research if they were "…conducted systematically and critically." In this section I will discuss briefly the strategies I am not using before discussing in more detail the strategies that are part of my methodology.

Ethnography is characterised by the researcher trying to develop an understanding of what it is to be part of the researched community, often through participant observation in the natural setting (Creswell, 2007; Freebody, 2003). The intention of this research was to develop understanding of a community within its natural setting. However, I did not feel that observation was an appropriate method for my study because it would be difficult to observe the creative process in undertaking assignments since this is likely to occur internally. Although some practitioner researchers use ethnography (Fox et al, 2007), ethnography generally involves researchers who are outsiders

(Anderson et al, 1994; Elliott and Lukes, 2008). For these reasons I did not think that ethnography was an appropriate methodology for this study.

Phenomenology focuses on the individually constructed world (Fox et al, 2007), whereas I have already established that I am interested in the socially constructed world. Phenomenology involves 'bracketing', which means that the researcher attempts to approach the research topic as a blank slate without theories and compartmentalising relevant experiences (Creswell, 2007:59). Particularly as a practitioner researcher I did not believe that I would be able to do this successfully, choosing instead to acknowledge my existing experiences and their impact on my interpretation of data.

Drake and Heath (2008) claimed that many professional doctorate students undertake action research. Action research is generally a cyclical small scale study that involves identifying a problem and a possible solution, implementing this, reflecting on the outcome and then repeating the cycle until a successful resolution (Cohen et al, 2007). My experiences as a practitioner have raised questions about creativity and assessment but I do not want to assume that these represent a problem. Smyth and Holian (2008) noted that when practitioner researchers are not in managerial positions they may lack the influence to effect changes. As a tutor I am able to make changes on the module I lead but lack power to change the programme as a whole. However, even if I did have such power I believe that changes are more likely to be effective if they are made collegially. My experiences from leading revalidation demonstrate that the tutors who were most involved in the process were most

likely to engage with the thinking underlying the changes and enact the spirit of these changes in their teaching.

Evaluation

Having decided against action research I realised that my interest in establishing a greater understanding of the existing programme was mostly closely aligned with evaluation research. Some features of evaluation within the interpretivist paradigm include:

- evaluator subjectivity valued rather than denied
- presenting a holistic picture which recognises interdependencies;
- the use of in-depth case studies with a focus on particularity;
- use of purposeful sampling;
- and thematic content analysis (Patton, 2008).

There are many different types of evaluation, although the different forms often overlap rather than being entirely exclusive. The evaluation in this research is a formative evaluation (Cousin, 2009; Franklin et al, 2004; Patton 2008) and has drawn upon programme evaluation (Elliott and Kushner, 2007; Fitzpatrick et al, 2009; Kushner, 2000; Patton, 2008) and illuminative evaluation (Parlett and Hamilton, 1972) in its design.

There are several potential purposes for evaluation, but I am most interested in facilitating improvements (Patton, 2008) and 'enlightenment' (Fitzpatrick et al, 2009).

Enlightenment may simply awaken a user to an issue that has

not previously been of concern. Alternatively, it may prompt the

user to doubt, question, or even reconsider a previously firmly

held belief.

(Fitzpatrick et al, 2009:6)

Although the programme as a whole and individual modules undergo regular

student evaluations and periodic institutional review, creativity within the

programme is not specifically covered by these. Joyes (2000) similarly found

that existing student evaluations were too general. The existing evaluations are

used for facilitating improvements, although they are also used for

accountability and monitoring. My evaluation of creativity within the

assessments of the programme should be enlightening and will facilitate

consideration of potential improvements to the programme with regards to

creativity.

Formative evaluation often takes an open-ended approach, considering both

strengths and weaknesses, investigating the experience of different subgroups

of participants (Patton, 2008). As will be discussed in more detail in the

sampling sections, this research involves the perspectives of tutors and

students from each year group. The main audience for formative evaluations is

the people who are most directly involved with the programme, such as staff

and students (Franklin et al, 2004; Patton, 2008). The results of the evaluation

will be shared with staff and used in planning future modules and developments

of existing modules. The full results will be available to students. However, I

also intend to share the results of this evaluation research more widely with ITE colleagues through publication and presentation at conferences.

Franklin et al (2004) claimed that formative evaluations are usually undertaken by internal evaluators but Fitzpatrick et al (2009) described contracted external evaluators. Stake (1976:4) talked about "direct personal experience" being the best form of knowledge in evaluations but stopped short of calling for insider evaluations. In line with Franklin et al (2004), Deepwell (2002) decided that an in-house evaluation would be more appropriate and achieve more depth for their evaluation because their intention was formative and their interest was improvement of the programme. According to Patton (2008) evaluators trying to facilitate improvements have to be able to create a learning climate and establish trust with the users of the evaluation, while the users have to be open to feedback and the possibility of change. As a practitioner researcher in education I believe that I have an advantage in this ability to create a learning climate and my established relationships with the participants includes elements of trust, although I cannot count on this trust extending to my research. I will be adopting a 'friend' stance (Cousin, 2009:232), while acknowledging the fact that I am already a 'native'. The friend stance involves constructivism, working closely with participants, looking for multiple perspectives and presenting rich descriptions, within a formative evaluation framework.

The 6th Cambridge conference on evaluation produced a manifesto for programme evaluation in the 21st century which had a formative focus, emphasising emergent understanding, representing a range of interests and

values, using a diverse range of methods to match the complexity of real situations (Elliott and Kushner, 2007). My research is formative, focused on an emergent understanding of creativity in the assessment of the programme, represents the perspectives of both tutors and students and uses a range of methods for collecting data within a complex situation, so fits this model.

The specific type of formative programme evaluation that I am using is illuminative evaluation (Parlett and Hamilton, 1972). The complexities of real situations were a major factor in Parlett and Hamilton (1972) promoting illuminative evaluation. It was particularly designed to evaluate innovatory programmes while considering the complexities involved in the whole learning environment, which they termed the 'learning milieu'. They argued that students' learning is dependent not just on the teaching and the tasks given but the whole learning environment, including the hidden curriculum. Parlett and Hamilton (1972:10) stated that illuminative evaluation "…aims to discover and document what it is like to be participating in the scheme, whether as teacher or pupil; and, in addition, to discern and discuss the innovation's most significant features, recurring concomitants, and critical processes." Although it was developed in the early 1970s, it is still being used, within nursing (e.g. Banning and Cortazzi, 2004; Whitmore et al, 2006) and within education, particularly related to developments in e-learning (e.g. Deepwell, 2002; Franklin et al, 2004; Joyes, 2000).

I am not dealing with an innovatory programme, in the way Parlett and Hamilton (1972) used the term, but with a revalidated programme; however, I do not

believe the 'innovatory' distinction is a vital component of the approach. What does match well is the emphasis on the complexities of the learning milieu. In addition to the teaching about teaching, there is also the teaching that students infer from the organisation of the National Curriculum and its associated strategies. In addition there is a hidden curriculum in the approaches taken at university and in schools where students undertake their teaching experiences. Underlying those are the students' own experiences as pupils which influence their beliefs about education.

Illuminative evaluation emphasises the use of triangulation and consists of three general stages: exploratory observation; systematic enquiry; and explanatory interpretations (Parlett and Hamilton, 1972). My study focuses on the second and third stages. However, Parlett and Hamilton were assuming that the researcher was external to the programme being evaluated and therefore would need time to become familiar with it and understand the learning milieu. As a practitioner researcher I can draw on lived experience and would argue that my on-going observations of the programme provided the initial impetus for the study. This view is supported by Drake and Heath (2008) and Cochran-Smith and Lytle (2007) who noted that the research questions for practitioner researchers arise from their extended experience working in the setting. Therefore, the first stage was completed, although it pre-dated the formal processes of this thesis.

Several authors (Fitzpatrick et al, 2009; Patton, 2008) talk about 'process use' of evaluations. This is when experiencing the process of the evaluation results

in changes to participants' actions, thinking and experience of the programme. This can be intentional but researchers need to be aware of the possibility of this occurring unintentionally. Speaking more generally, Parlett and Hamilton (1972) noted that the act of studying something and the presence of the researcher has an impact on the object of study. This occurred in this study, with some tutors and students commenting that taking part in the research had made them think more about creativity and change their approach to teaching and / or learning as a result.

Case Study

Case studies involve detailed descriptions of a bounded case and are conducted in their natural setting (e.g. Bassey, 1999; Gillham, 2000; Yin, 1994). Several authors have stated that programme evaluation (Elliott and Kushner, 2007; Cousin, 2009) and illuminative evaluation (Bassey, 1999; Elliott and Lukes, 2008) are evaluative case studies, although Yin (1993) disagrees. This research could be described as an intrinsic case study (Stake, 2005) because it is a single case that is studied to develop understanding of that particular case (Bassey, 1999), although I feel the term programme evaluation already encompasses this.

Walken (1986) pointed out that the time bounded nature of case study means that it produces a static picture of a past reality rather than the on-going developing reality of the situation. This was a factor in my study even in the course of data collection. The Years 1 and 3 assignment briefs were collected

in 2008/2009 and had already been modified by the time the student interviews were conducted in 2009/2010. By the time this research is published they probably will have changed further and the insights gained from the earlier briefs may be less pertinent.

GENERALISABILITY

Ideas about generalisation vary within evaluation research. Kushner (2000) felt that evaluation research resisted generalisation, while House (2005) stated that programme evaluations did not need to generalise, that they just needed to be true for that context and that time. Similarly Anderson et al (1994) emphasised that the specific context of practitioner research meant that generalising beyond that context was questionable. While acknowledging the complexity of specific contexts, Parlett and Hamilton (1972) believed that some generalisation was possible, with readers recognizing aspects common to their own practice. Stake (2005) had a similar approach in case study called 'naturalistic generalisations', which are not made by the researcher but by the readers and depend on readers finding resonance between their situations and the case study, its description and conclusions. He described naturalistic generalisation as a form of discovery learning based on a rich description of the case which allowed vicarious learning.

In this research I am presenting an evaluation of a specific aspect of a specific programme at a specific time. I do not generalize beyond this context but readers may find aspects which resonate with their own experience and draw

their own generalisations from this.

Having established that this study is practitioner research, a formative programme evaluation, with elements of illuminative evaluation, within an interpretive and social constructivist paradigm, the following sections will discuss the specific methods used in the study and the issues that these raised, starting with ethical considerations.

ETHICS

As a doctoral student undertaking research in my workplace, I needed to abide by both the University of Leicester (UofL, undated) Code of Practice and the Bishop Grosseteste University College Lincoln (BG, 2008b) Research Ethics Policy. I have also followed guidance on ethics from the British Educational Research Association (BERA, 2004), the Economic and Social Research Council (ESRC, 2005) and the Association of Internet Researchers (Ess and AOIR, 2002). Before undertaking the research I completed a Research Ethics Review form for the University of Leicester and received approval.

In their *Research Ethics Framework*, ESRC (2005) set out six key principles of ethical research:

- Research processes ensure quality and integrity

- Research participants should not be harmed

- Participation in the research must be fully voluntary

- Confidentiality and anonymity

- All parties involved should be fully informed, including about any risks

- Research should be independent, with any conflicts of interest acknowledged explicitly

Although the guidelines from BERA, BG and Leicester are set out with more points, they all follow these key ideas.

Integrity

The first principle about ensuring quality and integrity involves taking a systematic and ethical approach to all aspects of the research (ESRC, 2005; UofL, point 8). Having to submit an ethics form prior to beginning the research provides an institutional check for this aspect. It is further safeguarded by on-going tutor supervision. In addition to this Smyth and Holian (2008) recommended having additional contacts outside of the research to act as sounding boards, to challenge and support. I took part in an action learning set which served this role. I also had frequent contact with two ITE lecturers at other institutions whom I consulted on research issues. Another factor in ensuring quality and integrity is making my research decisions explicit to the reader in this methodology chapter and throughout the thesis. This includes demonstrating that the methods are fit for purpose (BERA, 2004: 11, point 36) and being clear about issues of validity and generalisability (BERA, 2004: 11, point 37).

Validity

The paradigm of the research impacts on the way validity or trustworthiness is considered and the terminology used (e.g. Brown and Baker, 2007; Cohen et al, 2007; Furlong and Oancea, 2005). Although the terminology varies, some key forms of validity for interpretivist research relate to the validity of the way the data has been collected (descriptive or methodological validity) and analysed (interpretative validity) (Bassey, 1999; Cohen et al, 2007; Fox et al, 2007; Guba and Lincoln, 2005) and how the data relates to existing literature (Golby, 1994). Tables 3.1 and 3.2 set out how these were applied.

Table 3.1 includes dissenting views about that form of validity. This was not included in Table 3.2 because the only challenge that I found was Silverman (2005), who disagreed with member checks, believing it privileged the participant's version. I feel that not including them privileges the researcher's interpretation and from a social constructivist standpoint aim to work with participants to construct a shared understanding.

Table 3.1 Methodological Validity

Form	Challenge	My application
Prolonged contact with participants / data sources (Bassey, 1999; Creswell, 2003)	Overfamiliarity results in assumptions and bias (Drake and Heath, 2008; Smyth and Holian, 2008)	Practitioner researcher so prolonged contact before, during and after research
Triangulation (e.g. Cousin, 2009; Miles and Huberman, 1994; Stake, 2005; Yin, 1994)	Irrelevant because no ultimate reality to establish (Barber, 2006; Silverman, 2005)	I'm trying to "…identify different realities" (Stake, 2005:133) rather than claiming ultimate reality. Methods – interviews, questionnaires, focus group, document research Voices – tutors, students from each year group

Table 3.2 Interpretive Validity

Form	My application
Awareness of potential bias Self (Creswell, 2007; Fox et al, 2007) Deference effect - Participants trying to please researcher, especially due to imbalances of power (e.g. BG, 2008b: 2, point 13; Bernard and Ryan, 2010; Fox et al, 2007) Reasons for volunteering (Drake and Heath, 2008)	Acknowledged subjectivity; set out own position Emphasised there was no 'right' answer; used only volunteers Acknowledged volunteers may have a particular interest in creativity and not be typical of population
Member checks / respondent validation (e.g. Boeije, 2010; Hansmann, 2006; Saldana, 2009)	Checks on interview transcripts, interpretations; models developed; final analysis and conclusions
Rich description of research process, clarifying bias (e.g. Bassey, 1999; Cousin, 2009; Parlett and Hamilton, 1972)	Made decisions and processes explicit
Relate to existing literature (Golby, 1994)	Extensive reading about creativity, generally, in schools, in HE and ITE, linked with reading about assessment in these contexts

Avoiding Harm

The BG (2008b:1, point 2) policy put consideration of harm as a primary concern. While physical harm was unlikely, other sorts of harm had to be considered. One potential for harm comes from the unequal relationship of the tutor-researcher and the student-participant (Fox et al, 2007). Students are vulnerable because the tutors mark their work and write their references (Cousin, 2009; Norton, 2007a). Although I was in the power role I tried to minimise its effects. I only marked interviewees' work that was submitted anonymously. I did not mark any of the presentations or performances, nor supervise on school placements where anonymity is impossible. I did not write references for the interviewees, although after the research was completed I offered them the option of having their participation in the research noted on their reference. I am not in a position of power with colleagues but Norton (2007a) also pointed out that colleagues could be vulnerable to conflicts of interest from the research. The main potential conflict for tutors was expressing a dissenting view about the role of creativity in ITE, since it is part of the programme and school aims. All the tutors expressed support for creativity on the programme but I must consider that this may have been due to self-preservation and an unwillingness to challenge the institutional norm.

Fox et al (2007) raised the issue that being a practitioner researcher results in having two different relationships with participants. The practitioner researcher needs to be clear to participants about which role is operating when (BG, 2008b:1, point 4). While I was quite explicit about when I was in the researcher role, I found that some student interviews ended up having aspects of tutorials,

slipping into the practitioner role. I do not believe this resulted in harm to the students but it did demonstrate that it can be difficult to separate the two roles. To ensure participants were aware of what data had come from their interviews they were sent a transcript and asked for confirmation that this was what they had meant to say and given the opportunity to amend or add to the transcript.

As a further aspect of respect for the person, BERA (2004: 10, point 29) recommended that participants are provided with a copy of the report at the end of the research. Electronic copies will be made available to the interviewees and a summary of the report will be posted on the virtual learning environment, accessible to all students and tutors. Tutors will also have the opportunity to attend a seminar and discuss the implications that the research might have for the programme.

The data I collected from my colleagues and the students were primarily their perceptions and opinions rather than biographical or academic standing data. Data was handled in accordance with the 1998 Data Protection Act (BG 2008b: point 36; UofL point 6). Data will be stored on password protected computers for a maximum of ten years and will be kept for the purposes of completing this thesis, writing articles and for further research.

Voluntary Participation

The power relationships resulting from the pre-existing teacher – student relationship can result in students feeling pressured to participate (Norton,

2007a) which jeopardises the principle of voluntary consent and right of withdrawal (BG, 2008b: 3, point 19). Participants must believe that they can withdraw at any time and for any reason (BERA, 2004:6, point 13). The virtual focus group and the questionnaires were chosen because I felt they minimised pressure to participate and maximised right of withdrawal. This was confirmed in the pilot study where a large number of students read the focus group but only a few posted messages. Power issues were not relevant with the tutors, although being friends and colleagues may have resulted in moral pressure. Tutors were given the option of different levels of participation, most opting for only the interview.

Confidentiality and Anonymity

As well as reducing pressure to participate, providing anonymity can reduce the danger of participants trying to please the researcher and make them more willing to discuss sensitive issues (Bampton and Cowton, 2002; O'Connor and Madge, 2001; Opdenakker, 2006), as can using the internet (Bernard and Ryan, 2010). The virtual focus group and the questionnaires allowed anonymity for the student participants. The virtual focus group took place on the virtual learning environment on a forum that was accessible to all students on the programme, me and the overall administrator. It was password protected and only open to those enrolled in the forum, guaranteeing that any participants were students on the programme. Questionnaires were distributed to and returned by students in taught sessions, again guaranteeing identity.

Anonymity was not possible in interviews because I already knew the tutors and students, a problem for practitioner researchers (Fox et al, 2007). Therefore, I offered confidentiality by assigning pseudonyms for interviewees. Although, interviewing students did not allow anonymity I included these to compensate for low participation in the focus group and to provide deeper responses than the questionnaires. I used my own name (Ashley) when reporting my data so that readers would be clear which were my views.

Table 3.3 Pseudonyms

Tutors	Beth, Carl, David, Emily, Fiona, Glenn, Helen, Ian
Year 3 students	Janet, Jack, Julia
Year 2 students	Kim, Keith
Year 1 students	Lewis, Lydia

I used pseudonyms rather than codes to humanise the data. However, names were chosen alphabetically by role (A-I=tutors; J=Year 3; K=Year 2; L=Year 1).

Informed Consent

Informed consent is an important aspect of ethical research (Ess and AOIR, 2002:6; BERA 2004:6 points 10,11; BG, 2008b: points16-22; ESRC 2005:3; UofL point 3). Before seeking permission from the participants themselves, I obtained permission from the principal of the institution, the head of school and the head of department. Having been granted access by these gatekeepers, I explained my study orally to both colleagues and students before seeking their consent.

Table 3.4 Consent

Method	Information	Indication of Consent
Tutor interviews	Written form	Signed to different levels of participation
Student interviews	Written form	Signed
Virtual focus group	Opening screen and initial thread outlined research and explained consent	Implied consent by posting messages
Questionnaires	Information on questionnaire	Implied consent through submission

I used implied consent to protect the anonymity of the students since a signed consent form would identify which students had participated. Wiles et al (2007) noted that not all researchers believed that a signed consent form was necessary, especially when the participants wished to be anonymous and / or were discussing sensitive issues. In the focus group the students were reminded several times how to post anonymously and the right of withdrawal. This fits with recommendations that consent should be on-going, not just sought at the beginning of the research (Ess and AOIR, 2002).

Additional consent was sought from the tutors and the principal about naming the institution and the programme, since this would increase the possibility of identification despite pseudonyms. I did not ask the students because they were already protected from identification by being 7 out of 240, whereas all the tutors were involved. Although in some research it would be more common to leave the institution unnamed, I felt it was important to be open about this as a practitioner researcher. There are many examples in creativity research, especially practitioner and evaluation research, where the institution and programme are named (e.g. Clouder et al, 2008; Davies et al, 2008; Harvey et

al, 2008; Robson et al, 2008). I did encounter one practitioner research evaluation where the institution was unnamed and the author affiliations hidden, but in that case the research focused on an individual who could have been easily identified, whereas the larger number of tutors involved in my research reduces this danger. Therefore, with the unanimous permission of the tutors, I decided it was appropriate to name the institution and programme.

Conflict of Interests

The nature of practitioner research raises the possibility of conflicts of interest (Fox et al, 2007; Norton, 2007a; Smyth and Holian, 2008). ESRC (2005) identified the potential areas of conflict as personal, academic and commercial, while BERA (2004, p.12) and BG guidance (2008b, point 30) highlighted conflicts where a particular set of results or conclusions would result in commercial or professional benefits. The University of Leicester code of practice (UofL: point 9) and ESRC (2005) both emphasised the need to be transparent and acknowledge any conflicts of interest in order to protect the integrity of the work. My research will not produce commercial gain for me. Attaining a doctorate could be seen as professional benefit but does not depend on a specific outcome and therefore should not affect the integrity of the research. Leicester's code also included partiality. This is a potential threat to the trustworthiness of the research. Since I was one of the authors of some of the documents that were examined, I may have been biased in my analysis of them. In their critique of educational research, Tooley and Darby (1998) recognised that conflicts of interest were common but stated that this could be

ameliorated by acknowledging the conflicts and taking steps such as triangulation to address them. Hopefully the triangulation of both methods and participants and clearly positioning myself as a researcher will have minimised the impact of any partiality.

METHODS

The data collection methods that I used were interviews, questionnaires, virtual focus group and document research. In the following sections I will explain why each method was chosen, how it relates to the key questions (see Chapter 1), sample selection, how piloted, its strengths and weaknesses and initial analysis methods. Table 3.5 provides an overview.

Research Timeline

Following a pilot study in the spring of 2008, the data collection for this thesis started in October 2008 with a virtual focus group, followed by student questionnaires in December, 2008 (Year 2) and June, 2009 (Year 1). Tutor interviews were conducted in the spring of 2009, while the two sets of student interviews took place in December, 2009 and February / March, 2010. Member checks of the interview transcripts for accuracy and for validation of my initial interpretations of them (Cohen et al, 2007) took place in the months following the interviews.

During analysis of the student and tutor interviews I collected the terms they had used to define creativity. I analysed these using flowchart terminology and organised these into the Creativity Model (Figure 4.1), which I sent to the interviewees in May, 2010 to annotate the terms they felt were most vital to creativity and those they felt were not part of it. This served as a member check (Boeije, 2010), however it also helped develop a shared picture of creativity within the programme (Anderson et al, 2005; Aljughaiman and Mowrer-Reynolds, 2005), since I have noted that creativity is a socially constructed concept (Gibson, 2005).

The document analysis took place in the spring of 2010, starting with the assignment briefs, marking grids and school placement documents in February and March, 2010 and finishing with the feedback sheets from assignments and placement in June, 2010. Overall analysis that considered all of the data sources together took place throughout 2010. Two tutors and one student conducted respondent validation (Boeije, 2010) of my analysis and conclusions in February, 2011.

Table 3.5 Overview of methods

Data	Pilot	Research Question	Initial Data Analysis	Second stage analysis
Tutor Interviews	e-mail interview with one tutor followed by discussion of process; revised interview questions discussed with 2 colleagues from other institutions and action learning set; revised further	1a, b; 2a; 3a	Coding; Matrices	Identify themes
Student Interviews (Semi-structured)	Interview questions discussed with a Year 3 student and colleagues, including 2 from other institutions, then revised	1a, b; 2a; 3a		
Student Interview (Open)	No	1a, b; 2a; 3a		
Virtual focus group of students	Piloted the year before; questions and responses adapted	2a; 3a		
Year 1 & 2 Questionnaires	Year 3 then revised from feedback and analysis	1a; 2a; 3a	Frequency of responses (closed q) Categorising (open q) Matrices	Identify themes
Assignment briefs	Used 2 assignments from former Year 1 programme	2b	Frequency of relevant words from Creativity Pyramid layers	Identify patterns and themes; compare assignment and SP
Marking grids		2b, c		
Tutor feedback on assignments	Used old assignments	2c		
School Placement booklets, including RPD and Ofsted criteria; tutor feedback	No pilot but used same approach as assignment documents	3b		

Sample

Coming from a constructivist stance, the views of participants were important to me. Parlett and Hamilton (1972) noted the desirability of interviewing all participants, although they acknowledged this was rarely possible. It was possible with nine tutors. Since I have acknowledged that my views will impact on how I conduct the study, I 'interviewed' myself so that these were explicit to the reader. It was not possible to interview all students so I included the focus group and questionnaires to allow all students to take part, while maintaining anonymity.

Walken (1986) noted that the people with the most power tend to be over-represented in case studies. I interviewed nine tutors and seven students, so fairly equal representation, although one was the complete population and the other was just a sample so that could be considered as over-representing tutor views. However, the virtual focus group was open to all students and the questionnaires were given out to all Year 1 and 2 students so there was opportunity for much greater representation of the student voice. Because all posts were anonymous it is impossible to know exactly how many students posted, but at least two of the 12 student posts were from the same student so there was a maximum of 11 participants, although likely fewer. The recommended size for focus groups is six to eight (Anderson and Kanuka, 2003; Wilson, 1996), so this was a reasonable size. More students read the discussions than posting, with 22 reading the initial post. According to Gillham (2007) anything above 50% can be considered a good response rate for

questionnaires. Therefore the 69% and 60% returns were good results and

helped represent the student voice.

Table 3.6 Sample

Method	Scope	Number	Approach
Tutor interviews	All permanent tutors	9	Whole population
Virtual focus group	Open to all students	Up to 11	Voluntary
Questionnaires	Open to all Year 1 & 2 students	Y1 55 (69%) Y2 32 (60%)	Voluntary
Student semi-structured interviews	Open call for volunteers	6 students: 1 male, 1 female from each of Years 1, 2, 3	Voluntary Purposive – Year group Purposive and opportunity – Gender
Student open interview	Julia, Year 3	1	Voluntary Purposive – student particularly interested in creativity
Document analysis	All current assignment briefs, marking grids, school placement documentation	70	Whole population
	Selected 7 assignments; selected 10 feedback sheets from the moderated sample of each assignment; included 5 in A*/A and 5 from B to F	70	Purposive – assignments with high and low creativity ratings from each year group; range of grades but greater proportion of top grades; Starting Point because of contrast between brief and grid
	Requested lesson observation feedback from student interviewees from most recent placement	13	Voluntary

Although I involved all permanent tutors, I did not include any of the associate tutors, who are on temporary contracts and primarily supervise school placement, because they would have limited or no experience with the university college based assessments and would have interacted with only a small number of students. Therefore I felt that they would not have sufficient experience of the programme to contribute fully to the research. However, it would be appropriate in future research to see if the views of the associate tutors were compatible with the permanent staff, promoting a coherent message across the programme.

Smyth and Holian (2008) cautioned that voluntary participation could be problematic when working with your own students. Norton (2007a) warned that students may find it difficult to refuse to participate in research even if they are assured that it will not affect their marks. The levels of participation in the focus group and questionnaires indicate that many students felt able to refuse. There is greater pressure in face to face interviews so I was especially concerned that these be truly voluntary. I felt that year groups would be an appropriate theoretical sample without putting undue pressure on particular students to participate. When I approached the students at least one female and one male volunteered from each year group so I took the opportunity to include gender since Cochrane and Cockett (2007) had identified some gender differences in teacher understanding of creativity.

Interviews

Semi-structured and open interviews fit into an interpretive, social constructivist design because they involve interaction and communication between the researcher and the participant in order to develop deeper understanding of complex issues (Fontana and Frey, 2005; Mason, 2002) and are looking for reality as the participants perceive it. Interviews let you gather in depth data about a range of opinions and experiences and access to the participant's inner world, which can be beneficial, but the transcription of interviews is extremely time consuming (Opdenakker, 2006; Rapley, 2007). Freebody (2003) and Yin (1994) both cautioned against accepting interviews as accurate pictures of reality since they are limited by what the participant remembers at the time, chooses to say and is able to express clearly. Also, asking questions can cause participants to think more deeply and in new ways about a topic, not just in the interview but afterwards as well (Walken, 1986). This is similar to the process use in evaluation mentioned previously. Powney and Watts (1987) set out a series of questions to aid good reporting of interviews:

- type and context of interview;

- participants;

- stated purpose;

- method and

- analysis.

There was one open interview but the rest were semi-structured. Semi-structured interviews were used to provide rich data that allowed for some

comparisons while still being responsive to the participant (Bernard and Ryan, 2010; Drever, 2003). I prepared a series of main questions with some associated probes and prompts (Drever, 2003; Gillham, 2000). This schedule was used very flexibly, especially if participants covered a later question when answering an earlier one. With the student interviews the questions were paraphrased rather than sticking exactly to a script, making it more conversational than formal. I stayed closer to the scripted questions with the tutor interviews, partly to maintain a more formal tone since these were people with whom I ordinarily have conversations.

All of the interviews started with a preamble that reminded the participants of the research aim and why I wanted their views. Both students and tutors were offered an open question at the end of an interview in which they could say anything about creativity, assessment or any other issue. Most took this opportunity, with Beth and Carl speaking at length. In addition to the open question I tried to ensure that participants were able to say what they wanted by not stopping them if they deviated. I would respond to what they said and only refocus the interview once they seemed ready to move on.

Additional probes and prompts were used in response to the participant's answers and body language. These often included the participant's own words (Anderson and Kanuka, 2003; Bernard and Ryan, 2010). Prompts and probes were abandoned if the participant seemed reluctant to continue, which occurred particularly in the question about characteristics of grade bands. Drever (2003) described two types of prompts and probes. Prompts encourage answering and

ensure that the participants have said all they want to, while probes promote expanding on and explaining the answer already given. Much of my prompting was through body language, encouraging noises (uh-huh), encouraging words (right, okay, good) and leaving silence to ensure the answer was completed (Bernard and Ryan, 2010). These prompts were not recorded in the transcript unless they were words said in a distinct gap. More verbal impromptu prompts and probes, such as open questions, specific statements, clarifications and elaborations were transcribed.

Although Gillham (2000) said that prompts did not equate to leading the participant, Drever (2003) pointed out that one had to be careful to avoid leading questions. When transcribing the second Year 3 interviews I realised that the exam had not been mentioned and I had not prompted for it. I worried that this might represent my bias because I did not expect them to find the exams creative. I therefore ensured that in the remaining interviews I prompted for the exam if it had not already been mentioned.

Appendix A shows the main interview questions, the planned prompts and probes and relates them to the key research questions. The majority of questions were related to 2a, the students' and tutors' perceptions of creativity in assignments, although several related to questions 1 and 3a as well.

I did not prepare any questions for the open interview with the student Julia to give her greater control over the direction of the interview (Anderson and Kanuka, 2003; Gillham, 2000). In my preamble I stated that my research

interests were about creativity and assessment and that I was interested in her views about either or both of those. I spoke very little in the interview and most of my remarks were probes for further information or clarification based on what Julia had said.

The order of the questions can be significant. Drever (2003) suggested starting with an easy question first, finishing with an open question and being careful with the order so that subsequent answers were not affected by earlier questions. With the tutor interviews I started with a hard question about the meaning of creativity because that was the recommendation from the pilot. However, some tutors found this a difficult way to start the interview so with the students I put this at the end of the second interview. This meant that it came after a series of questions about school placement, which resulted in the students talking about creativity in terms of teaching rather than more generally. This might have occurred anyway since some of the tutors did the same even though it was the first question.

Drever (2003) recommended not answering any questions the participants might ask about the researcher's views or previous participants' answers, for fear of contaminating the interview. I disagree with this stance and agree with Fontana and Frey (2005) and Cousin (2009) who suggested taking a more empowering approach by making the interview a two-way exchange and admitting that the researcher has a viewpoint. In one of the tutor interviews I was asked for my definition of creativity, which I shared with the participant. Particularly with the tutors, the interview was less formal at times and became

more of a conversation. Drever (2003) identified that maintaining a formal interview style can be a challenge when interviewing colleagues. However, I do not necessarily see this as a problem since we were exploring ideas together. In the interview where I shared my definition of creativity this took place at the end so there was no danger that the participant might change her answer to fit with my views.

Drever (2003) recommended conducting interviews in the participants' natural setting to put them at ease, while Cohen et al (2007) emphasised finding a place that was free from distractions. Most tutor interviews were held in their offices, although one tutor chose to be interviewed in my office instead. The first student interviews were held in a room, near the tutor offices, that is used by both tutors and students. This was done to provide a neutral territory that did not emphasise the power differential. Unfortunately, since this is a public space, there were some interruptions and distractions and this appeared to make some of the students uncomfortable. To avoid this I then switched to using my office for the student interviews. This did not completely avert interruptions but it did reduce them. One of the tutor interviews and two of the student interviews were held in my home. This was due to difficulties in finding a mutually convenient time, although all three were offered alternative times at the university college. This meant that the interviews were in my space rather than theirs, but using my home may have reduced my role as a tutor.

I offered all of the tutors the opportunity to have the questions before the interview. Most declined this option but the three who did ask for the questions

in advance indicated that this had caused worry rather than being helpful. For this reason I did not offer the students the questions before the interview.

One of the disadvantages of face-to-face interviewing is that of the time needed for transcription (Drever, 2003; Opdenakker, 2006). Recording interviews is generally recommended so that there is a record of the interaction (e.g. Boeije, 2010; Creswell, 2007). I used a small digital recorder with the permission of the participants. It had very good pick-up using just the internal microphone, which made it discreet rather than intrusive (Rapley, 2007). In addition to recording I made notes during the interviews in case of technology failure (Creswell, 2007), although making notes during the interview can distract the participant (Gillham, 2000; Wilson, 1996). Even with a recording much of the interview data, in terms of body language, is lost. The transcription results in further loss of information. I used a verbatim transcription (Drever, 2003; Rapley, 2007) but did not include the additional markings that are used in discourse analysis. Although it took a long time to transcribe the interviews, I chose to do this myself to help familiarise myself with the data (Bazeley, 2007). While transcribing I made memos about the individual interviews and wider issues about the research. I included the interview questions as well as the interviewee's responses in the transcript (Cousin, 2009; Freebody, 2003).

Powney and Watts (1987) recommended describing the status and relationship of the interviewer to the interviewees. I am a tutor on the programme and so was interviewing colleagues, whom I also consider friends. Two were my line managers. I had taught all of the students I interviewed on several modules and

marked their assignments, although anonymous marking on most written assignments means that I would not have known that at the time. My relationship with the students is professional, that of teacher - student. Wilson (1996) stated that the characteristics of the interviewer can produce bias and that matching interviewer and interviewee characteristics would reduce this, while Drever (2003) warned that people with very different characteristics might be uncomfortable sharing their views. As a woman I was the same gender as half of the tutors and four out of seven of the students. I was younger than all but one of the tutors but older than all of the students interviewed. All of the tutors and students interviewed were white British in origin. I also am white but originally from Canada, although I have British citizenship and have lived in the UK for nearly 20 years. Therefore, I have a similar cultural background to the participants. Before becoming an ITE tutor I was a primary school teacher in England, as were all of my colleagues, while the students are in the process of becoming primary school teachers. I believe that this is an important shared cultural factor in this study. Miller and Glassner (2004) suggested that being outside the group that is being interviewed can cause problems; therefore, I may have an advantage as a practitioner researcher. I have previous experience of research interviewing, although with children. I also have experience interviewing prospective students applying for a place on the programme, although I recognise that this is a very different form of interviewing. Finally, I have experience of being interviewed.

Virtual Focus Group

Focus groups are another form of interview (Cohen et al, 2007; Creswell, 2007) and may be used in evaluations (Anderson and Kanuka, 2003). They produce less data than a series of individual interviews but have benefits for a social constructivist in that they depend on the interaction of the group (Cohen et al, 2007; Wilson, 1997). Focus groups can be useful when investigating perceptions and opinions (Anderson and Kanuka, 2003) or sensitive issues (Wilson, 1997). Another advantage of virtual focus groups is that it is harder for one person to dominate the discussion since anyone can post at anytime, either on the current thread or a previous one, which can benefit shyer participants (Hughes and Lang, 2004; O'Connor and Madge, 2001). Anonymity can help all posts to be treated equally rather than being affected by preconceived characteristics of the poster (Mann, 2006). Wilson (1997) found that focus groups in educational research can reduce the hierarchical relationship between researcher and participant. Since I was interested in the students' perceptions of creativity and assessment, with assessment being a potentially sensitive subject for tutor – student discussions, a virtual focus group seemed a reasonable choice.

The virtual focus group was self-selected from the whole student population. This was an existing group, as recommended by Morgan (2004), although Cohen et al (2007) suggested using people who are unknown to each other for focus groups. They also had similar experiences and backgrounds, as recommended by Rezabek (2000).

Students were given the power to edit or delete their posts after they had made them so that if a student later regretted participating the post could be changed or removed. The discussion board does not have a history function so it would not be possible to retrieve previous versions. The fact that the participant has typed the entry means no loss of data through producing a transcription. Having to type the response gives the participant time to reflect and carefully construct an answer, but may limit what participants choose to say because of the greater effort involved in typing rather than speaking or because committing ideas in writing seems more permanent than saying them (Anderson and Kanuka, 2003).

Rezabek (2000) noted that some disadvantages of virtual focus groups included sporadic participation and an extended timescale. I found this to be true in the pilot study, with far more people reading rather than posting, posts appearing in little clusters and an additional post appearing a month after the discussion had been scheduled to end. This time all of the posts occurred within the same week, although there were still more readers than posters.

The importance of the moderator's role in directing focus groups is generally agreed (e.g. Morgan, 2004; Wilkinson, 2005; Wilson, 1997), although Cohen et al (2007) suggested that the moderator should be an observer rather than an active interviewer. Although different from conducting focus group research, I was able to draw on experiences as a moderator of student discussion boards on Blackboard®, as well as being a moderator on an international forum,

because the skills needed are similar. I have found that moderating involves stimulating discussion, encouraging reticent posters and probing.

In the pilot study the majority of posters merely responded to my posts rather than discussing and building on each other's. Therefore I consciously encouraged posters to respond to each other, rather than just me. This was successful in that several student posts sought the views of others (e.g. "What does everyone else think?") and several responded directly to previous student posts (e.g. "I agree…").

I posted clusters of questions in attempt to generate discussion and to avoid being too directive. I avoided responding to student posts in most cases since that inhibits discussion between students (Anderson and Kanuka, 2003), which seemed to happen in the pilot when my attempts to encourage posters (e.g. That's a really interesting point) may have been interpreted as teacher approving certain answers.

Table 3.7 Virtual focus group questions

Subject	Questions posted	No. of replies	Research Questions
Creativity in assignments	Do you feel that you have had the opportunity to be creative in any of your assignments? Which? In what way? Have you felt that creativity is encouraged / discouraged / irrelevant? What evidence has there been that creativity is recognised in your assignments and rewarded or ignored and / or penalised? I'm really interested in your views about creativity and the assignments you've completed or are currently doing.	5	2a
Favourite assignment	This may sound like a contradiction in terms but what has been your favourite assignment and why?	2	(2a)
Creativity in school	What has been your experience of creativity in school? This could be memories from being a pupil yourself, things you've seen as a student or things you've done yourself on placement. It could mean creative teaching, teaching for creativity or creative learning. It would be wonderful if you would share your experiences because they might inspire some great lessons on your next placement. I'll post some of my past lessons that I felt were creative. Feel free to disagree!	2 from the same student	3a
Creativity in your own life	Do you feel creative in your own life outside of being a student and being a teacher? What helps you to be creative? What hinders you? What has been your most creative moment or period or product?	3	(1a)

Questionnaires

Although questionnaires are more associated with survey research (Creswell,

2007), they still utilise the idea of people as sources of data (Mason, 2002), can

be used in evaluations (Parlett and Hamilton, 1972; Patton, 2008), and as part

of method triangulation in qualitative research (Creswell, 2007; Gillham, 2007).

Questionnaires have been criticised for producing superficial data (Mason,

2002; Parlett and Hamilton, 1972), limiting their usefulness for addressing complex issues. However, using semi-structured questionnaires, with a mixture of closed and open questions (Gillham, 2007; Munn and Drever, 2004) gives scope for depth.

Table 3.8 Questionnaire Pilot Issues

Issue	Pilot feedback	Result in study
On-line	Prefer paper	Improved response rate to paper questionnaire
Balance of open and closed questions	Good balance	Closed questions had more responses
Open questions	Hard to answer so should include prompts	Most used the prompts
Impact of creativity closed question	Main answer 'in some cases' not illuminating	Made an open question but had low response rate
Definition of creativity question	Very brief answers; the implied definitions from creativity on school placement question more useful; students said hard to answer	Kept creativity on school placement question but reserved definition question for interviews
Rating assignments question	Including assignments from all three years overwhelming	Only included Year 1 assignments

Pilot

I piloted the questionnaire with Year 3 students as part of a research methods session, using an on-line version. In this module students were taught about questionnaire design and encouraged to critique existing questionnaires. I demonstrated the on-line questionnaire during a taught session and asked students to try the questionnaire after the session and provide me with feedback on the questions and the overall design.

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Issues in the Study

In the pilot students found thinking about factors that might have affected their creativity quite difficult and suggested using prompts. This mirrored the experiences I had had with teaching sessions on creativity to different groups of students. Therefore, I included some examples that had been common answers from students in taught sessions. These answers dominated the free responses of the students on the questionnaire. One advantage of closed questions is that they can prompt recall of potential answers (Bernard and Ryan, 2010; Yin, 1994), which presumably also applies to including prompts in open questions. The disadvantage of including examples is that I do not know if they were the most common responses because I had suggested them or if they would have been the most common responses anyway.

Munn and Drever (2004) recommended putting open questions first in semi-structured questionnaires, which I did with the Year 2 questionnaire. However, feedback from the students indicated preference for having the 'easier' closed questions first, which is suggested by Cohen et al (2007). Accordingly I redesigned the questionnaire for Year 1 so that the closed questions came first. However, this may have been a mistake since nearly a quarter of respondents did not complete the second side of the page, which contained most of the open questions. It may be that they merely did not turn over the paper and were unaware that there were questions on the other side, despite verbal instructions, or it may be that respondents found that the open questions took too much effort and time to answer (Cohen et al, 2007). It may also be that

these students did not complete the second side because they did not feel that they had taught any creative lessons and therefore did not have anything to contribute. All of the Year 2 students who submitted the questionnaire included an example of a creative lesson. Having completed an additional five week solo placement may have provided them with greater opportunity to teach a creative lesson. It could also be that the increased knowledge and confidence in Year 2 also had an impact, although Year 1 students were also given the option of describing a creative lesson they had observed rather than taught. However, it may be that the Year 2 students who did not feel that they had taught a creative lesson chose not to complete or submit their questionnaire. It is perhaps interesting to note that while a greater proportion of Year 1 students (69%) than Year 2 students (60%) submitted their questionnaires, if you exclude the 13 Year 1 students who did not complete the second side the proportion of Year 1 students reduces to approximately half. Therefore, the order of closed and open questions may not have had a major impact on whether the whole questionnaire was completed, just the point at which the decision not to complete was made. Appendix B contains a table linking the questionnaire questions to the research questions.

Documents

In addition to using people as a data source, I used documents as a source of information. Documents are a common source of data in qualitative research generally (Mann and Stewart, 2004; Mason, 2002), in illuminative evaluation

(Deepwell, 2002) and in case study research (Freebody, 2003; Yin, 1994). Their use is also suggested for triangulation (Creswell, 2007).

Yin (1994) set out some of the advantages and disadvantages of documentary evidence. The main advantages are that they are pre-existing data rather than something created for the research, they are detailed and they are enduring rather than ephemeral. The main disadvantages are problems of access, bias in selection of documents and bias in reporting. Although there can be difficulty in accessing or even finding out about internal institutional documents (Gillham, 2000; Rapley, 2007), as a practitioner researcher I had full access and was able to verify the provenance of all documents. For the document research I used primary sources (Finnegan, 1996; Rapley, 2007). I wanted to use as many of the documents related to assessment as possible and made my selections in discussion with my supervisor and colleagues, trying to avoid bias (Finnegan, 1996; Rapley, 2007). The source and background to the documents also need to be discussed (Finnegan, 1996; Krippendorff, 2004).

For the school placement feedback sheets I approached the student interviewees. Although tutors write these, they are often composed in conversation with the student, signed as an agreed record by the student and are not anonymous; therefore, I felt the student's permission was important. Using the students I had interviewed would allow additional triangulation since they had discussed the school placement with me. I only received feedback sheets from four of the seven students. I sent one e-mail reminder to the other students but did not press the issue further to avoid coercion. All of the students

who supplied feedback sheets had received an A on the final placement, which

must be considered during the analysis.

Table 3.9 Document Provenance

Documents	Provenance
Assignment briefs	Each written by one or more tutors on the programme; often revisions of earlier versions
Assignment marking grids	Written by same tutors as assignment briefs; assessment criteria originally based on SEEC (Gosling and Moon, 2002) and FHEQ (QAA, 2008) criteria levels but delineation of grade boundaries decided by tutors
Assignment feedback sheets	Written by marking tutors, sometimes anonymously; sample used was also second marked
School placement booklets	Written by one tutor, although sent to all for revisions; often revisions of earlier versions
School placement observation feedback	Written by supervising tutor and related to the QTS standards (TDA, 2008), often composed in conversation with the student
Record of Professional Development (RPD), which includes graduated statements based on the QTS standards	Originally written by a consortium, including representatives from BG; revised by an internal committee which includes a tutor from the programme
Ofsted school placement criteria	Ofsted (2008a)

ANALYSIS

"Unlike statistical analysis, there are few fixed formulas or cookbook recipes to guide the novice." (Yin, 1994:102)

Although there may be few recipes for qualitative analysis, there are many texts which set out menus and I have used guidance from these to create my own analytical dish. Boeije (2010) defined three processes involved in qualitative analysis: data preparation; data segmentation and data reassembling. These are similar to but not identical to the three processes identified by Miles and Huberman (1994): data reduction; data display and conclusion drawing / verification. In this section I discuss a combination of these.

Data Preparation and Reduction

Data preparation involves analysis because the researcher has to decide what to include and exclude and how to present the material. As previously discussed, the interviews were digitally recorded and then transcribed verbatim but without non-verbal elements. The focus group was conducted on-line so transcription was unnecessary. The responses were copied and pasted into a single document. Answers to the closed questions on the questionnaires were tallied and percentages calculated. Responses to the open questions were recorded in a table and then put into categories, which emerged from the data (Boeije, 2010; Conner, 2010). Both paper and electronic copies of the chosen documents were collected and filed.

Data Segmentation and Reduction

Cousin (2009) recommended the use of content analysis on documents and with interviews. While some associate content analysis with quantitative approaches (Neuendorf, 2002; Bernard and Ryan, 2010), Krippendorff (2004) felt that analysing texts was inherently qualitative, even if this resulted in a numerical output. For Wilkinson (2005:183), "Content analysis is based on examination of the data for recurrent instances of some kind; these instances are then systematically identified across the data set, and grouped together by means of a coding system." This is the approach I have used.

According to Miles and Huberman (1994:56), "Coding is analysis." However, Basit (2003) and Saldana (2009) emphasised that coding was a step before more extensive analysis. Coding is the process of labelling sections of data with a name that encapsulates its essence (Boeije, 2010; Miles and Huberman, 1994). The data is segmented into different codes that reduce these text segments into a single word or phrase. I used an inductive approach to coding, allowing the codes to emerge from the data (Bernard and Ryan, 2010; Saldana, 2009), rather than using a "start list" of prepared codes (Miles and Huberman, 1994:58). I used open coding (Saldana, 2009; Stake, 2005), which involved repeated close readings of the interviews, segmentation, considering a code, comparing the segment to previously coded segments and then confirming that code or considering a new code. The main code types that resulted were descriptive codes, process codes and versus codes (Saldana 2009). The final code structure is included in Appendix C.

Many researchers (e.g. Bazeley, 2007; Cousin, 2009; Saldana, 2009) recommend the use of Computer Assisted Qualitative Data Analysis Software. I used a programme called NVivo. This helped manage data, making attributing and retrieving codes easier. The ease of coding with a computer can lead to a surfeit of coding (Neuendorf, 2002), although this can also happen without computer assistance (Bernard and Ryan, 2010). Although I had a large collection of codes initially, I found the computer made it easier to refine and reduce these later. NVivo also allowed cross-referencing across data, memos and literature, which aided in analysis. It is possible to create visual models using the software but like Saldana (2009) I found that physically moving elements around was more effective, so most of my models and matrices were created by hand.

A more deductive approach was used with the documents, which were analysed using my Creativity Pyramid (Figure 2.7) as an analytical frame. The documents were read carefully, several times, while words and phrases which corresponded with terms in the pyramid were highlighted in different colours to reflect the different layers. The terms used in the pyramid were initially drawn from creativity literature, as discussed in the literature review, and terms used by undergraduate and master's level students in my sessions on creativity. The Creativity Pyramid was developed in consultation with students and colleagues during the pilot study and further developed with other ITE colleagues at three conferences. The process was partially inductive because additional terms were identified and added to the pyramid during the process of analysing the documents. The highlighted words were transferred to a table and then the

instances from each layer were tallied. The words themselves were put into a program called Wordle which then presented them in different sizes to represent their frequency.

Data Reassembling and Data Display

The data reassembly is presented in the next chapter, organised to answer each research question. After coding, I reread the interviews, focus group transcripts and questionnaire responses to regain the holistic picture. I used the coding and categorisation of data to create role ordered and conceptually clustered matrices (Miles and Huberman, 1994), comparing and contrasting the views of different individuals and groups (Bazeley, 2007; Bernard and Ryan, 2010). NVivo was helpful in looking across the different sources of data (Gillham, 2000; Bazeley, 2007). I created a model (Boeije, 2010) for creativity based on participants' explicit and implicit definitions, which I further developed from responses by tutors. I looked for patterns within the data, especially in the document analysis, then finally identified overarching themes (Boeije, 2010; Saldana, 2009) which occurred across the coding and the research questions.

Conclusion drawing / verification

This is presented in the next three chapters. Some verification was achieved through member checks (Boeije, 2010; Cousin, 2009) of the models and themes. Further verification was developed by relating the themes to existing literature (Golby, 1994). Since this is a programme evaluation, conclusions

were drawn specifically to this programme rather than generalised to a wider population. However, as discussed previously, readers may find resonances in the findings and conclusions (Stake, 2005) which allow them to make links to their own situations.

CHAPTER 4 - ANALYSIS AND SYNTHESIS OF FINDINGS

In this chapter I have presented the relevant data for each research question. The data have gone through the stages of analysis: data preparation, data segmentation, data reassembly and some conclusion / verification. There has been synthesis of different data sources, as well as relating them to literature. Further synthesis and discussion of themes are in the next chapter.

QUESTION 1A: *What are the meanings of the word 'creativity' for tutors and students on this programme?*

The tutors and students generally agreed that defining creativity was difficult. Fiona expressed this well.

> I think it's an extremely hard thing to say what it means. And I think that even when you say what it means there could be examples where you'd say, 'I didn't mean it like that.'
>
> (Fiona, tutor interview)

In the interviews, the tutors and the students gave their definitions of creativity when asked but also talked about creativity in different parts of the interview. Both the direct and indirect responses were coded. The responses were turned into a model (Figure 4.1) using flowchart symbolism (Hebb, 2006), supplemented with my own symbols (Table 4.1), making distinctions among aspects of creativity and indicating links. While the creativity terms come from
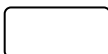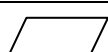
the participants, the categorisation and connections among them are my interpretation.

The tutors were asked to annotate Figure 4.1, showing the aspects they felt were most central to creativity and those they felt were not part of creativity. Five were returned anonymously. I tallied their responses and then adapted the diagram to show dissent and strong agreement, using the rules in Table 4.2. I did not complete one since construction of the diagram had already been subject to my biases and I wanted to avoid compounding these. The students interviewed were e-mailed copies but none responded. It may have been more difficult to respond electronically or the students may not have wanted to take part further, especially during their holidays.

Table 4.1 shows that process terms were most frequent, with 20 terms included as process or alternate process in the Creativity Model (Figure 4.1). Terminator / product, the next largest category, included physical products, ideas, personal development and states of being (e.g. enjoyment). This suggests to me agreement with Robinson (2001) that process is more important than product but also with Reid and Petocz (2004), that both product and process are relevant to creativity. One tutor had crossed off both original product and original ideas, which may indicate a process rather than product view of creativity. However, it may have been the originality that was disputed rather than the product aspect. Although processes and products dominate the initial model, examination of the adjusted model (Figure 4.2) shows that the terms

endorsed by three or more tutors as central to creativity included eight

categories of responses (Table 4.1), indicating a broad conception of creativity.

Table 4.1 Flowchart symbolism

Definition	Image	Number in model	Annotated model – chosen by 3 or more tutors as important
Process		5	Thinking
Alternate process		15	Exploring Investigating
Terminator (product)		8	Engaged Developing own style
Merge		1	Making connections
Decision		2	Interpretation Making choices
Data input / output		2	Imagination Own ideas
Preparation		2	Open minded
Inspection point		1	
Delay		1	
Preconditions (freedoms)		2	Freedom from conformity
Summing junction – branch convergence		1	Creativity

Only two statements on the original diagram were not annotated by anyone

(limits; broad view) and two with just a negative annotation ('off the wall'; 'ahead

of its time'). Interestingly 18 statements received conflicting annotations, with

some tutors saying these were vital to creativity but others saying they were not

part of creativity. Given this level of disagreement it is fascinating that one of the

conflicting statements was whether creativity was hard to define.

Table 4.2 Rules for formatting the Creativity Model

Italics = positive and negative responses	
Bold = only positive	
Size ~ strength of agreement	
Level of agreement	Formatting
X	Size 9, plain
xx√	Size 9, italics
x√	Size 11, italics
No annotation	Size 11, plain
√	Size 11, bold
x√√	Size 14, italics
√√	Size 14, bold
x√√√	Size 16, italics
√√√	Size 16, bold
√√√√	Size 18, bold, thicken box to 1.5
√√√√√	Size 20, bold, thicken box to 2.0

Figure 4.1: Creativity Model

new to the world
new to you

evaluate

original product

problem solving

off the wall

investigating

original ideas

incubation

ahead of its time

art

practical

transforming

making connections

insights

music

dance

writing

artistic

making choices

thinking

imagination

drama

doing / making

CREATIVITY

own ideas

enjoyment

open minded

exploring

excitement

having fun

interpretation

interested

challenging

engaged

expressing self

freedom from conformity

determine own limits

risk taking

must be deliberate

moving away from the mundane

developing own style

hard to define

limits

individual examples of any of these might not be creative

broad view

Figure 4.2: Annotated Creativity Model

In the Literature Review I established that creativity lacked clear definition but that there were aspects common to many definitions. Examining Figure 4.2 shows the same range of aspects discussed in the Literature Review:

- making connections

- dispositions

- risk taking

- problem solving

- making choices

- challenging and engaging

- originality

- representation and

- product.

'Universe / creation-nature', which I questioned in the Literature Review as a form of creativity, was the only aspect from Beetlestone's (1998) construct of creativity that was not put forward by students or tutors.

The arts were an area of dispute, with one tutor highlighting all of these and another crossing them off. For Kim (Y2), creativity meant the arts, although she expressed a broader view when discussing assignments. The arts were mentioned in several other interviews as one aspect of creativity among many, but a couple of these had negative connotations. One student referred to the arts as "*stereotypical creative subjects*" (Lewis, Y1, December interview), while one tutor implied that she had matured beyond thinking about creativity in terms of the arts, "*When I was younger I used to perceive creativity in an artistic or*

practical sense" (Beth, tutor interview). It may be that the tutor who crossed off the arts subjects was not denying the possibility of creativity within these subjects but was trying to present a view of creativity that transcended them.

There were 23 statements that received only positive annotations. Several of these were endorsed by three tutors:

- engaged,
- own ideas,
- developing own style,
- expressing self,
- investigating,
- exploring and
- the word creativity itself.

Engagement is a term that arose in many parts of the research and will be discussed later as an emerging theme. The next three terms (own ideas, developing own style, expressing self) could be considered as relating to autonomy and independence, a goal of teaching for creativity discussed in the Literature Review, while investigating and exploring are both thinking processes and aspects of creative learning.

The aspects highlighted by four tutors were also related to thinking processes:

- imagination,
- interpretation,
- open-minded,

- making choices and

- making connections.

There are clear links between most of these terms and the expectations of students in completing assignments. As will be seen later in the analysis of the assignments, interpretation, making choices and making connections are key skills expected of the students. 'Thinking' was the only term chosen by all five tutors as central to creativity. Looking at the adjusted model (Figure 4.2) it is clear that the thinking aspects of creativity are valued strongly by the tutors. This matches Davies' (2006) findings from European teachers where creative thinking was a highly rated process. Interpretation was noted by all students, while making choices, making connections, imagination and thinking independently were all highlighted by more than half of the students. This implies that there is considerable overlap in the tutor and student definitions, although there is not a simple, unified view in either group.

Cochrane and Cockett (2007) had found that headteachers and male teachers were more likely to focus on the critical thinking aspects of creativity, which was true of both the male and female tutors I interviewed. This may indicate that these ITE tutors are similar to headteachers in their thinking. Although the female students I interviewed generally held a broad view of creativity, all four of them raised self-expression while the male students did not. This offers some support to Cochrane and Cockett's (2007) finding that female teachers were more likely to focus on the self-expression end of creativity, although the small number of students I interviewed makes it dangerous to generalise.

Both the students and tutors held a democratic view of creativity, feeling that creativity was open to all, regardless of age, which matches Fryer's (2006) findings of National Teaching Fellows in HE, although not her earlier findings from teachers. I believe the current dominance of the democratic definition of creativity in English education (Craft, 2001a) influenced these views and that if Fryer researched teacher views again now she might find a more democratic view. This picture was more complex when considering academic ability rather than age, discussed in the next question.

RESEARCH QUESTION 1B: *Is creativity relevant to all grade bands?*

In the interviews I asked tutors to describe the different grade bands. Seven of the tutors were able to express ideas about the different grade bands, although not all tutors gave a description for every grade band. Two of the newer tutors did not have clear notions of the grade bands but said it depended on the assignment. I think it is significant that, unlike the rest, these two newer tutors had not been involved in devising new marking grids for assignments.

The responses were very similar and have been synthesised in Table 4.3. I organised the table around categories I extracted from the data, some relating to the Creativity Pyramid. The layer 3 elements, challenging the audience and original thinking, occurred only in the A* and A bands. Original thinking at A reduced to independent thinking (layer 2) at B and expressing own thoughts (layer 1) at D. Making connections and synthesis (layer 2), appeared from A* to

C, gradually reducing until D was described as not making connections. A further aspect of layer 3 was implied in the A* band in the description 'publishable quality'. Although this is part of the communication strand, it has wider implications about the work bringing something new and valuable to the peer group / academic community. This is further supported by the terms "*Wow!*" and "*Brilliant*" used to describe this level. Fiona said that A* assignments resulted in her learning something new, while Helen said a common reaction to this type of work was "*I wish I'd thought of that!*"

These descriptions give the impression that A* work is most likely to display creativity, although some aspects of creativity occur in the lower grades. When I asked the tutors about particularly memorable creative responses to assignments, all were able to provide one or more examples of creative assignments which had received A* or A grades. Several of the students in the interviews and 18 in the questionnaires felt that creativity resulted in higher marks, with some viewing a high mark as confirmation of their creativity.

Emily felt that the lower grade bands did not have sufficient knowledge and understanding to display creativity. This was not a universal view but there were several issues raised about creativity and the lower grade bands. Fiona provided an explanation of why creative assignments might get a range of grades.

> *So the creativity can occur perhaps in different aspects of what*
> *they're doing but if it doesn't kind of create a good whole, if you*

know what I mean, if there's holes in it, then it wouldn't end up with a

high grade. And you could argue that you could actually get some

very creative responses to out and out fails because they've

attempted to hoodwink but it's not worked.

(Fiona, tutor interview)

I agreed with Carl that there could be creative elements in an assignment that compensated for other deficiencies resulting in a C grade overall. In fact, four of the tutors supplemented their high achieving examples with an example of a creative assignment which had received C. Carl discussed creativity in the failing bands not being rewarded because it was "*channelled in the wrong direction."* Helen talked about creativity in the lowest bands resulting from the student making discoveries that were new at a personal level but that were far below the level expected by the assignment, which contains aspects of both Emily and Carl's ideas.

Table 4.3 Tutor perceptions of grade bands

	A*	A	B	C	D	E	F
Terms used	Wow! Brilliant! *Layer 3*	Really good	Good	Sound but uninteresting Satisfactory	Inconsistent Scraped through	Weak	Appalling
Challenge the tutor *Layer 3*	Engages and challenges the tutor	Some challenge					
Own ideas *Layer 3 original,* *Layer 2 independent,* *Layer 1 ideas*	Original thinking Really solid argument	Some originality Independent thinking supported by evidence	States own opinions Reflective		States opinions without explanation or proof		No sustained thinking Description without analysis
Connections *Layer 2*	Original connections leading to insights	Synthesis of own ideas, literature & evidence	Some synthesis Obvious connections	Some connections	Not making connections		
Knowledge & understand-ing	Able to teach the tutor something new	Well researched Many sources Strong knowledge base	Clear understanding Solid support from reading and evidence	Understood the question Appropriate reading	Understands some key ideas Some reading Superficial	Missed the point Insufficient subject knowledge	Misconceptions Very little understanding
Communica-tion	Publishable quality *Layer 3*	Scholarly, eloquent Non-linear structure	Good use of language Coherent, linear structure	Comprehen-sible English	Not clearly expressed Disjointed	Poor commun-ication	Poor communication impairs meaning

The students were also asked about their perceptions of grade bands. I could not synthesise the students' ideas about the grade bands because they did not have a unified view. Since most of the students appeared to find this question difficult I did not push them to answer for each grade band. Table 4.4 shows the views expressed for A*, C and D because these were the grades most often discussed. None of the students discussed failing grades.

Three of the five students who answered this question felt that A* was daunting and unattainable, although one had reassessed this position after receiving A grades on recent assignments. Part of what made it appear unattainable was the statement about publishable quality. Since this includes layer 3 creativity it is perhaps unsurprising that some students find this daunting but it is nonetheless depressing that, according to Kim (Y2), this results in students lowering their aims. There was an interesting continuum in the C band, perhaps related to their aims, from Kim who viewed it positively through to Keith (Y2) who described C entirely in terms of deficiencies, while Lydia (Y1) did not even want to consider this grade band, focusing only on the higher bands which she intended to attain.

Challenge and original ideas discussed by the tutors did not feature in the student descriptions. Several students emphasised the role of reading, partly to ensure sufficient subject knowledge and partly for making connections.

Table 4.4 Student perceptions of grade bands

	A*	C	D
Lydia	Originally seemed unattainable but after getting recent assignments back felt that it was possible and now is aiming for it Involves approaching assignments differently	Does not look at these because does not want these grades	
Lewis	"*elusive, untouchable*" Unclear about what more needs to be done to get from A to A* *"might be down to personal perception"*	Has done what is required	Not comparing and contrasting More description than analysis Limited sources and evidence to support ideas
Kim	The idea that A* is publishable quality is overly daunting and resulted in students lowering their expectations, not even looking at this band	A good job Has done everything required	Haven't argued for and against
Keith	Very confident approach Thoroughly supported by reading and evidence Astute understanding	Misconceptions Missed the point Limited effort, reading and understanding Lacks knowledge so cannot make connections	
Janet	Lots of ideas backed up by extensive reading, including journals Well written with academic tone	Some literary sources to support and oppose ideas but not enough	Very little reading No clear idea of what they're trying to say

Jack (Y3) found this question particularly difficult. Coloured by previous experiences, he felt the grade bands had very subjective language and the resulting grade depended on the perceptions of the marker. This was not just a student view. Ian had also commented on subjectivity in marking language, while both Carl and Lewis (Y1) felt that there was insufficient delineation between grades to make progression obvious. Subjectivity was also highlighted on two Year 1 questionnaires, particularly with respect to what counts as creative.

Overall, the A* and A bands were most likely to be perceived as creative by both tutors and students, and were described by tutors using terms related to layers 2 and 3 of the Creativity Pyramid. This is similar to Walker and Gleaves (2008) whose students believed only 1st class work was creative. In Fryer's (2006) study 3/4 of the HE tutors believed creativity enhanced performance, but only about 1/7 felt that 1st class marks indicated the most creative students. Similarly in my study, just one of the nine tutors believed creativity could only occur in the top bands. Other tutors believed that creativity could exist in weaker assignments, with the creative elements generally raising the overall mark, although there was also acknowledgement that the creativity could be misdirected. Worryingly, several students perceived the top bands as unattainable, which may be inhibiting their creativity in assignments. This will be discussed further in the second aim.

RESEARCH QUESTION 2A: *What are the perceptions of creativity in the assessment process?*

All of the students in the interviews and focus group and nearly all questionnaire respondents said there had been opportunities to be creative in at least some of the assignments. This was countered by just two Year 2 students in the questionnaires who said they were not creative in assignments because they did not think that was encouraged or appropriate. Janet (Y3) disagreed, stating that the marking grids demonstrated that creativity would be rewarded and felt that students were allowed to be more creative on the programme than she had been at secondary school. Lewis (Y1) considered there was potential for creativity in all of the assignments but it depended on interpretation. All of the tutors agreed that we wanted the students to be creative and that this was relevant to assessment. Four tutors referred specifically to our goal of producing creative teachers and that therefore we needed to promote creativity through assessment, both to show that we value it and to model creative assessment approaches. Four tutors and Keith (Y2) remarked upon the opportunities for creativity provided by the range of assignment types. The majority of assignments were deemed creative by at least one tutor. Having the freedom to produce individual responses was a strong theme through the interviews.

Factors that Facilitate and Inhibit Creativity in Assignments

The questionnaires asked students to rate factors that facilitated and inhibited creativity in assignments (Table 4.5). The categories were pre-determined

which may be seen as restrictive but the same issues were raised independently by students and tutors in the interviews. These factors are discussed below and related to the Creativity Pyramid.

Choice and Interpretation

Being passionate about the subject was clearly an important factor for nearly all of the respondents. Although the interviewees did not use the term passion they did refer to being interested (layer 1). For instance, Janet said the equality essay was particularly creative for her because she was very interested in the topic but that people who were not interested might not find it creative. In all of the assignments described as creative, choice (layer 1) was a key feature noted by both tutors and students. The Year 2 students in the questionnaire responded strongly that free choice facilitated creativity (72%), while restricted choice of content inhibited it (70%). Year 1 felt less strongly with only 55% feeling that free choice facilitated creativity and 46% stating that restricted content inhibited it, although these were still the most frequent responses. It may be that the Year 1 students felt more need for guidance than the more experienced Year 2 students.

Table 4.5 Questionnaires: Factors that affect creativity in assignments

Year 1, n=55 Year 2, n=32	Facilitates		Inhibits		Either		No effect	
	Y1	Y2	Y1	Y2	Y1	Y2	Y1	Y2
Being passionate about the subject	**93% (51)**	**100% (32)**	4% (2)	0% (0)	4% (2)	0% (0)	0% (0)	0% (0)
Being confident in the subject	**80% (44)**	**91% (29)**	4% (2)	0% (0)	16% (9)	9% (3)	0% (0)	0% (0)
Being knowledgeable in the subject	**85% (47)**	**81% (26)**	2% (1)	0% (0)	9% (5)	19% (6)	4% (2)	0% (0)
Having a real purpose	**71% (39)**	**77% (24)**	7% (4)	0% (0)	18% (10)	23% (7)	4% (2)	0% (0)
Free choice of content	**55% (30)**	**72% (23)**	15% (8)	16% (5)	29% (16)	13% (4)	2% (1)	0% (0)
Restricted content	9% (5)	7% (2)	46% (25)	**70% (21)**	43% (23)	17% (5)	2% (1)	7% (2)
Free choice of format	43% (23)	**81% (26)**	19% (10)	6% (2)	37% (20)	13% (4)	2% (1)	0% (0)
Set format	19% (10)	3% (1)	40% (21)	**75% (24)**	36% (19)	16% (5)	6% (3)	6% (2)
For an audience	33% (18)	**52% (16)**	24% (13)	13% (4)	43% (23)	32% (10)	0% (0)	3% (1)
Getting marks	30% (16)	35% (11)	19% (10)	29% (9)	39% (21)	29% (9)	13% (7)	6% (2)
Seen by tutor only	23% (12)	22% (7)	13% (7)	28% (9)	36% (19)	31% (10)	28% (15)	19% (6)
ALONE	29% (16)	22% (7)	16% (9)	19% (6)	**53% (29)**	**56% (18)**	2% (1)	3% (1)
IN A GROUP	34% (18)	22% (7)	15% (8)	19% (6)	**51% (27)**	**56% (18)**	0% (0)	3% (1)

Numbers: **dark shading** ≥70%, **light shading** 50 – 69%;

Words: **bold**= strong agreement 'facilitates'; *italics* >15% difference between Y1 and 2; CAPITALS agree 'either'

Actual numbers in brackets; some students did not answer all questions.

As discussed in Question 1, interpretation was mentioned by all of the students

interviewed. Julia felt that interpretation and choice allowed opportunities to

bring herself and her ideas into an assignment, making it more interesting for

her and the marker, and stated this was a strength of the programme. Several of the students in the virtual focus group also stated that having choice and being able to interpret assignments in your own way was what made the assignments creative.

However, choice is not unproblematic. The interviews and module feedback demonstrated that some students found assignments in Year 2 too open, with too much choice. In her maths investigation Julia discussed some ambivalence about having choice, especially since this was very different to past experiences of assessment.

> *This initial investigation of the Theodoruss spiral has given me the motivation to begin to think of a variety of ways to further investigation. This is quite daunting as throughout my secondary mathematics education I was guided into working in a certain direction and now, I have choice. We all want choice, and be given the opportunity to make decisions for ourselves; to take ownership of our learning, but now I have been given it, in this context, I am apprehensive; will it be right?*
>
> *(Julia, Y3, Own Investigation assignment)*

Choice of Format

Having choice in terms of the format of the assignment was considered important by the Year 2 respondents to the questionnaire (choice facilitates

81%; set format inhibits 75%). However, as with the free choice of content, the Year 1 respondents were less convinced (choice facilitates 43%; set format inhibits 40%), although again these were the most common responses. As with the choice of content this may reflect a greater desire for guidance from the less experienced Year 1 students. The choice of format can be related to both layer one (making choices) and layer two (developing own style, exercising judgement and taking risks).

Essay Format

Six tutors discussed essay format as a challenge to creativity. Glenn said he could not remember any creative essays, although he had marked a large number of essays that year. This seems to have been generally true since no tutors used an essay assignment as an example of creativity. However, two tutors felt that the Equality Essay had potential for creativity through choice (layer 1) and challenging own ideas (layer 2). A few of the students did say that the Equality Essay was a creative assignment for them but most students did not highlight essays as creative.

David contrasted essays with the more engaging presentations, "*I think when they write an essay it becomes very sterile and I like the personal contact.*" Beth also compared these and felt that it was harder to be creative in an essay than a presentation because you had to combine knowledge, confidence and being articulate before the creativity could come across in writing, whereas presentations provided more avenues for creativity. Emily had a similar view,

saying that the essay had too strict a format for creativity, although she felt that it was possible to be creative in an essay if you were very knowledgeable, skilled and familiar with the format. Several students expressed similar views. Keith said he found that the essay structure limited creativity in the way the assignment was constructed, Jack commented on finding it harder to be creative in essays, and Julia said it was easier to be creative in presentations than essays.

SoW Format

Although some of the students discussed SoW assignments as being open and providing opportunities for own ideas (layer two), Carl felt that SoW assignments were less creative because the conventions from schools and the National Curriculum and other government initiatives dominated student thinking. Emily agreed with this and linked it to the idea of misplaced creativity.

> *Where a SoW has a way of writing it. There's not only one way but there are a limited number of ways that are considered acceptable practice and although you could be creative, most of our students are not in a position to be able to experiment. They've not got enough experience to be able to think outside the box of the formats that we give them and that they pick up in the schools. So any format, any sort of format, does that. And often with those set formats if they try to be creative they tend to miss the point or leave things out which is why we give them the format in the first place, to make sure that*

they've got all the required elements on it. I think anything that's got a

limited number of ways in which you can respond would dampen

creativity there. You'd have to be very, very, very talented or very

experienced to demonstrate creativity using those.

(Emily, tutor interview)

This idea was disputed by David, who felt that the school based assignments, such as SoW, were more likely to produce creativity than the more 'academic' ones.

The Subject Leadership Curriculum Framework was similar to a SoW. Several students felt that this was creative because it had choices (layer 1) about both content and how to structure the framework. The tutors who discussed this assignment felt it had creative potential that was not being realised by the students. They agreed with Emily's view about SoW that the students lacked confidence to challenge (layer 2) curriculum conventions. However, Carl felt they might be playing safe because following conventions meant less work than thinking up a whole new approach. Jack felt he had been creative in his framework but was disappointed by feedback saying he had not been creative enough. My interpretation is that students, like Jack, usually accepted existing conventions and tried to be creative within those boundaries, while the tutors wanted the conventions challenged.

This desire may be more realistic in Year 3, although even there it is rare. However, Helen did have some Year 3 examples of this challenge.

One that was startlingly good and creative would have been C's

Speaking and Listening SoW. Because it broke a lot of the

conventions of what you would call traditional teaching or traditional

pedagogy and it was way ahead of its time really.

(Helen, tutor interview)

Presentation Format

When discussing individual assignments tutor responses were dominated by those they had marked recently, although some people did mention assignments they had not marked. Since all of the tutors are involved in marking the presentation and performance assignments it is not surprising that these were mentioned most often. In fact, only Emily did not discuss any of the presentation assignments, while all of the other tutors described them as creative. Two tutors valued the fact that the performances were all different, which may qualify as layer three. This individuality will have resulted from the most discussed aspect, that the presentation assignments provided considerable freedom through choices and interpretation (layer 1), in both content and ways of presenting. This is very similar to the views of the students interviewed. When asked to provide examples of students' assignments they felt were particularly creative all but one of the tutors described a presentation or performance assignment, indicating that these were particularly memorable. They were also commonly mentioned by students.

Having an Audience

Another aspect of presentations is the ability to engage an audience (layer 3). This was included as a mark of creativity for three of the tutors and seen as an incentive to be creative. "*The students like that there's an audience and I think they try harder because they know they're going to see the reaction (Ashley, tutor interview)."* One participant in the focus group stated that being creative for other people was an incentive, although this was not in the context of a performance. However, questionnaire respondents were more ambivalent about this aspect, with 52% of Year 2 respondents saying having an audience facilitated creativity, but 43% of Year 1 and 32% of Year 2 saying that the presence of an audience could either facilitate or inhibit creativity. Nevertheless, Jack, Keith and Kim all discussed how they had engaged their audiences when describing their most creative assignments, indicating that this was an important aspect for them.

Exams

Exams were not seen as opportunities for creativity by either students or tutors. Keith and Julia both talked about exams generating fear which restricted creativity. Although many students have said that being open was a creative characteristic of assignments, Kim found the open question on the Year 2 exam just made her uncertain. Exams fail two of Lucas' (2001) conditions for creativity because they increase negative stress and reduce ability to cope with uncertainty.

Confidence and Knowledge

The questionnaires demonstrated that being confident and knowledgeable about the subject were important facilitators for creativity for both year groups. This was reinforced in interviews. Beth and Ian both stated that you need to be confident before you can be creative, while Keith (Y2, February interview) said, *"If I feel secure I can be a bit more creative."* Keith spoke more generally about lacking confidence resulting in people worrying more about whether they were right or wrong and therefore making them risk averse.

Good subject knowledge can bring confidence. Jack and Julia both talked about a lack of confidence in mathematics restricting their creativity in that subject, whereas both Beth and David gave examples where depth of subject knowledge had facilitated creativity in an assignment. Helen discussed students being willing to take risks and challenge the status quo (layer 2) when they had secure subject knowledge. She also said that good subject knowledge made it possible for them to make connections (layer 2) and led to new insights. Beth and Emily both felt that good subject knowledge was a prerequisite for creativity, picking up different aspects of Helen's ideas. Beth focused on challenging the status quo:

> *…you really have to have a good understanding of pedagogy before*
> *you can be creative in your response to it. So you need to*
> *understand the rules before you can break them.*
>
> > *(Beth, tutor interview)*

Emily talked more about the making connections aspect.

Well I think you have to be au fait and comfortable with the material,

with facts and concepts before you are able to synthesise it in a way

that shows creativity. I think if you're still struggling with getting your

head around the factual elements then you can't be creative.

(Emily, tutor interview)

Creativity that is significant to others (layers 3 and 4) and creativity that involves making connections, judgements and solving problems (layer 2) are likely to depend on secure subject knowledge. Although it is possible to have some creativity, especially at layer one, without this it is likely to have limited success in assignments.

Some might have creative ideas but don't have the knowledge and

understanding to ground it; eventually it comes unstuck.

(Fiona and Ashley, discussion)

Use of Literary Sources

Secure subject knowledge is an expectation in higher education assignments. This is often gained through reading academic sources and there is an expectation that your arguments will be supported by citing such sources in assignments. All of the students interviewed stated that they began by

searching for literature and reading it when given assignments. Several of the students' definitions of grade bands focused on the literary sources.

However, this can cause difficulties with creativity. Janet (Y3) felt the use of literary sources limited creativity because she lost faith in her own ideas if she could not find a literary source to back them up. She was much more confident about putting her own ideas into SoW and presentations where there seemed to be less emphasis on using literary sources than in essays. This was not just a student view. Carl felt the emphasis on using literary sources to support your views encouraged students to cite as many sources as possible which he saw as "*totally counter-creative, plagiarism legalised.*" This was exemplified by Julia's (Y3) statement, "*I think I know I've got a good assignment when I know I couldn't have read any more without going mentally insane.*" This tension between originality and using literary sources was recognised by Kushner (2000:19), "Although it inevitably acts as a drag on innovation, a historical grasp is essential to its full and proper conceptualization. But we cannot lose sight of the essential contradiction which this implies." However, literary sources can promote some creativity. Keith found an opportunity for creativity in the choice of literary sources, while the encouragement to synthesise different sources results in making connections.

Working in Groups

The questions of working alone or in a group were the only ones where the majority of both Years 1 and 2 responded that they can either facilitate or inhibit.

This mixture also came through in the interviews. Janet, Keith and Kim said group work gave them more confidence and resulted in greater creativity because they could spark ideas off each other. However, Keith also had a negative experience of working with a group where they had not able to work together to a common goal, while Janet felt it depended on who was in the group and the type of work involved.

Peer support does not just come in group assignments. According to Keith (Y2, December interview), *"I think peer support is a big thing in being creative, especially on our course."* He went on to say that just talking with creative colleagues about assignments resulted in creative ideas. However, Julia (Y3) said that talking with colleagues can lead to pressure to conform to their approach, something she tried to resist, *"I sometimes think no, no, no. I'm not going down somebody else's route. Don't listen to that. Be yourself and do what you think"*

Performativity

In the Literature Review performativity was found to have a complex relationship with creativity. My findings support this. The question about the impact on creativity of being marked received very mixed responses from both Years 1 and 2 on the questionnaire. There was also a mixed view in the focus group and the interviewees.

The questionnaire also asked about the impact of creativity on marks received. The majority of students did not answer this question, but of those who did 18 felt it had a positive impact, with creativity resulting in higher marks, increased passion, enjoyment, motivation and confidence. However, the other six students felt that creativity had a negative or limited impact on marks.

Several students in the focus group commented that the creative assignments were the hardest, either for themselves or for other students. One believed it was the "*creative thinking process*" that was difficult, but another felt it was related to performativity.

> *With the BG assignments the creative ones are the hardest because at the back of your mind the marks you get are forming your degree so perhaps we are still limited and cannot be as creative as if we were not being marked on the work at all. The sheer fact that we are being judged on what we have done holds back some of the creativity.*
>
> *(Student, focus group)*

This view was echoed by Lydia (Y1, December interview), *"And there's a lot of pressure on you to achieve. And it's for everyone. So it's quite hard to be creative when you feel a bit under pressure. But we try."* Keith suggested that creativity could be emphasised on other aspects of the programme because making assignments more open caused the students to worry about whether they were right or wrong and what mark they would get. This view was

supported by his Year 2 colleague Kim who stated that several aspects of the Year 2 assignments were too open, causing difficulties.

Nevertheless, five of the seven students interviewed and some of the students in the focus group noted that the creative assignments were the ones they enjoyed most and had earned high marks. However, creativity did not always result in top marks. Jack, Janet and Kim experienced disappointment when assignments they had felt were creative received low marks. The low marks caused them to question whether they had been truly creative, while in other cases high marks were perceived as validating the student's creativity. This may indicate that they take Cropley's (2001) view that creativity must be effective as well as original. However, it may also indicate that they have more faith in the tutor's judgement of creativity than their own.

Lewis was once again different from the other students, this time in admitting to strategic creativity.

> *I think the Starting Point, if I'm honest, I was creative to the point where I had to be, to get the mark I needed, I wanted to get…I didn't go beyond what was necessary for me to reach the mark I needed to get. Although I can understand the idea behind the Starting Point, what it's for, what it was worth in the long run, to myself, I didn't want to exceed what was needed, in a way.*
>
> *(Lewis, Y1, March interview)*

Although he was the only student to discuss a strategic approach overtly, Irons (2008) suggests it is common. Similarly, Jack described some dissatisfaction with Year 1 when his aim was to get assignments finished rather than striving for excellence. It is possible that other students may have taken a strategic approach but were reluctant to disclose this to a tutor.

Providing Exemplars

Kim suggested that having some exemplars might have helped in the assignments she found too open. Although the Child Study did not have exemplars, it was supported through group seminars where students discussed their on-going ideas with a tutor, which she found effective. Kim appreciated openness in the group presentation but this may be because she had already seen exemplars, having acted as audience for the previous cohort.

Carl had concerns about exemplars. He felt that allowing students to see previous examples of assignments led to replication rather than originality and promoted the technician rather than thinking teacher model. He believed this occurred in the BCB assignment and the Year 2 group presentation because Year 1 acted as audience for these. Julia (Y3) said this also occurred through the student support seminar (SSS) groups, where students help colleagues from other years. She had tried to support the other students while discouraging them from just copying ideas, but found it a difficult balance. The balance between support and freedom was discussed by Beth, Fiona and me. We decided that it was very difficult to provide sufficient support for the students

while still encouraging independent thought and original responses. This was made more difficult by the variety of assignment types on the programme which makes it harder for the students to master the formats and be confident with them. Julia felt that the assignments had a balance of guidance and freedom but that is the view of a very successful student and may not be typical of the whole cohort.

Understanding requirements

Jack felt that understanding how the marker interpreted creativity was important in order for the student creativity to match this. This related to a broader point of students having difficulty understanding the language used in assignment briefs and marking grids, reported by five of the seven students. Kim and Lydia both said they had to translate from the academic language to their own words before they could understand the assignments. Kim, Janet and Jack all discussed experiences where they had used the marking grids when writing their assignments but then had been very disappointed in their marks, leading them to conclude that they had understood the criteria differently to the marker. By contrast, Lewis in Year 1 was already confident in using the assignment briefs and felt he understood how to achieve high marks, a feeling confirmed by the high marks he received.

A lack of understanding can result in misplaced creativity in assignments.

I can think of lots of assignments that have been very creative but it
has to be aligned to an understanding of what they are talking about
and it also has to answer the question which has been set.

(Beth, tutor interview)

This relates to the need for a broad knowledge base and strong understanding, mentioned by five tutors, in order to be creative in a way that is successful in assignments. I assessed a student who had presented ideas that were new to her (layer one) but certainly not new to the field (layers three and four). The limited originality was not a problem but the fact she believed it to be original exposed her limited knowledge and understanding of the topic and reduced her mark in these aspects.

However, there is not always agreement among the tutors about what constitutes an appropriate creative response. Carl had an example of a Year 1 student who had voiced controversial views, which he had found interesting, but got a low mark because the marker did not feel it fitted with the criteria.

Ian felt we could be more creative with assessments than we currently are, although he shared a concern with Carl that the bureaucratic mechanisms and committee structures would limit these possibilities. Ian put forward a model where students could be more involved in deciding what was assessed and how, taking part in designing the marking criteria. This is similar to some of the studies discussed in the Literature Review (e.g. Cowan, 2006; Kleiman, 2005; Walker and Gleaves, 2008). A collaboration between tutors and students over

assessment criteria and marking grids would ensure a shared vocabulary and a common understanding that creativity and individuality was desired in assessment, concerns expressed by four of the tutors.

Time restrictions

Both Ian and Emily were anxious that the compressed time resulting from the modularisation of the programme some years previously reduced the possibilities for creativity. Ian felt that the reduced time meant there was less time for the incubation of ideas, one stage in the creative process (Cropley and Cropley, 2008; Wallas, 1945). Emily also commented that the reduced time meant that there were fewer formative opportunities for students to try things out and receive feedback before they had to be graded on work. She felt that this reduced their willingness to take risks because it might have an adverse affect on grades.

Process Use

There were examples of process use of evaluation (Fitzpatrick et al, 2009; Patton, 2008), where taking part in the research had affected the participants perceptions and actions, impacting on later evidence. Kim (Y2) had not seen assignments as creative in her first interview. However, in her second interview she said the research had encouraged her to be creative in her assignments, especially the presentation. Jack (Y3) explained he had tried to be more creative with the pupil mathematics investigations, taking risks by including

more practical activities and using a thematic approach. Keith (Y2) said he had tried to be creative in his use of sources for the equality essay. There was also an example of process use from a tutor. Emily felt that we had not set out to highlight creativity in assignments but that this research had raised the issue and that now she focused on this.

Perceptions of Specific Assignments

In the questionnaire I asked the students to rate the creativity of Year 1 assignments (Tables 4.6 and 4.7) because those were the only ones they had completed. Interviewees and focus group also discussed Year 2 and 3 assignments. I have not tabulated these results because there were few participants and many responses were clearly influenced by which assignments had been written / marked recently.

The Year 3 assignments highlighted by students and tutors as creative were:
- Own mathematics investigations
- Pupil investigations
- Individual presentation
- Research
- Speaking and listening SoW.

All of these included aspects of layers 1 to 3 of the Creativity Pyramid. The main aspects noted were choice (layer 1); making connections and independent thinking (layer 2); original ideas and engaging the audience (layer 3). The way

in which the assignment was presented was also raised for most assignments. The only Year 3 assignment described as not creative was the English exam. None of the students mentioned the Learning Journal assignment but since this was not due until May it was unlikely that any of them would have started it in February.

The Research assignment presented a mixed picture. In the first interview both Janet and Jack had been positive about the opportunities it provided for using your own ideas. They were less positive in the second interview having had their marks. Julia felt using her own ideas had been successful and was rewarded with high marks. Three of the tutors named the Research project as creative but one tutor expected less creativity from research since it was more academic, although he acknowledged that this may be due to his inexperience as a newer tutor. The potential for layer 3 creativity was proved by the example given by two tutors of a particularly creative research project which was later published in a journal of student research, demonstrating that it was new and valuable to the peer group, if not beyond.

Year 2 assignments where students and tutors noted creative potential were:
- Group presentation
- BCB
- Child study
- Equality essay
- Subject leadership framework
- IEP

Choice (layer 1), making connections and independent thinking (layer 2) were the main aspects of creativity. The only layer 3 aspect was engaging the audience for the group presentation and BCB display. This may indicate that the higher levels of creativity are more common in Year 3 than Year 2, supporting the SEEC (Gosling and Moon, 2002) and FHEQ (QAA, 2008) statements which reserved layer 3 for honours and masters level students.

Year 1 Assignments

There was a greater participant base for the Year 1 assignments because the focus group and all of the students interviewed had undertaken at least some of them. Revalidation meant there were some changes to assignments for different year groups so the questionnaire results have been presented in two tables to differentiate between these. Tables 4.6 and 4.7 have the assignments ordered from most to least creative. Assignments in capitals were rated very creative by 60% or more of students. Shading represents ≥70% when 'very creative' and 'creative' were combined. Bold numbers indicate less creativity, with ≥ 50% when 'creativity inhibited' and 'not creative' were combined.

Table 4.6 Year 1 Questionnaires: Rating assignments

Year 1, n=55	Very Creative	Creative	Creativity Inhibited	Not Creative
GROUP PERFORMANCE	69% (37)	28% (15)	4% (2)	0% (0)
STARTING POINT	60% (33)	35% (19)	5% (3)	0% (0)
SoW with Essay	4% (2)	69% (37)	17% (9)	11% (6)
Learning Journal	2% (1)	44% (24)	*33% (18)*	*20% (11)*
Audit & Action Plan	5% (2)	37% (16)	*21% (19)*	*37% (16)*
PE Evaluation	0% (0)	31% (16)	*48% (25)*	*21% (11)*
Exam – Core knowledge	0% (0)	13% (7)	*28% (15)*	*59% (32)*

Table 4.7 Year 2 Questionnaires: Rating assignments

Year 2, n=32	Very Creative	Creative	Creativity Inhibited	Not Creative
STARTING POINT	87% (27)	13% (4)	0% (0)	0% (0)
STORY SACK	71% (22)	26% (8)	3% (1)	0% (0)
GROUP PERFORMANCE	68% (21)	26% (8)	3% (1)	3% (1)
Group Display	52% (16)	48% (15)	0% (0)	0% (0)
Art SoW	13% (4)	63% (19)	20% (6)	3% (1)
Learning Journal	16% (5)	50% (16)	31% (10)	3% (1)
Portfolio of Tasks	0% (0)	56% (18)	38% (12)	6% (2)
Audit & Action Plan	3% (1)	26% (8)	*55% (17)*	*16% (5)*
Exam – Assessing the Core	0% (0)	10% (3)	*23% (7)*	*68% (21)*
Exam – Core knowledge	0% (0)	9% (3)	*22% (7)*	*69% (22)*

N.B. Totals might not add up to 100% due to rounding.

One of the goals of revalidation was to reduce the number of assessments. Tables 4.6 and 4.7 show a large spread of creativity in the five assignments that were lost, with ratings from second to second lowest. The two new assignments were also spread, with the SoW rated as creative and the PE Evaluation as non-creative.

In both tables the exams were rated as least creative, which matches the exam ratings in Years 2 and 3. A low rating was hardly surprising for the multiple choice core knowledge exam. However, the other exam was much more problem based, with students assessing children's work to provide feedback and plan future learning, yet this had almost identical ratings. It may be the exam conditions themselves, with performativity pressure and time restrictions, which were a major factor in the low rating. Fiona felt that even the more open exams still were not creative because the students simply did not have enough time to be creative in them. This fits with models of creativity that include incubation (e.g. Craft, 2005; Wallas, 1945).

The next lowest category was essay-type assignments: the Learning Journal, the PE Evaluation and the portfolio of written tasks. These assignments were not mentioned in the student interviews nor by the focus group, unlike the Audit and Action Plan, which also had low ratings. The new Audit and Action Plan had a much more positive rating than it had from Year 2. This may be due to the changes in the assignment which moved it from a group assignment using the VLE, with detailed step-by-step guidance, to an individual assignment on paper. However, since the other group assignments were highly rated as very creative

it was more likely the VLE aspect and / or the detailed guidance that prompted the low rating. Both Y1 students discussed the Audit and Action Plan assignment. Lydia felt it was not creative because there were too many instructions about what to do and what not to do. Yet again Lewis was different from the majority of interviewees, saying that this was his favourite assignment. He felt that he had been imaginative within the structure and creative with his strategies. However, he was not alone in perceiving creativity in this assignment, since around a third of students in both year groups rated this as creative on the questionnaire. One questionnaire response stated that having a set format can push you to make conscious decisions about how to be creative and approach it differently, which may explain this.

Tutors were more negative than students about the Audit and Action Plan. Most tutors had marked the Audit and Action Plan and six of the nine raised this as a non-creative assignment. The most common criticism was that it was too formulaic with too much specific guidance for the students to follow. Helen felt the audit and exams contrasted with the other assignments because they were,

> *…regurgitating facts, whereas most of our assignments, in fact all are probably, apart from that, are actual problem based. They investigate enquiry, they investigate learning. You're going on journeys of discovery, so I mean you, you know, it's the difference between regurgitating facts and being real thinkers and problem solvers.*
>
> *(Helen, interview)*

The Learning Journal, by contrast, had a lower creativity rating in the new programme, although 42% still rated it creative. The new Learning Journal involves the students keeping a blog on the VLE, which is commented on by tutors and selected peers, then developing these entries into a coherent assignment. Again the VLE element may have had a negative impact on the rating since some students lack confidence with this technology. However, the other change to the assignment is that it has increased in length and become 100% of the assessment of the module rather than 50%. This may have resulted in increased pressure on the students to succeed and reduced risk-taking.

The Starting Point and Group Performance were rated highly by both year groups and were mentioned most often as creative Year 1 assignments in the interviews and focus group. They both involve arts subjects but they also both involve considerable choice (layer 1) for the students in terms of the topic and exact shape of the assignment. Four of the students interviewed talked about the arts element of the Starting Point as creative but all four also talked about thinking creatively and layer one aspects: exploring, interpretation, choice and freedom. One student in the focus group said these two assignments were creative because the choices meant no two were ever the same. These assignments are also different to the sorts of assessments most of the students will have completed in the past. Boud (2006) talked about innovative assessments preventing a stereotypical or conditioned response due to their unfamiliarity and this may have been a factor here.

The Group Performance received very similar ratings in both tables. Kim (Y2) and Janet (Y3) were both very positive about the experience, having enjoyed creating the performance. Several tutors described group performances as examples of creative assignments and said they enjoyed watching them. Helen went further and talked about the performance as an opportunity for self-discovery for the students.

Starting Point received a much higher rating by the Year 2 group than the Year 1. This may be related to changes in the assignment, such as changing from 50% to 100% of the module mark, as discussed above. However, I think that the distance from it and the subsequent learning give students a greater appreciation of it in later years than they have at the time of completing it. Lewis talked about struggling with the assignment initially because it was too interpretive, although afterwards he appreciated the way it had combined being creative and practical, with reflections on the theories behind these. I have had many informal conversations with students in Years 2 and 3 who have said that they now understood the point of the assignment. This was echoed in one of the interviews, "Yeah, this year I see why we did it. In year 1 I was like, no, they're potty!" (Kim, Y2, December interview)

Starting Point was put forward as creative by five of the tutors. The creativity came through choice, interpretation (layer 1) and new ways of thinking (layer 2), although the art elements were also mentioned. One tutor also discussed the individuality of the assignments because it was a personal exploration. Although

none of the students discussed the personal aspect of the Starting Point, the tutor and student views coincided for the other aspects. Interestingly, the only two Starting Point assignments that were brought up by tutors were examples where the student had taken an unusual approach to the assignment and had been unsuccessful. In one case the low mark was due to limited understanding of the underlying issues, while in the other it was believed that the creative element resulted in the assignment not matching the requirements.

Overall, both the students and tutors reported that there was potential for creativity in some of the assignments in all three years. There was a general agreement that the exams did not promote creativity, even when the questions were more open. Assignments which provided choices and relied on interpretation were generally considered to be creative, although some students found choices threatening and wanted more support.

The Starting Point was deemed creative, both for its arts element and the creative thinking involved. The performances and presentations were seen as creative and enjoyable, with much opportunity for choice and using own ideas. A desire to engage the audience promoted creative ways of presenting the materials, as well as own ideas in the content.

The tutors had some concerns about whether students understand that they should be creative and what that means. Promoting creativity in assessment is seen as part of the creativity cascade where students are presented with a

creative model for them to respond to as students and then develop as thinking, questioning teachers.

RESEARCH QUESTION 2B: *How is creativity apparent in assignment briefs and marking grids?*

Document analysis was performed on the assignment briefs, with words and phrases related to the different layers of the Creativity Pyramid recorded and tallied. In addition 'arts related' words (e.g. painting, drawing, music, role play) and references to presentation were counted in a separate category. It should be noted that all of the assignment briefs contain an anti-plagiarism statement to the effect that students must confirm that the work is entirely their own. Since there is a presumption that students are aiming to pass the assignments, I have taken this statement of originality and presumed value to relate to layer 3. This accounts for the single layer 3 statement for many assignments. Tables 4.8-4.11 present the results of this analysis, with assignments placed in order of decreasing totals, not counting the arts related terms. Most of the assignment briefs are quite lengthy so the words noted make up a fairly small proportion of the total word count.

Starting Point and Group Performance are clear leaders in Year 1. While Starting Point has nearly twice as many layer 1 than layer 2 statements, the Group Performance has slightly more layer 2 statements but stands out as having three layer 3 statements beyond the general anti-plagiarism one. Being in the context of the performing arts the Group Performance also has a very

large number of arts related statements. It should be noted that Learning

Journal and PE Evaluation are not far behind the leaders in terms of layer 2.

The high ranking of Starting Point and Group Performance and the low ranking

of the exam and Audit and Action Plan match the tutor and student perceptions

of these assignments.

Table 4.8 Year 1 Assignment Briefs analysed with the Creativity Pyramid

Assignment	Layer 1	Layer 2	Layer 3	Arts/Presentation	Total Length
Starting Point	24	12	1	7	1287
Group Performance	13	14	4	**53**	1155
Learning Journal	8	11	1	1	1199
PE Evaluation	6	10	1	1	777
Audit & Action Plan	4	4	1	**13**	1239
SoW	4	4	1	5	707
Assessed Discussion	1	4	1	0	735
Exam	1	0	1	0	481

Table 4.9 Year 2 (former) Assignment Briefs analysed with the Creativity Pyramid

Assignment	Layer 1	Layer 2	Layer 3	Arts / Presentation	Total Length
IEP and Evaluation	22	14	1	0	1056
Child Study	24	11	1	3	2499
Evaluating a SoW in Science	9	22	1	0	813
Subject Leadership long term planning framework	14	15	1	6	935
Investigations essay	13	5	1	1	643
Beyond the Curriculum Boundaries	8	4	4	**31**	1036
Equality Essay	4	7	1	2	730
Subject Leadership group presentation	4	3	3	**19**	703

Compared to Year 1, the top ranked Year 2 assignments in both validations

have similar totals but the middle and low ranked Year 2 assignments have

considerably more creativity statements. The new Year 2 assignments generally

have fewer creativity terms than those of the previous validation. However,

when comparing assignments, those with lower creativity counts also had lower

total word counts in the revalidated version, while those with more creativity

words correspondingly had longer assignment briefs.

Table 4.10 Year 2 (revalidated) Assignment Briefs analysed with the Creativity Pyramid

Assignment	Layer 1	Layer 2	Layer 3	Arts / Presentation	Total Length
Evaluating and Creating Core SoW	12	10	4	2	603
Creation and Evaluation of an IEP	14	11	1	1	953
Distant Places Group Display	9	5	4	**42**	1224
Rationale and Reflection	1	15	1	**16**	1043
Child Development Study	8	8	1	0	632
Languages Group Presentation	5	7	3	**18**	826
Equality Essay	7	7	1	2	851
Exam	4	1	1	0	410

The group presentations and BCB assignment were perceived by tutors and

students as creative but these have middle and low rankings in the tables.

However, it should be noted that they have higher numbers in layer 3 and high

numbers in the arts / presentation column, so either or both of these could be

contributing to the perceptions of creativity. Of course, it may be the process of

undertaking the assignments themselves, rather than reading the brief, which

has the greater influence. By contrast, the top two ranking assignments from

both validations were barely mentioned by tutors or students. The Subject

Leadership Framework, which ranked fourth in the former programme, still has

a higher total than all of the revalidated assignments. The most frequent words

were to do with challenging current practice, developing own philosophy and

presenting own ideas. This matches the ambitions the tutors had for the assignment and fits with the perception of both tutors and students that the assignment had the potential to be creative, although there were questions about how much this occurred in practice.

Table 4.11 Year 3 Assignment Briefs analysed with the Creativity Pyramid

Assignment	Layer 1	Layer 2	Layer 3	Arts/Presentation	Total Length
Research	47	10	1	0	1327
Pupil Investigations	33	13	5	3	873
Own Investigations	22	8	1	2	878
Learning Journal	4	24	1	3	993
Speaking & Listening SoW	4	9	1	4	987
Individual Presentation	5	5	2	**14**	594
English Exam	1	0	1	4	553

Once again the presentation assignment has a low total of creativity terms, except in the presentation column, despite a positive perception from tutors and students. Research and the two investigations assignments both scored highly. This generally matches the perceptions of tutors and students, although the perception of the Research assignment was more mixed. It should be noted that frequent repetition of the terms 'research' and 'investigations' inflated the layer 1 totals for these assignments. However, they still had higher layer 2 totals than all except the Learning Journal, which was not mentioned in interviews as discussed previously.

The number of words related to each layer of the Creativity Pyramid gives one picture of the creative potential of each assignment but it does not indicate the

type of creativity involved. I decided to use Wordle (Feinberg, 2009) to show the types. This programme changes the font size of words according to frequency of occurrence. Therefore a word that occurs twice as often will be in a font that is twice as big, although that actually results in the area being quadrupled, so differences are magnified. I did not combine cognates (e.g. 'investigations', 'investigation' and 'investigative' all appear separately). I felt the chaotic presentation of the Wordle was more like the impression you would get from reading the document rather than the precise numerical picture that a bar chart would give.

The Starting Point assignment brief Wordle (Figure 4.3) shows that words about investigating dominate. Other prominent words are 'relates', 'observation', 'questions' and 'presentation'. Although not prominent, there is a large collection of words related to art. However, when the marking grid is examined (Figure 4.4) the emphasis is different. Presentation and evaluation have become much more important. 'Relates' has turned into 'relevant', at roughly the same level but 'judgement' and 'style', which are prominent now, did not feature in the assignment brief. The arts words are not present in the marking grid. Therefore there seems to be a lack of constructive alignment between assignment brief and marking grid when it comes to creativity. This disparity was apparent in many assignments. The differences between brief and marking grid may help explain the dissatisfaction that several students expressed about their marks and feedback on the Starting Point assignment. However, it should be noted that many words in the marking grid appear frequently because they appear in each grade band, which may present a distorted image.

Figure 4.3 Starting Point assignment brief

Figure 4.4 Starting Point marking grid

Figure 4.5 Learning Journal assignment brief

Figure 4.6 Learning Journal marking grid

There was better alignment between the Learning Journal assignment brief and marking grid (Figures 4.5 and 4.6). Choice / selection, connections / relevance and evaluation dominated in both Wordles. This was not an assignment rated as particularly creative but the other assignments which showed strong constructive alignment of creativity elements between brief and marking grid were ones that tutors and students had rated highly: group performance; group presentation; group display and rationale; individual presentation and own mathematics investigations.

Appendix C has the full set of assignment brief and marking grid Wordles. Examining the most prominent words in these demonstrated that the concept of making connections was prominent most frequently in both briefs and marking grids, although it was prominent in nearly twice as many marking grids as assignment briefs (22 versus 13). This was followed by selection/choice which was prominent in roughly the same number of briefs (10) and grids (11), although there were only four cases where this was for the same assignment. Evaluation was similar, prominent in 8 briefs and 13 marking grids, but only three of these were for the same assignment. The annotated creativity model (Figure 4.2) shows that making choices, making connections and engagement were all prominent in tutors' views of creativity. Evaluation, however, was a disputed element. There was much greater consistency with ideas of presentation and audience. Unsurprisingly these dominated assignments which involved presentations and displays, in both brief and marking grids, although they also appeared in marking grids for six other assignments. Other dominant terms included investigation, research, design, challenge, observations and own

philosophy. The terms which dominated the Wordles were consistent across the three year groups.

Overall there is considerable evidence that terms related to the Creativity Pyramid are present in assignment briefs and marking grids in all three year groups. Although many assignments which were perceived as particularly creative by tutors and students did have a high number of creativity terms in the assignments briefs, this was not always the case, particularly with presentations. The dominant terms related to making choices; making connections; evaluating and engaging an audience. However, there was often a lack of constructive alignment between the assignment brief and the marking grid when it came to the creativity terms used.

RESEARCH QUESTION 2C: *How is creativity represented in the marking grids and feedback in different grade bands?*

Marking grids underwent the same process as assignment briefs but with terms identified for each grade band. The numbers indicate the frequency of words or phrases related to that layer of the Creativity Pyramid. 'Art/Pres' indicates a term related to the creative arts or presentational aspects. The tables were constructed with assignments going from left to right in order from highest to lowest number of positive statements from the Creativity Pyramid. Statements related to the arts / presentation were not included when ordering the assignments. If these had been included when ordering several assignments (marked with #), mostly presentation assignments, would have been higher in

the order. Negative numbers mean that the statement was pejorative or indicated an absence of that aspect of creativity.

The order of the assignments based on the marking grids is quite different from the order in Tables 4.8 to 4.11 of the assignment briefs. No pattern was apparent between the two orders. The presentation assignments in all three years appeared low in the tables, although they would have been higher if the arts / presentation totals had been included when ranking.

Examination of totals for each grade band (numbers in **bold**) shows that A* has the highest totals for each year group and that totals decrease as grades go down. This is fairly gradual in Year 1 but in the other years there is a marked drop between the B and C grade bands. This matches the perceptions of grade bands discussed previously, where top grade bands were seen as most creative. In all cases there is a dramatic drop between D and E. The E and F grade bands have high numbers of pejorative statements, although some of these occur in D too. This may link to the perception that D means basic competence but with deficiencies.

Table 4.12 Indicators of Creativity Year 1 Marking Grids

Creativity Pyramid	Grade	Learning Journal	PE Evaluation	Starting Point	Sequence of Work	Audit and Action Plan	#Group Performance	TOTALS
Layer 1	A*	3	5	1	1	2	1	13
Layer 2		4	10	4	5	6	1	30
Layer 3		*2*	0	*2*	0	0	*3*	*7*
Art/Pres		0	5	2	2	0	6	15
Total A*								**65**
Layer 1	A	3	2	1	2	0	1	9
Layer 2		8	9	8	8	5	4	42
Layer 3		0	0	0	0	0	*1*	*1*
Art/Pres		1	1	2	1	0	3	8
Total A								**60**
Layer 1	B	4	1	1	2	0	2	10
Layer 2		7	3	6	4	4	1	25
Layer 3		0	0	0	0	0	0	0
Art/Pres		2	1	3	4	0	4	14
Total B								**49**
Layer 1	C	2	1	0	0	0	2	5
Layer 2		4	3	2	3	3	2	17
Layer 3		0	0	0	0	0	0	0
Art/Pres		1	1	2	3	0	4	11
Total C								**33**
Layer 1	D	4	1	2	0	0	2	9
Layer 2		4	2	2	1	3	2	14
Layer 3		0	0	0	0	0	0	0
Art/Pres		-1	-1	1/-1	-1	0	3	4/-4
Total D								**27/-4**
Layer 1	E	-1	0	0	-1	0	-1	-3
Layer 2		-2	-1	-1	-2	-1	0	-7
Layer 3		0	0	0	0	0	0	0
Art/Pres		-1	-1	-2	-1	0	-2	-7
Total E								**-17**
Layer 1	F	-1	0	0	0	0	-1	-2
Layer 2		-3	-1	-1	-1	0	0	-6
Layer 3		0	0	0	0	0	0	0
Art/Pres		-1	-1	-2	-1	0	-2	-7
Total F								**-15**
Total L1,2,3		45/-7	37/-3	29/-2	26/-2	23/-1	22/-2	
TOTALS		49/-10	45/-6	39/-7	36/-7	23/-1	42/-6	

Table 4.13 Indicators of Creativity Year 2 (former) Marking Grids

Creativity Pyramid	Grade	S.L. planning framework	#BCB	IEP	Equality Essay	Child Study	#S.L. Group Presentation	Investigations essay	Evaluating a SoW	TOTALS
Layer 1	A*	2	2	4	3	3	4	2	2	*22*
Layer 2		11	6	9	6	7	3	2	2	*46*
Layer 3		*2*	*5*	0	*2*	*1*	*3*	*2*	0	*15*
Art/Pres		2	7	1	1	1	4	1	1	*18*
Total A*										**101**
Layer 1	A	3	5	2	2	3	1	2	2	*20*
Layer 2		11	9	7	8	4	5	7	3	*54*
Layer 3		0	*2*	0	0	0	*1*	0	0	*3*
Art/Pres		4	8	0	2	0	3	1	0	*18*
Total A										**95**
Layer 1	B	3	4	2	2	2	3	2	3	*21*
Layer 2		8	6	6	5	4	3	6	1	*39*
Layer 3		0	0	0	0	0	0	0	0	*0*
Art/Pres		5	9	1	3	1	5	3	1	*28*
Total B										**88**
Layer 1	C	3	1	3	0	2	2	0	3	*14*
Layer 2		5	2	4	2	2	1	1	0	*17*
Layer 3		0	0	0	0	0	0	0	0	*0*
Art/Pres		2	5	0	2	0	4	1	0	*14*
Total C										**45**
Layer 1	D	4	2	3	2	2	1/-1	2	2	*18/-1*
Layer 2		2	1	4	1/-1	0	1	-1	0	*9/-2*
Layer 3		0	0	0	0	0	0	0	0	*0*
Art/Pres		-1	1/-3	0	1	0	4	-1	0	*6/-5*
Total D										**33/-8**
Layer 1	E	-1	-1	-2	1	0	-1	0	-2	*1/-7*
Layer 2		-2	-1	-4	-2	-2	-2	-1	-1	*-15*
Layer 3		0	*-1*	0	0	0	0	0	0	*-1*
Art/Pres		-1	-3	0	-1	0	0	-1	0	*-6*
Total E										**1/-29**
Layer 1	F	-2	-2	0	0	0	0	0	-1	*-5*
Layer 2		-3	-2	-3	-1	-2	0	-1	-1	*-13*
Layer 3		0	*-1*	0	*-1*	0	0	0	0	*-2*
Art/Pres		-1	1/-3	0	-1	0	0	-1	0	*1/-6*
Total F										**1/-26**
Total Layers 1,2,3		54/-8	45/-8	42/-9	34/-5	30/-4	28/-4	26/-3	18/-5	
TOTALS		67/-11	76/-17	44/-9	43/-7	32/-4	48/-4	32/-6	20/-5	

Table 4.14 Indicators of Creativity Year 2 (revalidated) Marking Grids

Creativity Pyramid	Grade	Child Development Study	#Rationale and Reflection	#Distant Places Group Display	Creation and Evaluation of an IEP	#Equality Essay	Evaluating and Creating Core SoW	#Languages Group Presentation	Exam	TOTALS
Layer 1	A*	6	2	2	4	3	1	3	1	*22*
Layer 2		5	10	3	5	6	6	3	4	*42*
Layer 3		**4**	**2**	**5**	**3**	**2**	**2**	**3**	**1**	***22***
Art/Pres		0	1	10	1	3	1	6	0	*22*
Total A*										**108**
Layer 1	A	6	1	6	3	2	2	1	1	*22*
Layer 2		7	11	5	6	8	8	5	4	*54*
Layer 3		0	0	*1*	0	0	0	*2*	0	***3***
Art/Pres		1	2	10	1	2	1	3	0	*20*
Total A										**99**
Layer 1	B	5	2	3	2	2	2	3	0	*19*
Layer 2		5	8	4	5	5	5	3	3	*38*
Layer 3		0	0	0	0	0	0	0	0	*0*
Art/Pres		2	4	9	2	4	2	5	1	*19*
Total B										**76**
Layer 1	C	5	0	1	2	0	3	2	0	*13*
Layer 2		2	4	2	2	2	0	1	2	*15*
Layer 3		0	0	0	0	0	0	0	0	*0*
Art/Pres		1	3	8	1	2	1	4	0	*20*
Total C										**48**
Layer 1	D	2	1	2	1	2	1	1	0	*10*
Layer 2		3	2/-1	1	2	1/-1	0	1	1	*11/-2*
Layer 3		0	0	0	0	0	0	0	0	*0*
Art/Pres		1	2	6	1	1	1	5	0	*17*
Total D										**38/-2**
Layer 1	E	-3	-1	-1	0	1	-1	-1	0	*1/-7*
Layer 2		-4	1/-2	-2	-1	-2	0	-2	-1	*1/-16*
Layer 3		0	**-1**	0	0	**-1**	0	**-1**	0	***-3***
Art/Pres		-1	1/-1	-7	-1	0	-2	-1	0	*1/-13*
Total E										**3/-39**
Layer 1	F	-1	0	1/-1	0	0	0	0	0	*1/-2*
Layer 2		-3	-2	-2	-2	-1	-1	0	-2	*-13*
Layer 3		**-1**	**-1**	0	**-1**	**-1**	**-2**	**-1**	0	***-7***
Art/Pres		-1	1/-1	1/-6	1	-1	-2	-1	0	*3/-12*
Total F										**4/-34**
Total L1,2,3		50/-12	44/-8	36/-6	35/-4	34/-5	30/-4	28/-5	17/-3	
TOTALS		54/-14	58/-10	80/-19	42/-5	46/-6	36/-8	51/-7	18/-3	

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Table 4.15 Indicators of Creativity Year 3 Marking Grids

Creativity Pyramid	Grade	Pupil Investigations	Own Investigations	#Research Project	English Exam	Speaking & Listening SoW	#Individual Presentation	Learning Journal	Research Proposal	TOTALS
Layer 1		5	5	5	2	3	5	1	1	27
Layer 2		1	5	6	11	7	2	4	2	38
Layer 3	A*	*2*	*1*	*3*	*1*	*4*	*3*	*2*	0	*16*
Art/Pres		2	0	2	3	0	4	1	0	12
										93
Layer 1		5	6	5	0	1	1	2	4	24
Layer 2		1	2	9	7	7	5	7	2	40
Layer 3	A	*2*	0	0	0	0	*2*	0	0	*4*
Art/Pres		3	0	1	3	1	4	1	0	13
										81
Layer 1		6	7	4	0	1	3	2	4	27
Layer 2		2	3	6	6	2	3	5	1	28
Layer 3	B	*1*	0	0	0	0	0	0	0	*1*
Art/Pres		3	0	3	2	1	3	1	0	13
										69
Layer 1		5	6	1	0	1	2	0	3	18
Layer 2		3	3	2	4	2	1	4	1	20
Layer 3	C	*1*	0	0	0	0	0	0	0	*1*
Art/Pres		3/-1	0	2	2	1	4	1	0	13/-1
										52/-1
Layer 1		5	7	3	0	1	2	2	2	22
Layer 2		3	3	1	4	2	1	1	-1	15/-1
Layer 3	D	0	0	0	0	0	0	0	0	0
Art/Pres		3	0	-2	2	0	2	-1	0	7/-3
										44/-4
Layer 1		3/-2	-2	-2	0	-1	-1	0	1	4/-8
Layer 2		-2	-3	-1	-3	-2	-2	-1	0	-14
Layer 3	E	0	0	*-1*	0	0	0	0	0	*-1*
Art/Pres		-3	0	-1	-2	0	-1	-1	0	-8
										4/-31
Layer 1		3/-2	-3	-2	0	-1	0	0	-1	3/-9
Layer 2		-1	-3	-2	-3	-2	0	0	0	-11
Layer 3	F	0	0	*-1*	0	0	0	0	0	*-1*
Art/Pres		-2	0	-1	-2	0	-1	0	0	-6
Total F										**3/-27**
Total Layer 1,2,3		48/ -7	48/ -11	45/ -9	35/ -6	31/ -6	30/ -3	30/ -2	21/ -2	
TOTAL		62/ -13	48/ -11	53/ -13	47/ -10	34/ -6	47/ -5	34/ -3	21/ -2	

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There is an obvious difference among the grade bands regarding the layer 3 totals (**bold italics**). In Years 1 and 2 there are many layer 3 statements for the A* band, a small number for the A band and then none for the others, although in Year 2 there are pejorative layer 3 statements for E and F. That the highest layers of creativity are reserved for the highest grade bands matches the tutor and student perceptions of these grade bands. Year 3 is slightly different because it also has a single layer 3 statement in the B and C bands. This comes from the Pupil Investigations assignment and relates to Kaufman and Beghetto's (2009) Pro-C creativity because it talks about the students preparing investigations which are motivating and appealing to the children.

I also examined a selection of assignment feedback sheets. The selection process was described in Chapter 3. After finding the disparity between brief and marking grid for Starting Point I decided to include that also. Again I analysed the documents using the Creativity Pyramid. However, I also considered creative teaching and engaging the marker because these aspects featured prominently in the feedback. Simple tabulations are not appropriate for the feedback sheets because there are different numbers of assignments for different grade bands.

Creativity terms used most often in feedback were the same as those in the grids: making choices, making connections, engaging an audience and presentational aspects. The exception to this was evaluation which was prominent in the marking grids but less so in the feedback. Creative teaching

phrases appeared in all assignments, although they were more common in assignments that related directly to teaching pupils or adults.

Layer 3 comments in feedback were confined to those assignments which had layer 3 comments in the marking grids. However, in all assignments where layer 3 comments were made they continued one grade band lower than in the grid. In most cases this meant that layer 3 comments were included for B grade assignments, but in two cases this extended to D grade assignments. This may relate to the perception expressed by some tutors that an assignment could have some elements of creativity while being less successful overall. Most of the layer 3 statements related to engaging the audience or reader of the assignment. I noted statements indicating the tutor had engaged positively with some aspect of the assignment. These occurred in all the assignments, often extending to the D band and, in one case, E. However, the only assignment in the sample from the F grade band included a statement about it being disappointing. This was the only negative statement regarding tutor engagement, although one C grade assignment had a target suggesting ways to make the performance more engaging for children.

Creativity terms are included in marking grids and feedback throughout the passing grade bands, although they are more common in the top grade bands, especially related to layer 3 creativity. The main terms used are related to making choices, making connections, engaging the audience and presentational aspects.

RESEARCH QUESTION 3A: *What are the perceptions of creativity in school placement?*

All of the tutors were able to give examples of creativity on school placement, although several also included negative examples where they were disappointed by the lack of creativity. Emily and Fiona commented they found it easier to come up with examples of creative lessons than creative assignments but Beth found it harder and was quite disappointed in this reflection. Emily felt it was easier for students to be creative in a one hour lesson than in a summative assignment because the stakes were not as high. Ian elaborated on this idea.

> *The thing that placement gives is more of a chance to restart or learn from experience and build very quickly. Where what the assignment does is make you wait for a month after hand in and then get feedback that may or may not be relevant to you. Life may have moved on to a degree and you're never going to do that assignment ever again. Whereas school practice, tomorrow's another day, if today was a disaster we can try something different and just keep moving on, moving on, and the feedback's pretty much instantaneous.*
>
> <div align="right">*(Ian, tutor interview)*</div>

This relates to the differences between formative and summative assessment discussed in the Literature Review.

The students interviewed were unified in seeing placement as an opportunity for creativity, although there were some caveats about group and paired placement. The second and third year students interviewed all responded enthusiastically that school placement provided scope for their creativity. Jack felt that the criteria for placement was less specific than for assignments which gave more freedom, which is interesting since the QTS standards and the RPD are highly specific.

Emily (tutor), Keith (Y2), Julia (Y3) and Jack (Y3) expressed the view that being creative on placement was rewarding.

> *The more creative you are the more you get from it as well, as a*
> *human being I guess, you get a lot from it. They say that teaching's*
> *rewarding, and yeah that's definitely…when you've put in the effort*
> *and been creative you get something from it.*
>
> <div align="right">

(Jack, Y3, December interview)</div>

On the questionnaire students were asked to rate how creative they had been in Year 1 school placements.

Table 4.16 Questionnaires: Rating school placement

Year 1, n=55 Year 2, n=32	Very Creative		Creative		Creativity Inhibited		Not Creative	
	Y1	Y2	Y1	Y2	Y1	Y2	Y1	Y2
Group Placement	31% (17)	9% (3)	56% (31)	44% (14)	13% (7)	47% (15)	0% (0)	0% (0)
Paired Placement	47% (26)	53% (16)	49% (27)	47% (14)	2% (1)	0% (0)	2% (1)	0% (0)
Solo Placement	69% (38)	N/A*	27% (15)	N/A	4% (2)	N/A	0% (0)	N/A

*N.B. This group had not had a solo placement in Year 1.

There is an obvious trend of increased creativity with increased autonomy in the placements. However, these placements are listed chronologically so the students would also have increased knowledge and experience in schools, and therefore possibly increased confidence in teaching also, as they moved from group to paired to solo. In addition to having fewer student teachers in the classroom, this progression involves increased independence and responsibility for planning and teaching across the curriculum.

Lydia and Lewis (Y1) had differing experiences on group and paired placements, with some commonalities. Lydia found group placement less creative because they had to follow the teacher's planning and the teacher was not particularly receptive to their ideas. Lewis' group seemed to have been given greater freedom by their teacher-mentor. He found creativity in negotiating with the other students and adapting his ideas to fit with theirs. Both Lewis (Y1) and Keith (Y2) commented on the number of students in the group helping to generate more ideas when planning. Lewis was less positive about paired placement, where he found it hard to work from plans where his partner's

ideas dominated. It may have been that there was greater negotiation with the larger group or it may just have been differences in personalities. Lydia felt paired placement was extremely creative, although this seems to have been due to her teacher enjoying 'messy learning' and the fact that most afternoons were spent working on an extended art project. For Lydia the teacher's attitude and approach to learning seems to have been a major factor in perceptions of creativity, rather than the number of students involved. For Lewis the students were a greater factor, although it is not clear whether it was the number or the personalities involved that made more impact.

Creative Teaching and Teaching for Creativity

Emily said she saw more creative teaching than teaching for creativity and she was not sure that most students understood the difference between these. Keith described this distinction rather nicely:

> *Once you know what you've got to teach you can always put your creative spin on it and how the children are going to learn in a creative way or how you can be creative to allow them to learn.*
>
> *(Keith, Y2, December interview)*

Analysis of the questionnaire and interview responses about what made lessons creative confirmed examples of both teacher creativity and pupil creativity across all subjects, although many responses only included one of these aspects. The types of teacher creativity matched the QCDA (2010)

teacher roles in creativity and aspects of Harrington's (1990) creative

ecosystem. The pupil creativity did include some elements of the QCDA (2010)

indicators of pupil creativity, but more often related to making things.

Table 4.17 Frequency of types of Teacher and Pupil creativity in example lessons

Teacher creativity	No.	Pupil creativity	No.
Making / choosing / organising resources	23	Drama / role play / small world play	30
Cross-curricular approach	16	Making a product	20
Providing choices / freedom	16	Exploring / investigating / experimenting	17
Use of ICT	10	Making choices / own interpretation	15
Innovative approach	9	Creating art work – painting, printing, drawing, 3-D work	12
Providing a purpose / context	8	Writing composition – poetry, stories, non-fiction, play scripts, news report	11
Teacher in role	5	Designing	6
Using the outdoor environment	5	Performing	4
Taking risks	4	Evaluating	4
Promoting imagination / originality	3	Composing – dance, music	3
Adapting the classroom environment	3	Imagining	2
Creative use of TA	2	Problem solving	2
Carousel	2	Child-initiated learning	2
Being flexible with time	2	Asking questions	1
Challenging	1		

In terms of the Creativity Pyramid, teacher creativity ranged from layers 1 to 3,

while pupil creativity was mostly at layer 1, with a few examples of layer 2 in

evaluating and problem solving. The many examples of children making

products and creating various art works may have resulted in layer 3 products,

new and valuable to the peer group, but this was not reported. By contrast, Jack

(Y3) reported that his teacher-mentor was impressed with him using ICT in

ways new to the school. Glenn described students using ICT in ways that were new to him and beyond his capabilities. This demonstrates that ICT provides opportunities for students to access layer 3. Some of the innovative approaches to lessons and resources the students created may also have merited layer 3. Layer 2 was prominent in making connections through a cross-curricular approach, adapting and risk taking.

Using drama was a very common way to make lessons more creative. This example shows both teacher and pupils going into role:

During introductory placement we did a history lesson with a drama aspect. We had a war scene on the IWB and melancholy music playing in the background. The student teacher dressed in bandages and acted as a victim of the Blitz. The children were reporters and interviewed the victim and wrote newspaper articles. Then children took it in turns to have a role (e.g. fireman, doctor, etc) It was a very successful lesson.

(Y1 Questionnaire, creative lesson)

Drama was most prevalent in English lessons, which is unsurprising since it is as aspect of the English curriculum. It was also common in history lessons where role play allowed the pupils to gain insights into the lives of the people and times they were studying. There were also examples of drama techniques being used in science, mathematics and art.

Providing pupils with choices and valuing their original interpretations were examples of teacher creativity and opportunities for pupil creativity. One student in the focus group stated creativity was particularly apparent when everyone had the same basic task but the final products were all individual. This idea was echoed by Julia (Y3), *"…in marking children's work you'll know straight away whether you've given them opportunities to be creative because if they all come out the same, how was that creative?"* This sort of individuality was celebrated by a Year 1 student in the questionnaire describing a D&T lesson where the children designed and made their own cars.

Fiona described a lesson which contained both teacher and pupil creativity through choice and interpretation. The student was teaching about the art of Matisse with an EYFS class. They had already done initial work on different styles Matisse used in his work. She dressed up as Matisse and set up part of the classroom as an art gallery with some of the children's art work framed and displayed. She then got the child artists to explain their techniques to the class. The rest of the classroom was set up as an art studio with different stations. Each station contained materials that related to different techniques Matisse had used, along with copies of his pictures, e.g. torn paper and his snail picture, coloured cellophane with a picture of stained glass. The children were encouraged to create their own pictures (rather than copies of Matisse's) using the different techniques, although they were also given the option of using their own technique or a combination. This example shows how many different aspects of teacher creativity and pupil creativity can be combined in a single lesson. The teacher went into role, had an innovative approach, adapted the

classroom environment, prepared resources, promoted originality and promoted choice. The pupils were making choices and creating art work.

It must be said that not all of the examples provided involved this degree of creativity. In fact a few examples given by Year 1 were very questionable in terms of creativity. This art lesson provides a direct contrast to the one above:

> *The most creative lesson that I taught on placement is printing.*
> *Within the lesson the children had to recreate a section of a William*
> *Morris picture.*
>
> > *(Year 1 Questionnaire – creative lesson)*

While the children were making a picture, they were producing a copy rather than an original art work. There may be elements of creativity involved in this lesson that were not evident from the brief description. The children may have been involved in problem solving in determining how best to recreate the section and in trying to create and match specific colours. They may have been evaluating their work afterwards. However, the opening phrase may indicate the student recognised this was not a particularly creative lesson but it was comparatively creative in a very uncreative placement.

Another example of dubious creativity came from a science lesson.

> *The children had to do an experiment individually where they had to*
> *test what material soaked up the most water. They had to make it a*

fair test by using same amount of water each time and same amount

of material. They measured the water then tested cotton wool, paper

towels, kitchen roll, plastic bags and sponge. Giving each a mark out

of 3 on effectiveness.

(Year 1 Questionnaire – creative lesson)

This describes a regimented lesson with pupils following detailed instructions, with no room for individual questioning or exploration. The use of the term 'experiment' rather than 'investigation' is often indicative of this. This contrasts with the science lesson described by Ian where the classroom and outdoor area were set up with various resources to promote exploration about light. The children were given time and freedom to discover rather than given a recipe to follow.

CREATIVITY FACTORS ON SCHOOL PLACEMENT

On the questionnaires students were asked about factors which facilitated and inhibited creativity. Tables 4.18 and 4.19 show what I have termed school factors and personal factors. There was very little difference between Year 1 and 2 responses, although Year 2 students presented a slightly greater range of responses despite having fewer students. The factors that inhibited creativity were generally the mirror images of those that facilitated it.

Table 4.18 School Factors that Facilitate and Inhibit Creativity on School Placement

Category	Facilitate (Year 1)	Facilitate (Year 2)	Inhibit (Year 1)	Inhibit (Year 2)
Resources	Resources (9) Facilities (2) Rules for equipment (1)	Resources (15)	Lack of resources (10) Facilities (2)	Lack of resources (17) Lack of space (1)
Atmosphere	School atmosphere (12)	School atmosphere (8)	Negative atmosphere (4)	Negative atmosphere (4)
Time	Flexible timetable (7) Having time (2)	Difficult timetable (1) Having time (5)	Timetable restrictions (6) Lack of time (5) End of week (1)	Timetable restrictions (3) Lack of time (7) Too much time (1)
Staffing	Help of other adults (8)	Help of other adults (3)	No TA (1)	No TA (1)
Curriculum	Interesting subject (1) EYFS approach (1)	Interesting topic (2) Cross-curricular planning (1) Creative week (1) Multi-sensory approach (1)		Curriculum demands (5) Assessment and targets (2)
Organisation		Grouping children (1)	Restrictive classroom organisation (2) Structured lesson format (1)	Children withdrawn from lessons (1)
Child Factors	Children's behaviour and enthusiasm (14) Creative children (1)	Children's behaviour and enthusiasm (4) Children's level of understanding (1) Absent children (1)	Children's behaviour (14) Unresponsive children (1)	Children's behaviour (6)
Mentoring Factors	Not being observed (6) Being observed (3) Supportive teacher (11) Positive feedback (1) Given freedom/ flexibility (4)	Not being observed (3) Being alone with class (2) Being observed (1) Supportive teacher (11) Positive feedback (1) Given freedom/ flexibility (5)	Being observed (7) Unsupportive teacher (4) No freedom (1) Follow teacher's plans (1) Teacher unenthusiastic (1) Teacher not displaying creativity (1) Overprotective teacher (1)	Being observed (7) Unsupportive teacher (8) No freedom (6) Follow teacher's ideas (2) Teacher unenthusiastic (1)

Table 4.19 Personal Factors that Facilitate and Inhibit Creativity on School Placement

Category	Facilitate (Year 1)	Facilitate (Year 2)	Inhibit (Year 1)	Inhibit (Year 2)
Confidence	Personal confidence (9) Confidence in subject (8) Confidence in behaviour management (2)	Personal confidence (17) Confidence in subject (4)	Lack confidence (4) Lack subject confidence (1)	Lack confidence (10) Lack confidence in teaching ability (1)
Preparation	Thorough planning (3) Having ideas (2) Subject knowledge (1)	Thorough planning (3) Subject knowledge (2) Knowing your class (1) Time for preparation (1)	Insufficient planning (2) Lack subject knowledge (4)	Lack subject knowledge (1)
Own attributes	Enthusiasm (3) Teaching experience (1)	Own creativity (5) Wanting to give children a good experience (2) Valuing children's creativity (1) Viewing self as learner (1) Happy mood (1)	Lack enthusiasm (3) Dislike subject (1)	Lack enthusiasm (2) Lack own creativity (2) Lack inspiration (1) Fear of failure (1) Mood (3) Nerves (2) Tired / ill (1)

Curriculum Factors

EYFS Approach

One questionnaire said an EYFS approach facilitated creativity, which was supported by several interviewees. Janet and Julia (Y3) both discussed that the child-initiated learning fundamental to EYFS linked to creativity. The analysis of the EYFS document in the Literature Review demonstrated it supported a creative approach. Lewis (Y1) was also in an EYFS class and said the teacher had to be creative to engage the pupils. Beth felt creativity was more common in the younger years, although she put this down to increasing pressure from SATs and performativity from Year 2 onwards.

Performativity

As discussed in Chapter 2, performativity encompasses internal and external pressures resulting from testing, league tables and inspections. Kim (Y2) experienced an Ofsted inspection on placement and described how her creativity was curtailed by the school insisting that she followed the teacher's lesson plans during the inspection. Lydia (Y1) and Keith (Y2) both reported that pressure from SATs and fear of Ofsted had reduced potential for creativity, particularly in maths and English. Several Year 2 students on the questionnaire said curriculum demands inhibited creativity, with two specifically noting assessment and targets. Jack (Y3) found his creativity in teaching mathematics was curtailed by the perceived need for coverage. Similarly, Keith had been given specific differentiated success criteria for mathematics and found these predetermined outcomes restricted what he and the children could do. Keith

found tension between assessment and creativity: it was easy to assess when there were tight criteria but hard to be creative; however, he found it hard to assess when the children were given more freedom. In more open lessons *"…it was very difficult to give focused success criteria, and then if you tried to do focused success criteria it actually spoilt the lesson."* (Keith, Y2, March interview) Both Lydia and Keith reported much greater freedom in the 'topic' work that they did in the afternoons, which incorporated a cross-curricular approach with subjects other than English and mathematics.

There is also performativity relating to the student being assessed on the placement. Beth and David talked about students lacking the confidence to be creative, fearing that it would all go wrong. David described a student's reaction to being asked to be more creative in the next lesson. Here performativity was inhibiting creativity.

> *…she was wary in case it went wrong and it affected her grade, but I, I tried to put her mind at rest and say that it won't affect your grade because I know you can teach. What it will do if it all goes pear shaped is it will give you some pointers on where, on how to improve in future practice. But in fact I've never experienced a student yet that's been creative and failed at it. They've always been successful. Because they seem to, they seem to teach in a more relaxed way with the children. And that may be because they're doing what they believe in rather than what they want us to see.*
>
> *(David, tutor interview)*

Several tutors agreed with David that creative lessons were usually successful and that creativity enhanced learning, partly because it engaged children.

Cross-Curricular or Topic Approach

Cross-curricular work was also raised as a creative aspect of placement by Glenn, Jack and Julia. Several of the examples given of creative lessons by students and tutors had cross-curricular elements but most were focused on single subjects. A good example of a cross-curricular lesson came from a Year 1 student. It involved several subjects working together on a common theme.

> *I planned a cross-curricular lesson containing links to the history and geography of Grimsby, maths with 3D shapes and net construction and literacy with non-fiction writing and evaluations and art. There were 4 tables set up and the class moved round as a carousel from building a junk model of a Grimsby landmark, sketching a landmark, evaluating their model and writing a non-fiction piece of writing on their landmark using sources.*
>
> *(Year 1 Questionnaire - creative lesson)*

However, not all of the cross-curricular lessons were that strong. This second example illustrates tenuous links between subjects.

> *Children studying Henry VIII and electricity. Used the children's eagerness to create circuits as a way to facilitate learning in history*

with ultimate creation of torches with appearance of either Henry VIII

or one of his wives.

Creativity in Different Subjects

Table 4.20 Creativity on school placement by curriculum subject

Subject	Year 1 questionnaire n=55	Year 2 questionnaire n=32	Student interviews n=7	Tutor interviews n=9	Total
English / CLL	12	6 (+1)*	6	4	28(1)*
Science/KUW	5	7	5	4	21
Art / CD	9	6	3	2	20
Mathematics / PSRN	6	3	5 [&1 negative]	2 [&1 negative]	16 [&-2]
History	1	4	3	3 [&1 negative]	11 [&-1]
D&T / KUW	3	3 (+1)*	0	0	6(1)*
PSHE/PSED	2	0	2	0	4
RE	0	3	0	0	3
PE / CD&PD	0	1	0	2	3
Geography	(1)*	1	0	0	1(1)*
Music	(1)*	(4)*	1	0	1(5)*
ICT	(4)*	(2)*	(3)*	(1)*	(10)*

*bracketed numbers used in the service of other subjects in a cross-curricular lesson

Table 4.20 shows the distribution of creative lessons across curriculum subjects. EYFS Areas of learning have been aligned with NC subjects when examples included EYFS. It should be noted that not all students completing the questionnaire included an example of a creative lesson, while some included more than one example. There were proportionally more examples from Year 2 students (n=32) since they provided 35 lessons, while Year 1 students (n=55) described 38 lessons. Year 2 students had spent more time in school, including

a longer solo placement so they may have benefitted from having had more experiences.

Table 4.20 demonstrates the students are more similar to those researched by Robson et al (2008), who did not perceive creativity as relating to a particular subject, rather than those researched by Davies et al (2006), Rogers and Fasciato (2005) and Kampylis et al (2009), who related creativity mostly to the arts. The results also call into some question the degree of negative influence of performativity on creativity in English and mathematics, despite the comments from Lydia and Keith, since both subjects were well represented by every group. However, it should be noted that a tutor and a student both talked about the decided lack of creativity that can occur in mathematics due to excessive worksheet use, so the picture was not entirely positive. Another consideration is the fact that English and mathematics are taught daily in most schools so students would have taught substantially more lessons in these subjects. Tutors generally observe at least one lesson in English or mathematics during a placement so would also have a larger bank of examples to draw upon from these subjects. The more limited opportunities to teach and observe subjects such as geography and RE may partly explain why there were few examples of these. Science examples were given by all groups but were particularly prominent from Year 2, whose placement included a focus on investigations in Science and had a school-based assignment related to it.

Art was third in the overall list which demonstrates that students see creative potential in this. However, music was only mentioned once as a specific lesson,

although it was frequently used in a cross-curricular way. As the music specialist on the programme I found this depressing but not overly surprising. I believe there is great potential for creativity in music, especially in composing, but have found students and many teachers to lack confidence in music with the result that they use lessons from published schemes, accompanied by pre-recorded music, reducing creative potential.

History was the fifth highest subject overall. Many examples were themed days, often about World War II, where children took part in a range of activities, usually cross-curricular. Themed days also involved dressing up, with children and teacher going into role. These were generally single days at the end of a topic. I had posted a positive example of a themed day in the virtual focus group but also gave a negative example in my interview. The children were dressed up in Victorian clothing and had spent the morning at a local museum engaging in activities, learning about the Victorians. The student had prepared a range of interesting activities for the children when they returned to school but had sabotaged this by withholding the necessary resources and demanding complete silence and subservience from the children. The importance of providing appropriate resources was a recurring theme in responses about making lessons creative.

ICT

All the compulsory subjects and areas of learning had at least one example of a creative lesson, although all the ICT examples were cross-curricular. Although

discrete ICT lessons do exist, in many schools the emphasis is on using ICT across the curriculum which may explain these results. Jack provided an example where children had used ICT to help present their poetry.

One example, I think I've told you before, was when I got them to record the poems that they did, when they all put music to them and actions to them, vocals to them, effects to them. They had like their own camera team, directing team, everything which was really, really good.

(Jack, Y3, December interview)

There were other examples of students using ICT as part of innovative approaches in their lessons.

In science we recreated the earth, sun and moon using balls and the children in a simulation and then recorded it with digi-blues to show back to the class to re-cap learning rather than watching a simulation which had already been created.

(Year 2 Questionnaire – creative lesson)

We looked at how the human ear worked using interactive teaching programs and videos. We used drama to show how vibrations travelled through each part of the ear. Once the children were confident with the parts of the ear they wrote an explanation of the

process and displayed it in an ebay advertisement template (as if

they were selling an ear).

(Year 1 Questionnaire - creative lesson)

In these examples there appears to have been more teacher use of the ICT rather than the greater child use in Jack's example.

Resources

Resources were commonly cited as facilitating creativity, while a lack of resources inhibited creativity. Janet (Y3) included some imaginative resources, like bringing in astronaut food for the children to taste as part of a space topic. She also talked about continually adding resources to the role play area to provide new challenges and extend the children's imagination. Kim (Y2) too was stimulating children's learning through a role play area, including dressing up clothes. Kim found her own creativity was challenged because the school had very limited resources and little of the ICT equipment she was used to having so she had to think of alternative approaches. This included using her own camera so she could use pictures as assessment evidence rather than relying so much on written products.

When asked about creative lessons on school placement, Emily talked generally about creative use of resources, both in terms of choice and organisation that allow children to take control of their learning, quite the opposite of the history example described earlier. Ian also discussed the

importance of having lots of resources and adapting the classroom environment to encourage children to explore and discover. Helen contrasted the resources used in two student presentations. The successful student had resources that encouraged discovery and learning while the unsuccessful student had resources that closed down learning by focusing on doing rather than thinking. This was highlighted by both Janet and Julia (Y3) in terms of providing resources that would promote child initiated learning.

> *They took the resources that I'd provided and I told them things that they could do with it but I didn't say 'right, you need to do this'. They came out with something completely different but they did meet the learning objective. It was, together as a group they'd decided to do something completely different and I was took back, I was thinking 'wow!'*
>
> *(Julia, Y3, interview)*

In addition to physical resources, many respondents discussed human resources, such as teaching assistants or parent helpers, and time. Having additional adults was particularly noted by Year 1 students, although they may be including their peers in the group and paired placements in this. Having sufficient time and a flexible timetable were also facilitators, although one student became creative because of a difficult timetable. One student explained that creative lessons took more time, while another found that it was difficult to predict how long creative lessons would last.

Child Factors

For Julia, Janet (Y3) and Helen part of the creative planning process was to ask yourself how you could make the lesson interesting for the children. This fits with Robson et al's (2008) findings that creative teaching involved making it interesting and engaging. The benefits of engaging children were also seen by tutors as an incentive for students to be creative. The positive impact of engaging children through creative approaches was noted by all of the students interviewed and was a frequent response on the questionnaires (Table 4.21).

On the questionnaires students were asked how children had reacted to the creative lesson they had described. The vast majority of responses were positive, although some problems were noted. However, there may have been students who chose not to complete the questionnaire because they had had negative experiences with creative lessons.

I read the questionnaires several times and then grouped similar statements, creating categories I felt reflected the contents. Students often wrote elaborate answers that included more than one category of response. There were very few differences between Year 1 and 2 students, although Year 2 students did cite pupil freedom and individuality more. This may indicate that Year 2 students had greater confidence in ceding some control to pupils, which will be discussed further in the personal factors.

Table 4.21 Children's Reactions to Creative Lessons

Category	Year 1	Year 2
Engaging	Enjoyed (22)	Enjoyed (15)
	Eager to learn / enthusiastic / motivated (13)	Eager to learn / enthusiastic / motivated (8)
	Engaged (8)	Engaged (5)
	Excited (6)	Excited (4)
	Positive impact on behaviour (3)	Positive impact on behaviour (1)
		Wanted more (3)
Pupil ownership	Freedom (2)	Freedom (4)
	Independence (1)	Independence (1)
		Individuality (4)
Pupil outcomes	Very well (16)	Very well (4)
	Learnt a lot (5)	Learnt a lot (2)
	High quality work (1)	High quality work (3)
	Proud of their work (3)	Showed thought and imagination (3)
	Learning objectives met (2)	Showed greater understanding (1)
	Completed work (2)	Worked effectively / focused (3)
		Worked quietly (1)
Collaboration	Helped each other (2)	Shared ideas (1)
	Groups worked well (2)	Benefitted from seeing each other's work (1)
	Interacted in unexpected ways (1)	
Problems	High ability needed the aims emphasised (1)	Pupil upset about own ability (1)
	"at times it was a little chaotic and rushed" (1)	Some nervous about performing (1)
		Some found it difficult (1)

Keith (Y2) explained behaviour management had not been an issue because pupils were engaged. This was echoed in the questionnaires, which included several examples of improvements in behaviour, such as the one below:

Previous problems with behaviour management dissipated and the children interacted in ways I'd not expected – by asking further questions and one child who refused to engage getting really involved

(Year 1 Questionnaire - child response)

Although some problems were identified by students, these are quite minor compared with the positive aspects listed. As is shown by the full quotation below, one of the problems noted was only a small drawback in what was otherwise a successful lesson.

Although at times it was a little chaotic and rushed the children were really excited and enjoyed the lesson. They took pride in the amount of work they produced and were eager to show it off and take it home.

(Year 1 Questionnaire, child response)

The problems that were identified in the Year 2 questionnaires all related to Lucas' (2001:39) key conditions for creative learning:

1. the need to be challenged
2. the elimination of negative stress
3. feedback
4. the capacity to live with uncertainty

It would appear that these conditions had not been met for a small number of students in these three classes. However, this could be viewed as a reason to

develop a creative ecosystem (Harrington, 1990) where risk taking is encouraged and mistakes valued, rather than a reason to avoid creative lessons.

Mentoring Factors

Many questionnaire respondents referred to school atmosphere as an important factor in creativity. This was especially important in the individual classroom where having a supportive teacher was a key factor. Lewis (Y1), Keith (Y2) and Jack (Y3) all discussed the importance of flexibility and being given freedom to try out their ideas. The contrast to this was being required to follow the teacher's plans and ideas, which Lydia (Y1), Kim (Y2) and several questionnaire respondents found frustrating. Helen talked about building relationships with the teacher-mentor as a form of creativity. This was evident with Kim, who had to negotiate with the teacher-mentor and the teacher in the parallel class so that she was allowed to do some planning independently.

Lydia and Lewis (Y1) both benefitted from teachers who were positive role models for creativity and encouraged them to be creative as well. However, Julia and Janet (Y3) both warned of the temptation to copy the teacher and how this inhibits creativity.

The questionnaire respondents were divided regarding the impact of being observed. The majority preferred not being observed because there was less pressure. One Year 2 student wrote, *"I found that being alone allowed me to be*

more creative as I didn't feel 'silly' for having innovative ideas and could express myself / ideas better". However, there were a few students who found that the pressure of being observed gave them incentive to be more creative.

Personal Factors

Most factors discussed so far have been beyond the students' control, other than the way in which they respond to those factors. However, many students recognised there were also factors that depended on themselves. Some were about preparation, ensuring sufficient subject knowledge and planning thoroughly. Others were more personal, such as being enthusiastic and feeling creative. The majority related to confidence: in subject knowledge, teaching ability, behaviour management and in self. This confidence is important because it impacts on willingness to take risks (layer 2).

Confidence and Risk Taking

Fiona described some students as wanting a recipe, while others were prepared to think independently and take risks (layer 2). Glenn, Helen and Ian also highlighted risk taking as a feature of creative lessons. Lewis (Y1) did not use the term risk taking but illuminated the issue by explaining creative teaching involved balance between giving children freedom while still having control. It is common for first year students to focus on behaviour management while on placement and this sense of needing control is indicative of that. I believe creativity involves giving control to the children and that scares many students.

Julia illustrated that these fears can be overcome. She had to teach a short maths lesson as part of a job interview and she actively involved the children in exploring the environment for shapes.

I would probably have been so nervous I'd either have done an activity at the tables or just probably sat for 15 minutes with the fear of the children are going to go riot if I let them go! Because I don't know them, I don't know their abilities, I don't know any behaviour. But having that, let them run with it, let them take an idea and let them show you what they know. I just thought it was great and the feedback I got was positive about that because I had actually involved all the children.

(Julia, Y3, interview)

Jack described how he intended to take risks on the final placement.

I guess with this placement as well I'm going to take the risk as well because it's sort of the last chance. I'm not seeing this as being a teaching practice. I'm seeing it as being the final thing before we actually go and get our own class. My placement teacher has been really supportive of me trying out things. She's said yeah try them out and if they don't work you've learnt from it. So I'm going to try a lot more creative things in maths definitely. Really, really just push myself in that and if it all goes wrong, well…

(Jack, Y3, December interview)

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Possibly, greater experience and knowledge by Year 3 gives students more confidence to take risks. However, it would be disingenuous to imply that all Year 3 students are willing to take risks on their final placement and in job interviews, since my experiences have demonstrated this is not the case. It should be noted that all three of the Year 3 students who participated in this research were graded as outstanding on their final placement and were among the first five to get permanent jobs. This research is unable to answer whether they were so successful because they took risks or whether they were willing to take risks because they were so successful. However, it was not just Year 3 students who were willing to give children control. Kim described giving control to a year 5 class, resulting in a very successful child initiated debate, while still in her first year. She also discussed her determination to give more control to the year 1 class in her second year placement to develop their independence.

Overall, school placements are viewed by students and tutors alike as opportunities for creativity, especially when allowed to do own planning. There are many factors, such as freedom to try out your own ideas, which impact on creativity in the classroom. Many of these are school factors and beyond the students' control, although some students managed to be creative despite restrictions. There are also personal factors over which students have more control if they want to be creative.

Creative lessons are seen as rewarding for teachers and beneficial to pupils. Making lessons interesting so you engage the pupils was a key factor and resulted in improved behaviour and high quality learning. Nevertheless there

were still some students who perceived creative lessons as risky and stuck to lessons where the teacher had greater control. While students were providing opportunities for children to demonstrate their creativity at layer 1 in the pyramid, there were fewer examples of layer 2 creativity. The teachers were more likely to exhibit layer 2 creativity themselves and there were also examples of layer 3, or Kaufman and Beghetto's (2009) Pro-C creativity, in their professional practice.

RESEARCH QUESTION 3B: *How is creativity made visible in the school placement documentation?*

School placement booklets have a general introduction, followed by specific task lists to be completed during the placement. Table 4.22 presents the document analysis separated into these two sections, using the same process as the assignments. I did not use Wordles for school placement documentation because there was much less variety of terms used. The art/presentation column had references to teaching arts subjects but was dominated by references to displays and presenting resources. The first two layers of the pyramid are well represented, although the vast majority of these are observation for layer 1 and evaluation for layer 2. In Year 2 words about creating and research are added to layer 1 and in Year 3 there is also reference to being imaginative. The phrase that I have included for layer 3 could have been put into the creative teaching column: creative, innovative lessons that inspire and motivate children (PE114 paired, PE214, PE304). However, I felt that the requirement of innovative lessons made this Pro-C level. This was

clearer in the Year 3 task: Developing new / innovative ways of working
(PE304).

The creative teaching column has similar statements without requiring
innovation, e.g. *Lesson content should be appropriate, challenging and*
motivating (PE114 paired, PE114 solo, PE214, PE304). Creative teaching had
the greatest variety of terms. In the first placement (PE114 group) the focus was
on questioning. This extended to developing children's creativity through
problem solving (PE114 paired, PE114 solo), extending children's decision
making skills (PE114 paired, PE114 solo) and developing children's evaluation
skills (PE304). There was also emphasis on personalising learning, through
responding to children's interests, learning styles and using a range of teaching
styles. In Years 2 and 3 students were encouraged to stimulate children's
interest in a range of ways, including first hand experiences, visits and visitors.

Table 4.22 School Placement booklets analysed with the Creativity Pyramid

	Layer 1	Layer 2	Layer 3	Art / pres	Creative Teaching
PE114 Group SP introduction	19	17	1	13	4
PE114 Group SP task list	47	15	0	12	9
PE114 Paired SP introduction	19	8	1	4	4
PE114 Paired SP task list	18	8	0	11	4
PE114 Solo SP introduction	4	12	0	4	2
PE114 Solo SP task list	16	13	0	11	6
PE214 Penultimate introduction	6	11	1	6	4
PE214 penultimate task list	22	10	0	10	9
PE304 Final SP introduction	10	5	1	4	8
PE304 Final SP task list	27	28	1	21	25
PE305 Transitional introduction	1	0	0	5	0
PE305 brief	1	1	0	0	0

One particularly interesting phrase in PE114 group placement was that the students should **act** as the lead teacher. By PE114 paired placement this had changed to act as the teaching assistant but **be** the lead teacher.

Therefore, creativity on school placement had a different focus than the assignments, with an emphasis on observation, evaluation, display and creative teaching. Although innovative lessons are expected from all three year groups, there are increasing expectations of own creativity and of developing children's creativity as students progress through the placements.

I also examined the school placement marking grids and a selection of lesson observations. The Year 2 placement, PE214, has a marking grid in the same format as campus based assignments. However, the other placements are marked using the Record for Professional Development (RPD), which has levelled statements developed from the QTS standards, while final placement also uses levelled Ofsted criteria for trainee teachers (Ofsted, 2008a).

Marking criteria for school placement have a greater range of creativity related terms than other school placement documentation, although still not as wide as campus based assignments. While observation still occurs for layer 1, there are more references to designing and making, as well as choice and exploring. Evaluation still features in layer 2 but there are many more references to making connections and adapting.

Table 4.23 Indicators of Creativity in the School Placement marking grids

	Layer 1	Layer 2	Layer 3	Art / Pres	Creative Teaching
PE114 Group standards	0	2	0	1	1
Working towards	0	1	0	0	0
Satisfactory	1	2	0	0	0
PE114 Paired standards	1	2	0	1	1
Working towards	1	3	0	0	1
Satisfactory	0	4	0	0	0
PE214 marking grid					
A*	4	10	0	5	6
A	4	10	0	0	6
B	4	10	0	0	6
C	3	5	0	0	4
D	3	5	0	0	4
E	-3	-5	0	0	-4
F	-3	-5	0	0	-4
QTS Standards	2	12	0	3	6
RPD					
Working towards	2	5	1	0	1
Met	4	14	1	2	5
Met well	6	10	1	3	14
Consistently well	4	18	6	3	13
Teacher level	1	14	0	3	9
Other text	3	25	1	6	2
Ofsted grades					
Features of Trainees					
Outstanding	0	5	0	1	3
Good	2	6	0	1	4
Satisfactory	0	1	0	1	0
Trainees' files					
Outstanding	0	3	2	0	0
Good	1	2	0	0	0
Satisfactory	0	3	0	1	0
Trainees' explanations					
Outstanding	0	1	0	1	0
Good	0	1	0	1	0
Satisactory	0	1	0	1	0
Noticeable characteristics					
Outstanding	0	3	1	0	4
Good	0	2	0	0	1
Satisfactory	0	1	0	0	0

.

There is also a series of references, in the PE214 marking grid and in the Ofsted explanations section, to problem solving in terms of finding ways of overcoming barriers to learning. The outstanding category of Ofsted's trainee characteristics also includes risk taking.

The layer 3 statements are mostly confined to the top bands: met consistently well (RPD); outstanding (Ofsted). There are some Pro-C type statements about creating own effective activities and resources; however, most focus on innovative approaches. One of these refers specifically to the innovative use of ICT. The only layer 3 statements outside the top bands relate to the standard Q8 (TDA, 2008), which talks about being constructively critical of innovation. In the RPD this has been developed to demand some creative and innovative practice from all students, from the 'working towards' level.

The other references to creative teaching are similar to the rest of the school documentation:

- Questioning
- Personalised learning
- Promoting independence
- Engaging pupils
- Challenging pupils
- Applying learning to new contexts
- Resources
- Teaching strategies
- Visits

What is missing from the marking criteria are references to developing children's investigative and evaluative skills.

Table 4.24 Indicators of Creativity in School Placement Feedback

	Layer 1	Layer 2	Layer 3	Art / Pres.	Creative Teaching
Final placement (Year 3)					
Janet, 3 obs	Observe 2 Make 1	Evaluation 4, -2	"Designed and used her own excellent ICT resources to inspire pupil learning"	Song 1 Dance 1	Cross-curricular / topic 3 Resources 3 Engaging pupils 2 Promoting independence 2 Teaching / learning styles 2 Questioning 1 Learning environment 1 Provide opportunities for investigation -2
Jack, 4 obs.		Evaluation 3, -2 Make connections -2	"Your resources were innovative and highly appropriate." "Outstanding preparation of ICT resources"	Performance 2 Display 1	Engaging pupils 4 Promoting independence 1 Questioning 1 Pupil ideas 1 Visit 1
Julia, 3 obs	Observe 1	Evaluation 4, -2 Make connections 2 Own idea 1			Engaging pupils 7 Questioning 4, -2 Making relevant 2 Learning environment 3 Personalising 1 ICT 1 Challenge pupils 1, -1
Penultimate placement (Year 2)					
Kim, 3 obs	Create 1	Evaluation 1 Discernment 1	Innovative -1	Teacher role 1 Use of voice 1	Questioning 3, -2 Engaging pupils 1 Pupil exploration -1 Resources -1

A negative number (-) indicates the comment related to a target for improvement.

As explained in Chapter 3 I used a voluntary sample of observation feedback sheets from the students. These are primarily formative documents and are not graded so they differ from the more summative, graded feedback of campus based assignments.

The feedback sheets are closer to the school placement documentation than the marking criteria, with emphasis on creative teaching, evaluation (layer 2) and, to a lesser extent, observation (layer 1). Evaluations are both praised and set as targets for further development. The three Year 3 students were all graded as outstanding so it is perhaps unsurprising to see references to innovative practice and a range of creative teaching aspects. They do differ from the placement booklets in having few references to display and other presentation aspects, although three of the four students did receive some comments in this category.

There appears to be reasonable consistency between school placement booklets and school placement assessment documentation, although the internal documents place a greater emphasis on observation and evaluation than the QTS standards, RPD and Ofsted criteria. I think this relates to the developmental nature of the programme over the three years, as opposed to the summative nature of the QTS standards and the Ofsted criteria which focus on qualifying to teach. This constructive alignment may be contributing to the perception of creativity on placements.

CHAPTER 5 - DISCUSSION OF THEMES

In the previous chapter I answered the individual research questions. However, looking across the questions some themes have emerged, particularly when comparing school placement with campus based assignments. These are further supported by data which did not directly apply to individual questions. In this chapter I discuss these themes and the implications they hold for the programme. The main themes are:

- Assessment for Learning;

- Types of creativity and engagement;

- Creativity Cascade.

ASSESSMENT FOR LEARNING

In the Literature Review I discussed the drive in primary schools towards formative assessment through AfL (e.g. Harlen, 2007), how this was matched by calls for more formative assessment in HE (e.g. Wisdom, 2006) and that AfL supports creativity. The findings of this study indicate that AfL, particularly as part of an apprenticeship model, is more apparent in school placements than campus based assignments. This is partly due to several fundamental differences between school placements and campus based assignments which I shall discuss.

Apprenticeship model

Kvale (2007) stated that apprenticeships were good models of assessment for learning, while Cowdroy and deGraaff (2005) promoted an apprentice model for developing creativity. The factors identified by Kvale (2007) included modelling by the expert, frequent feedback, self and peer assessment, expert and end-user assessment, and the apprentice gradually taking on more responsibility when deemed ready, which fits well with an AfL model (ARG, 2002). This matches Hewlitt and Smith's (2007) description of school placements and the aspects identified by tutors and students in the current study.

I think that the apprenticeship model is working successfully on placement and I would like to see this developed further on campus. There are some of these elements in campus based assignments, such as peer assessment in the group presentation and opportunity for frequent feedback in the on-line learning journal, but as a whole this model is less applicable to the campus based assignments. Modelling by the expert is a key difference. On placement the teacher-mentor models the entire process, including planning, teaching and assessing, and there are opportunities for the student and teacher-mentor to discuss these. For assignments we can provide exemplars (Pickford and Brown, 2006) but these show the finished product rather than the process of creating them. The findings showed that this was problematic because it encouraged copying rather than originality, as noted by Cropley (2001) and Irons (2008). Students also reported a temptation to copy the teacher on placement but recognised by Year 3 the need to be yourself. On placement it is

acceptable for students to copy the model, reserving originality until they have mastered the skills but in assignments copying the model is plagiarism. The tendency towards imitation is a weakness of the apprenticeship model in developing creativity, although an initial period of imitation may lead to future originality. Modelling the process rather than the product is more likely to result in originality because one process can result in many different outcomes. Tutors can model aspects of the assignment process, such as reflective writing or using literature effectively, but much of the process is internal and hidden; rather than observe the process the students receive a condensed articulation of it. Tutors need to explore more ways to model processes in ways that promote confident autonomy rather than conformity. A possible solution is for Y3 students to work alongside Y1 students, modelling these aspects on a one-to-one basis. This could be beneficial to both year groups but would need to be incorporated into relevant modules to ensure participation.

Feedback

Both the apprenticeship model and AfL emphasise the importance of feedback. On placement there is prompt, detailed, frequent, formative feedback on lessons which is discussed. Self-evaluation is encouraged in this process and contributes to target setting for improvement while also recognising strengths. This matches Gibbs' (2006) criteria for effective feedback. Feedback for campus based assignments is also detailed but is more summative. It is delivered on paper 20 working days after submission and is not discussed, reducing the feedback's impact. Self-evaluation is limited to identifying how

previous targets were addressed, with tutors solely responsible for setting new targets. Students understanding the criteria is important (Bloxham and West, 2007; Mentkowski, 2003; Price and O'Donovan, 2003) so requiring more self-evaluation using the marking grids would be beneficial. Since the marking grids were found to include many creativity terms this increased understanding could lead to enhanced creativity.

Findings showed that the mark received had greater impact than the more formative written feedback, as noted by Pickford and Brown (2006) and Prowse et al (2007). Since we teach assessment issues with respect to primary children, students understand the importance of formative feedback and the detrimental effect that giving a numerical mark can have on this but the university procedures mean we cannot model best practice in this regard, except on placement. Julia, a very conscientious student, said that she tried not to look at the mark before reading the formative feedback on her assignments, but struggled to do so. By contrast, lesson observation feedback does not have a mark so the focus is on the formative feedback. Although ultimately students are awarded a mark for most placements they still get the written feedback several weeks before the final mark. We should challenge existing protocols and explore a similar approach with assignments.

Performativity

The focus on assignment marks, reported above, relates to a performativity culture (e.g. Knight and Yorke, 2003). Several students said that being marked

inhibited their creativity, supporting Lomas' (2007) view; however, many said that being creative resulted in higher marks and others saw high marks as validating their creativity so the relationship between creativity and performativity is not simple (Clouder et al, 2008). Analysis of marking grids showed that creativity, especially layer 3, was most noted in A* and A, becoming less frequent in lower grades. This coincides with the findings in objective 1, demonstrating that tutor behaviour in writing marking grids is consistent with their expressed views about creativity. Feedback was consistent with marking grids in the types of creativity commented upon but generally extended a grade band lower than the grids, which may corroborate the view expressed by several tutors that the presence of creativity can raise the mark of an otherwise weak assignment, but also that creativity can be misdirected.

Although the Year 3 students interviewed saw final placement as an opportunity to experiment and take risks, these were very successful students so may not be typical. The questionnaires showed there was a range of views with some students eager to be creative even when observed, while others worried about behaviour and were reluctant to take risks, especially when observed. This worry about personal performativity has been found to inhibit qualified teachers as well (e.g. Ellis et al, 2007). Some students found their creativity hampered by the wider performativity agenda in schools (Troman, 2008) of Ofsted, SATs and targets. However, some students, experiencing these same pressures, were able to make a creative response.

Cropley (2001) and Wyse and Dowson (2009) stated teacher feedback should tolerate errors to encourage risk taking. Tutors and Year 3 students talked about risk taking being encouraged in school placement, with errors being ameliorated by students recognising their own mistakes and reflecting on how to overcome them. However, this is difficult in a summative assessment context (Biggs and Tang, 2007), especially if the errors result in assessment criteria not being met, as several tutors described. Nevertheless, there was some evidence, in the interviews and in the assignment feedback analysis, of tutors commenting positively on risk taking (Year 1, Starting Point, grade B; Year 3, Individual Presentation, grade B). Adding risk taking explicitly to the assignment marking criteria, as it is on the Ofsted (2008a) outstanding placement criteria, could encourage more risk taking and originality.

Student Involvement in Assessment

Another factor in both the apprenticeship and AfL models is peer and self-assessment (Bloxham and West, 2007; Price and O'Donovan, 2006). There is already peer assessment in the paired and group placements and the group presentation but this could be developed further. A more radical solution, which was proposed by one of the tutors, is for students to help decide what should be assessed and help design the marking criteria. This is similar to innovative approaches used by Cowan (2006), Kleiman (2005) and Walker and Gleaves (2008). We could try doing this in module PE211, which is about assessment, and could try to provide greater choice in assignments.

Constructive Alignment

According to Knight (2007) and Biggs and Tang (2007), constructive alignment of aims, teaching, assignments and feedback is important in promoting learning; this is compatible with AfL (ARG, 1999; Harlen, 2007). The school placement documents generally showed constructive alignment in the aspects of creativity expected. Examination of assignment briefs and marking grids sometimes showed limited constructive alignment between the types of creativity noted most frequently in these, although several assignments, like the presentations and the group display did have strong alignment between brief and grid. This mismatch between assignment brief and marking grid for Starting Point may explain why several students felt that this was a creative assignment but were disappointed in their marks and feedback. This assignment is probably the most extreme example because it involves students engaging in investigational and artistic work which is described in the brief but not assessed. However, there was still much greater constructive alignment than in the programmes criticised by Ogunleye (2006) and Hawe (2007). In all assignments I checked there was a strong alignment between written feedback and marking grids, which emphasises again the importance of students understanding and using the grids when undertaking assignments.

I focused on constructive alignment within individual modules. However, Moon (2002) stated that programme outcomes might involve interaction between modules and therefore not exist discretely in modules. Gosling and Moon (2002) even said that they might become evident in later practice which could fit

with the apprenticeship model. We could be achieving our aim of producing creative teachers by ensuring they have the necessary skills, even if some do not move from imitation to creativity fully until after graduation. Nevertheless, I think we should focus on achieving at least layer 2 creativity before graduation. A continuing emphasis on students developing their own educational philosophy should help achieve this. We should also review all assignments to ensure there is constructive alignment between the aims, the brief and the marking grids.

TYPES OF CREATIVITY AND ENGAGEMENT

The main types of creativity the assignments focused on matched the annotated creativity model (Figure 4.2) and also matched the QCDA (2010) list of creative behaviours in children, especially making connections, evaluating, making choices, questioning and challenging. Another key aspect, engaging an audience, also featured in the model but was part of the QCDA (2010) list for teachers rather than children. This focus on engagement helps explain the high ratings of the presentation assignments and those which involved preparing resources for children.

O'Donovan (2003) and Knight and Yorke (2003) found that presentation assignments produced greater tutor engagement and resulted in more personalised feedback. While there was greater emphasis on engagement in presentation marking criteria, analysis of feedback sheets showed that tutor engagement comments were present in all assignments studied, often extending throughout the grade range, personalising the feedback. Jack

remarked positively about tutor comments in his assignment feedback which demonstrated engagement. The greater engagement in presentation feedback may also be due to the fact that these assignments are not anonymous while most others are.

School placement documentation included expectations of many elements of creative teaching for all students, starting in Year 1, but innovation was primarily expected from the best students. Since several authors have related creative teaching with good teaching (e.g. Coultas, 2008; Craft, 2005) it is unsurprising that these elements appeared in Ofsted's (2008a) 'outstanding' category and the RPD's 'met consistently well' column. Jeffrey (2006) said a teaching innovation could be entirely the teacher's own idea or could be an adaptation of an existing idea. By this definition nearly all of the students will be involved in innovation on placement, although it is not clear how much the original idea had to change to count as innovation.

There was evidence of both creative teaching and teaching for creativity, often with these integrated (Jeffrey and Craft, 2004). The creative teaching addressed layers 1 to 3 of the Creativity Pyramid, while the teaching for creativity focused mostly on layer 1, although there were some layer 2 problem solving and self-evaluation. Of NACCCE's (1999) three facets of teaching for creativity, encouraging and fostering were reported but identifying was not. It may be that identifying children's creative strengths needs a longer relationship than the students have on placement or it may be a level of personalised learning that many students do not achieve. Teaching students about creativity assessment

tools, such as those devised by Ellis et al (2007) and Redmond (2005) might help them with identifying pupils' strengths.

Jeffrey and Craft's (2004) additional facet, ownership and self-evaluation, was also reported, although often the level of ownership only involved offering the children choices. An arts model dominated the children's creative opportunities but not the teachers' creativity. This may link to Davies et al's (2006) findings that students perceived the arts subjects as most creative. However, these arts were being applied to a wide range of subjects, as well as other aspects of creativity such as questioning and investigating.

Core subjects were well represented in the creative lessons described by tutors and students, despite performativity, contrary to the findings of Davies et al (2006) and Kampylis et al (2009) but similar to Robson et al (2008). However, I am concerned that the assignments in Years 1 and 2 relating to core subjects generally rated low for creativity. This contrasted with high ratings for the mathematics investigations in Year 3, but this module is not in the revalidated programme. Therefore, there is a danger that we are unintentionally promoting the view through the hidden curriculum that the core subjects are not creative and / or should not be assessed creatively. We need to review the core subject assignments to promote a more creative approach.

Engaging the children is a key part of creative teaching (Anderson et al, 2005; Davies, 2006) but engaging productively is also a key characteristic of creative learning (Jeffrey, 2006). The desire and need to engage the children was

commonly expressed by both tutors and students and was a driving force for creativity. Several participants also spoke of personal satisfaction from being creative (Troman and Jeffrey, 2008; Fischman et al, 2006). There was evidence from questionnaires and interviews that the majority of children who experienced creative lessons were engaged productively, with high motivation, good behaviour and high levels of learning accomplished. This needs to be emphasised to students to help overcome fears about creative lessons.

CREATIVITY CASCADE

The link between creative teaching and creative learning is important since students on the programme are simultaneously learners and teachers. The creativity cascade, from tutor to student to pupil, was raised by both tutors and students.

> We're trying to get our students into a certain frame of mind. That they question, that there's no one right answer; that we can respond in a number of ways. If we can get them to be thinking like that then the likelihood is that they're going to go into school and be creative and work with the structures that they have to work within in a creative way.
>
> (Beth, tutor interview)

Carl was not content with the creativity cascading to the pupils, wanting students' creativity to result in wider changes to education.

I think individuality is such an important part of, not only making

teachers who are going to make a difference in children's lives, but

have got the thought processes to think that through, but also have

got the individuality to move education forward and make a

difference. To be a professional and to be, one day, a leader. That's

what I want. That's what the teaching profession needs, not just a lot

of technicians.

(Carl, tutor interview)

All students interviewed discussed creative sessions on campus and several linked these directly to inspiring them to be creative on placement. Some referred specifically to tutors modelling creativity which they then imitated on placement. This fits with the apprenticeship model (Cowdroy and deGraaff, 2005; Kvale, 2007) and being a role model (QCDA, 2010). However, some spoke more broadly of their creative learning on the programme.

…having the opportunity to be creative on this course has enabled

me to be creative as a teacher because I've had those experiences

myself. And I think if you feel like you're enclosed and you've been

limited, you're going to limit the children because of the experiences

you've had and you're used to it and that's how it is. But if you've

been able to give your creativity you know how to provide

opportunities for the children to be creative. So that's also how I've

been able to do what I've been able to do on placement. From having

those opportunities myself on this course.

<div align="right">

(Julia, Y3, interview)

</div>

Although all students acknowledged there were creative sessions, Lydia (Y1) said they did not allow her to be creative in the way she wanted. There may be other similar students who find themselves 'enclosed' and 'limited' in Julia's terms, rather than empowered, despite creativity being modelled.

Tutor and student interviews, the focus group, questionnaires and document analysis all concurred that there was scope for creativity on school placement and in many assignments on the programme. There was general agreement that presentation assignments had the most creative potential, although there were also creative written assignments. Some assignments, like the audit and action plan were rated creative by some students but as lacking creativity by others. Providing a wide range of assignments will help ensure that all students have some assignments in which they can use their type of creativity.

Lucas (2001) had four conditions for creative learning, all of which relate to the assessment process. The first, the need to be challenged, was not really discussed by tutors or students, but I know from previous module and programme evaluations that students generally feel sufficiently challenged by assignments. The third was feedback, which was discussed earlier. His second and fourth conditions related to the emotional climate, since they were about removing negative stress and being able to cope with uncertainty. Knowledge

and confidence were highlighted as prerequisites for creativity by students and tutors for both assignments and school placement. I believe that these relate to Lucas's (2001) conditions because confidence, based on broad knowledge, will reduce stress and allow you to engage with ambiguities. As tutors we can introduce students to up-to-date knowledge but the students must extend this independently. We also need to encourage students to make connections with their existing knowledge.

Establishing this safe atmosphere where students are open and willing to take risks is important to creativity both in primary children (e.g. Fisher, 2004; Haste, 2008) and HE (e.g. Jackson, 2006b; Prowse, 2007). It was clear from student responses that exams did not promote this safe atmosphere, producing anxiety and reducing creativity. We should review the purpose of exams to determine whether there are benefits which outweigh these problems. Long (2008) worried that using innovative assessments would increase student anxiety because students would not know how to respond to them. There was some support for this view in the focus group and interviews, but overall the more unusual assignments rated higher than exams and essays, both in terms of perceptions and document analysis. Bryan and Clegg (2006) felt that innovative assessments could promote autonomy. While there is evidence from document analysis that autonomy in the form of innovation, challenging preconceptions and original thought were rewarded in the innovative assignments, this also occurs in some more traditional types. Therefore, we should maintain a range of assignment types.

Harrington (1990) called for open-ended assignments in his creative ecosystem and there have been many calls for variety and choice in HE assessments (e.g. Long, 2008; Pickford and Brown, 2006). Supporting this both students and staff reported that having assignments which encouraged individual interpretation, with choice in content and format, was important to creativity in assessment. However, both students and staff reported that these choices can result in anxiety and stress, presumably because Lucas's (2001) final condition of living with uncertainty has not been met. Therefore, when giving choices we need to ensure that we provide support that reduces stress while promoting individuality.

The students identified a range of conditions which promoted creativity on school placement, most of which matched the conditions Fryer (2006) identified for HE tutors and Harrington's (1990) creative ecosystem. Some of these were school factors, such as resources, timetable, school ethos, curriculum and physical space, although in many cases the student could ameliorate them. While Loveless et al (2006) had found that school context was important, Mutton et al (2010) determined that the student's attitude towards the context, perceiving it as a constraint or an opportunity, was more significant. I found evidence to support both views. A key factor was having a supportive mentor who gave the student freedom and permission to experiment, while also modelling creativity, matching Fryer's (2006) tutor autonomy and Harrington's (1990) mentor / role model and permission / support. Similar to Hayes' (2002) findings, not all of the students had these supportive mentors who modelled and

encouraged creativity; this is something that could be highlighted more in mentor training.
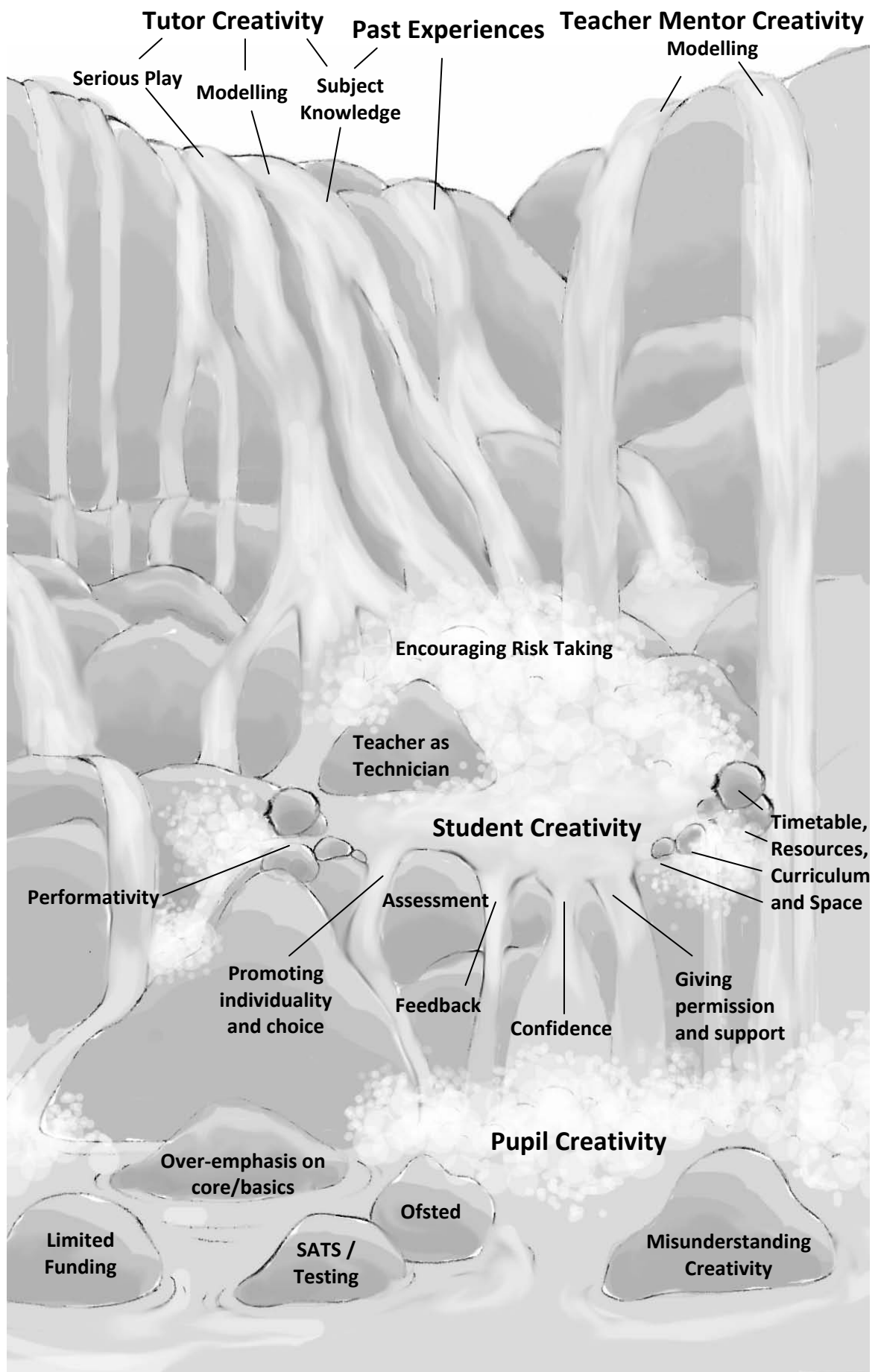
Figure 5.1 Revised Creativity Cascade

Harrington (1990) included opportunities for play in his creative ecosystem. I previously supported a research project about developing creativity in art which concluded that free play helped children discover the possibilities of the materials. The difficulty for the programme is that children take play seriously but adults often do not. Some of the sessions that students described as creative include opportunities for play but I have observed that some students do not take these seriously. Play, in which you explore possibilities, does not fit well in summative assessment yet summative assessment is the main driver of student learning (Bloxham and Boyd, 2007; Boud, 2007). The university college prayer exhorts the staff and students to "work together with seriousness" (BG, 2003). The challenge is to convince the students that play is serious and provide sufficient incentives for students to engage in it.

All these factors contribute to the revised Creativity Cascade (Figure 5.1), whereby tutors and teacher-mentors try to develop creativity in students who can then cascade to their pupils. In the initial cascade (Figure 1.1) I had not considered the role of the teacher-mentor. In the revised cascade, modelling by both the tutor and the teacher-mentor are important sources. However, I have also included the students' past experiences as a major source of creativity. This research has focused on the cascade to the students both as learners and trainee teachers. The rocks in the pupil creativity pool have been drawn from the literature and from the students' reports in the interviews and questionnaires. However, I have not studied pupil creativity directly in this research.

In addition to modelling creativity the tutors provide opportunities for serious play and help to develop subject knowledge. All of these sources can contribute to the pool of student creativity, however sometimes they will have no impact, which is shown in the model by diverted flows and rock pools. All three also contribute to establishing the conditions for creativity by encouraging risk taking. Other factors, like formative feedback and providing support, promote the flow of creativity. As shown in the model, some of the factors discussed, like performativity and restrictive timetable, are rocks in the flow, damming creativity for some students, though the resulting pressure increases the flow of creativity for others. Encouraging risk taking and independent thinking could increase the proportion of students who respond creatively to these barriers. One of the rocks is misunderstanding creativity. I believe it is important that we encourage students to develop their own views of creativity, while being explicit about what tutors perceive as creativity, especially in the context of assessment.

We need to be explicit about the Creativity Cascade so students know we value creativity and want to see it in their teaching. We need to examine the Creativity Cascade for ways to enhance the flow, overcoming or minimising obstacles to creativity.

CHAPTER 6 – CONCLUSIONS

The overall aim of the research was to develop a better understanding of creativity in assessment, in order to facilitate achievement of the programme aim of developing creative teachers. This aim was researched through three objectives and seven key questions which were answered in detail in Chapter 4. In this chapter I will summarise these findings, evaluate the research and then make recommendations for future practice and future research.

I have concluded there are opportunities for creativity in assessment, both in campus based assignments and school placement, consistent with the programme aim of producing creative teachers. However, some assignments were deemed to have more creative potential than others, especially those involving presentations. This may be due to presentations having a more flexible format than essays but the need to engage the audience was an important factor. This need to engage the audience also resulted in creativity on school placement.

There was some evidence of a performativity culture, both in the students and in the schools, which restricted creativity, but this was largely overcome by the formative nature of the school placement assessment which encouraged risk taking. However, the summative nature of assignments resulted in student fears about risk taking which restricted creativity. Some of these fears resulted from students not understanding the language used in assignment documents.

Students tried to overcome these fears by relying on exemplars but this resulted in pressure to conform to the exemplar, again restricting creativity.

Nearly all of the assignments were deemed creative by someone, but different people responded to different types of assignment. The exception was the exams which universally were considered uncreative. Most of the assignments which were rated highly as creative had constructive alignment between the types of creativity most noted in the assignment briefs and those in the marking grid. Some assignments, like the Starting Point, lacked constructive alignment of creativity elements between the brief and the marking grid but all of the assignments analysed showed constructive alignment between the marking grids and feedback. There was constructive alignment between the school placement booklets, the internal assessment documents and the tutor feedback. These were closely related to the external assessment documents (QTS standards, Ofsted criteria and RPD), although the internal documents put a greater emphasis on observation and evaluation. This relates to the apprenticeship model of school placement which emphasises AfL.

In this research I have concluded that the tutors and students on the programme have a broad view of creativity, with generally overlapping definitions, although they found it difficult to state their definitions explicitly. The tutor conception emphasised thinking, making connections and developing own style, all of which fit into the aims of the programme of producing independent, creative, reflective practitioners who develop their own educational philosophy. These ideas, along with engaging an audience, also dominated assignment

documentation and feedback. The students often emphasised interpretation and there was some evidence that female students were more likely to include self-expression and an arts based view.

Both tutors and students held a democratic view of creativity, that creativity was possible for all people, including children, not just for geniuses. There was evidence that creativity was perceived as relevant to all of the passing grade bands (A* to D), while misdirected creativity might exist in the failing grade bands (E, F). However, there was a general perception that creativity was more apparent in the top grade bands (A* and A). Document analysis confirmed that creativity terms, especially terms related to layer 3 of the Creativity Pyramid, were most prevalent in the A* and A bands in the marking grids and feedback. However, this does not equate to an elitist view of creativity because the top grades were seen as a reward for creativity combining with knowledge and understanding, not that only certain people were capable of creativity. The top grades often represented creativity that was valuable to the local community or peer group (layer 3). Lower grades sometimes represented creativity that was just valuable to the person (layers 1 or 2) but sometimes represented that the creative elements were not sufficiently underpinned by knowledge and understanding.

I have concluded that the assignments, the school placements and the taught sessions all contributed to a Creativity Cascade, resulting in both creative teaching and teaching for creativity on placement. The teaching for creativity related primarily to layer 1 of the Creativity Pyramid, with some problem solving

and evaluating from layer 2, while the creative teaching included layers 1, 2 and 3. Creativity was included across the curriculum and was well represented in the core subjects. However, this prominence may relate more to the frequency with which the core subjects are taught compared to the foundation subjects, rather than underlying beliefs about the inherent creativity of different subjects.

The students identified a range of conditions which promoted creativity on school placement. A prime factor was having a supportive mentor who modelled creativity, gave permission for creativity and supported risk taking. This helped overcome some of the school factors, such as lack of resources or a restrictive timetable, which could inhibit students' creativity. Personal factors, such as knowledge, confidence, sufficient preparation and enthusiasm, were also important. Most of these factors were also important for promoting creativity on campus based assignments. The students who undertook creative lessons found that children responded well to them, with high motivation, good behaviour and high levels of learning being achieved.

MODELS OF CREATIVITY

The three models I developed contribute to the originality of this research:

- Creativity Pyramid (Figure 2.7)

- Annotated Creativity Model (Figure 4.2)

- Creativity Cascade (Figure 5.1)

The Creativity Pyramid (Figure 2.7) evolved in response to literature, undergraduate and post-graduate student input, and feedback from colleagues, both on the programme and from other institutions. It was developed from Beetlestone's (1998) three tier model of creativity but I feel the extra layer is an important addition because it includes professionally significant but not genius-level creativity. The resulting four layer pyramid was similar to Kaufman and Beghetto's (2009) four C model of creativity but I think the broad range of creativity terms included in the pyramid makes it more explicit. The Creativity Pyramid was the main analytical framework for this research but I think it will also be useful for students to reflect on creativity in their teaching, both for themselves and their pupils. My research indicated that the student-teacher was often engaged in higher layers of creativity than the pupils. Through using the Creativity Pyramid students might be more conscious of this and be able to provide more opportunities for pupils to engage in higher layers of creativity.

I also developed a Creativity Model (Figure 4.2), which presents the range of tutor and student views on creativity from my research, annotated to show tutor emphasis on different aspects. This is also likely to be an evolving definition as staffing and the general educational climate changes. I recommend that this model be shared with students so that they understand the scope for creativity within the programme. However, I think that further research is needed to create an annotated model which represents the student emphasis on the different aspects of creativity. This could also be extended to include teacher-mentors to see if their views on creativity coincided with those on the programme. My version would not be useful to other programmes but the approach to

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constructing it could be used in schools or HE to develop a local shared understanding of creativity.

The final model was the Creativity Cascade (Figure 5.1). This represents the aim for creativity to cascade from tutors and teacher-mentors to students, then to pupils, while acknowledging the elements which may increase or impede this flow. I think that this visual representation explains the idea more powerfully than words. This model will be useful to share and develop with tutors, students and teacher-mentors so we can explore ways of increasing creativity for the students both as learners and teachers.

EVALUATION OF THE RESEARCH

Trustworthiness

In the Methodology I discussed how I attempted to promote trustworthiness in the research and its methods. In this section I focus on trustworthiness of the analysis of findings. The nature of qualitative analysis is that it depends on the interpretation of the researcher and, therefore, may not meet the requirements of quantitative models of reliability (Anderson and Kanuka, 2003). This is why Creswell (2003) emphasised the importance of validity over reliability and generalisability in qualitative studies. Cohen et al (2007) redefined reliability for qualitative studies, rejecting replicability, focusing upon:

- being detailed and comprehensive;
- faithfulness to real life;

- being specific to the context;

- honesty;

- being meaningful to respondents.

I have tried to be comprehensive in my data presentation. However, the quantity of data involved meant this had to be condensed extensively through coding, categorising and, in some cases, quantifying responses. This means details have been lost. I went through the coding process several times, comparing individual examples and searching for best fit, but nuances in the data meant it was often hard to be certain when different instances matched. I refined the coding several times, looking for commonalities and overlap, reducing the number of categories. This helped clarify the themes but made the categories broader, hiding subtle variations. When refining coding I went back to the original interviews or documents to ensure I was seeing the instance in context. However, the coding came from my interpretation which may differ from other people's. Therefore, I am not claiming replicability but Cohen et al's (2007) broader conception of reliability.

As a programme evaluation, this study has been specific to the context and grounded in real life. I have endeavoured to be comprehensive by gathering both staff and student views, through interviews, questionnaires and a virtual focus group, as well as analysing all of the assignment and school placement documents. This has resulted in triangulation of viewpoints and triangulation of data sources, which some say contributes to validity (Creswell, 2003; Cousin, 2009), adding rigor, breadth and depth (Denzin and Lincoln, 2005). Generally

the different viewpoints and sources coincided but I have reported when individuals have expressed discrepant views. I have used respondent validation (Boeije, 2010; Creswell, 2003), with both students and tutors, at several points in the analysis to ensure that the analysis was meaningful to the participants. My interpretation has been further checked through meetings with my supervisor and action learning set.

Limitations

I have been explicit about how I developed the Creativity Pyramid as my analytical framework and then how this was used to analyse the documents and aspects of the interview, questionnaire and focus group data but this approach has limitations. A similar approach was used by Jackson and Shaw (2005) when analysing creativity in subject benchmark statements.

> The analytical tool contains eighteen possible indicators of creativity and, whilst it is by no means certain that the presence of an indicator is a guarantee of student practice of creativity within the curriculum, at least it indicates that the opportunity exists for such practice.
>
> (Jackson and Shaw, 2005:4)

This is also true of my analysis and is what I perceive as the main weakness of the study. Although I have identified terms related to creativity, their presence does not ensure the resulting assignments will be creative. Many of the elements may be considered necessary but not sufficient conditions for

creativity. For example, creativity involves evaluation but evaluation in itself does not guarantee creativity.

Another limitation is that the elements I have identified through my broad definition may not coincide with other stakeholders' conceptions of creativity, especially since creativity lacks a clear definition (Davies, 2006; Gibson, 2005). In the Methodology I stated my own position regarding creativity and education. I have not questioned whether creativity should be part of education because I have started with the premise that it is fundamental to learning. I have a very broad view of creativity and this may have biased my interpretation of the data, inclining me to accept a broad range of definitions rather than trying to identify a more focused view.

Rapley (2007) has pointed out that relying on methods like interviews means that you find out what people say without any proof of what they actually do. This is another limitation of my research since I have not attempted to observe creativity on school placement or analyse assignments for creativity, although the feedback sheets gave some indication of creativity observed by others.

During the interviews both student and tutor responses were skewed towards the assignments they had been writing or marking recently. This may have biased the results and my interpretation of which assignments are more creative. Because the programme was in transition to a revalidated version while I was conducting the research, there have been many changes to the

assignments since I began. This means that I need to be cautious about

generalising from my analysis to the current versions of assignments.

The sample of students involved in the study raises questions of validity, since

the students who volunteered to take part in the research may not be typical of

the whole population (Cohen et al, 2007). The questionnaires were given to all

Y1 and Y2 students and completed by a voluntary sample. However, it is

possible that those who chose to complete the questionnaire had a greater

interest in the topic. Even if they were just more willing to take part in things

outside of their required tasks this sets them apart. Although the return rates

from the Y1 (69%) and Y2 (60%) are reasonable (Gillham, 2007) that still leaves

the views of 31% (Y1) and 40% (Y2) unaccounted for. I used Y3 students in the

questionnaire pilot but did not conduct questionnaires with the Y3 students in

the main study so their views are not included, other than the students who

participated in the interviews and focus group. I have already explained that the

Year 3 interviewees were atypical. If the students who did not take part had

significantly different views of creativity and assessment that would reduce the

validity of my findings and conclusions.

Generalisability

In the Methodology I explained I was using naturalistic generalisation (Stake,

2005), which means I am not claiming this study is generalisable beyond this

programme but hope that readers may find aspects which resonate with their

own situation. However, I still need to be cautious when generalising within the

programme. There have been several staff changes since I started this research so current tutors may not share the views of those interviewed. The student population changes annually and the wider educational climate is in flux. Although I need to be cautious about generalising this research to the current and future programme, I believe that the research is trustworthy, being context specific, comprehensive and confirmed through respondent validation as being meaningful to participants. I hope that my presentation of methodology, sample details, data, analysis, triangulation and research limitations have allowed the reader to confirm this (Tooley and Darby, 1998).

Review of the Process

In the Literature Review I showed there had been research on creativity in subject benchmark statements (e.g. Jackson and Shaw, 2005), module design (e.g. McGoldrick, 2002), HE tutors' views (e.g. Fryer, 2006), ITE students' views (e.g. Davies et al, 2006) and evaluations of programmes promoting creativity through assessment (e.g. Cowan, 2006). My research is original because it brings these together in a single programme evaluation.

Coming from a quantitative research background I was most comfortable initially with the document analysis and the quantifiable sections of the questionnaires. However, I recognised the limitations of this data and appreciated the richer data available through interviews and open questions. I developed my skills as an interviewer and my ability to interpret interview data through undertaking this research. I also now have a much greater

understanding and appreciation of the interpretive paradigm, which was one of my personal goals.

I believe I interviewed an appropriate range of people and that the semi-structured format was useful. It may have been beneficial to also interview some teacher-mentors and pupils to give a wider picture of the cascade. While I did gain some data from the virtual focus group this was not a particularly successful aspect of the research. I am unsure whether this was due to my limitations as a facilitator or whether the format itself did not appeal to the students. Although anonymity would not be possible, a face-to-face focus group may have been a better choice.

The questionnaires were valuable for capturing a larger quantity of student views while ensuring anonymity. The main limitation was that these only covered Year 1 assignments. It would be advantageous to create similar questionnaires for the end of Years 2 and 3 to cover the full range of assignments.

During the research I analysed over 150 documents. It might have been more effective to use a smaller number but examine them more closely, perhaps through discourse rather than content analysis. Nevertheless, I think the comprehensive approach was appropriate for a programme evaluation.

Overall, I am confident that my research has been thorough, considering a wide range of viewpoints and delving deeply into the assessment processes. I

believe that I have developed as a researcher but also as an educator. I think that my research can help refine our practice on the programme and therefore I have several recommendations.

RECOMMENDATIONS

From my reading and my research I have a series of recommendations for the programme.

- Shared definition of creativity

- Greater use of AfL on campus based assignments

- Check constructive alignment

- Review core subject assignments

Shared Definition

Schools were advised to develop a shared understanding of creativity (Anderson et al, 2005; QCA, 2003) that is embedded in the ethos of the school (DCMS, 2006). The tutor interviews have shown me that we do have a general shared understanding of creativity, although there are some individual differences. I recommend we share the tutor view of creativity (Figure 4.2) with the students so that they have a clear understanding of what we mean by 'creative teachers'. This shared understanding of creativity and its relationship to learning and teaching should extend to the Creativity Cascade so that both tutors and students are aware of the factors that may facilitate or inhibit creativity and consider the extent we can control or overcome these. However, I

also believe that students should continue to be encouraged to develop their own understanding of creativity while considering a range of definitions and their implications for teaching and learning. This would include both creative teaching and teaching for creativity, their differences and their commonalities.

Greater Use of AfL

The research has demonstrated that an AfL approach is embedded in the school placements but only limited aspects are present in campus based assignments. I believe greater use of AfL in campus based assignments would enhance student creativity (Wisdom, 2006) and generally benefit their learning (Bloxham and Boyd, 2007). In particular I recommend:

- Greater student engagement with marking criteria, such as using grids to mark work (their own, each other's, exemplars);
- Students helping to formulate marking grids;
- More peer and self-assessment;
- Developing formative assessments which involve children or public presentation so that students feel obliged to take part;
- Returning formative feedback before the mark.

Check Constructive Alignment

During revalidation the tutors ensured constructive alignment between the module outcomes, the teaching programme, the assignments and the assessment criteria. However, some of the programme aims went beyond the

individual module outcomes, relating to a more holistic view of the programme and the interaction of the different modules. The conceptual model of the programme (Table 1.1), with three strands of learning brought together in school placements, demonstrates that individual modules were intended to link and interact. However, the focus on constructive alignment at the module level has meant that constructive alignment for the broader aims was not always checked. This research has indicated that there is potential for creativity across the programme but there are aspects, such as alignment between some assignment briefs and marking grids, which could be improved. I have examined creativity in this research but there are other overarching aims for the programme which should also be checked.

Review Core Subject Assignments

Although both PE306 mathematics assignments rated high for creativity, these were part of the former programme and no longer exist. Several of the assignments which currently assess the core subjects of English, mathematics and science were among those rated lowest for creativity, including two exams. This may have resulted from performativity pressures. The core subjects have a large body of specified knowledge in the curriculum and the QTS standards (TDA, 2008) demand evidence that the students are confident with this. In schools there is an emphasis on formal summative assessments, target setting and accountability for English and mathematics. I fear that this has unconsciously influenced our assessment choices for the core. The presentation and display assignments, which were rated highly creative, are

mainly linked to foundation subjects, which are not part of this school performativity. I worry that the types of assignment we have designed for the core subjects reinforces performativity messages to the students and privileges the core subjects. Therefore, I believe that we should review the assignments related to the core subjects, looking for alternative assignment models which promote AfL and more creative approaches to learning.

FURTHER RESEARCH

Further research could explore the impact of different ways of assessing the core subjects. In particular I would like to see if more creative and formative models of assessment for the core subjects had an impact on students' approaches to assessing their pupils in the core subjects.

Among the factors that students identified as inhibitors of creativity was fear of behaviour problems, although nearly all of the students who described creative lessons reported that pupils were motivated, engaged and learning, with fewer behavioural issues than normal. I believe that further research is needed to convince students of the benefits of creative teaching and teaching for creativity. This could take the form of a series of case studies, including different sorts of creativity, in different subjects and with different ages. I believe that evidence of creativity having a positive impact on achievement and behaviour will be increasingly important because of the coalition government's emphasis on these aspects (DfE, 2010b).

These case studies could be used as exemplars. Although some students may respond to these exemplars by imitation, this might be the first stage in their apprenticeship before being able to imagine their own creative lessons. Additional research into the use of exemplars could explore ways of promoting analysis so that students learn from the examples rather than merely copying them.

Since the programme, the staff, the students and the educational climate are continually changing, the programme evaluation should also be on-going. I have already said that I would like to do further research to identify the areas of the Creativity Model that the students and teacher-mentors emphasise. I would also like to conduct questionnaires for the Year 2 and 3 assignments. Conducting similar research in other institutions would help identify the extent the findings can be generalised or if they are unique to this programme.

VALEDICTION

My overall aim was to develop a better understanding of creativity in assessment, in order to facilitate achievement of the programme aim of developing creative teachers. I believe that I have achieved that aim and that the recommendations from this research will further promote creativity on the programme, facilitating the development of creative teachers.

Already, several of the participants in the research commented that taking part had led them to think more about creativity and how they could incorporate it

into their teaching and learning. Building on this impact, a continued emphasis on creativity could further increase focus by both tutors and students on creative teaching and teaching for creativity. This would help achieve the programme aim of producing creative teachers.

> *It's what teaching's all about. It's designing opportunities that are creative, that allow children to be creative, that allow you to be creative.*
>
> (Emily, tutor interview)

I believe that creative teachers are going to be increasingly important as the curriculum changes yet again. These creative teachers need to be clear about what creativity means to them and how this relates to their teaching and the children's learning. This should support creativity as fundamental to learning and fight against yet another backlash against creativity. I will be very proud if my research contributes to enhancing the flow of the creativity cascade in education.

APPENDIX A - INTERVIEW QUESTIONS

Table A.1 Tutor interviews

Main Question	Probe	Research question
What does creativity mean to you?		1a
Describe any assignments in which students responded particularly creatively.	In what ways were they able to be creative?	2a
Describe an example of something you considered to be a particularly creative response within an assignment.		2a
Thinking about examples of students' creativity in assignments, did these students receive a range of grades or did some grades dominate?		1b
Were there any differences in the presence of creativity in the different types of assignments you marked?	In what way?	2a
Did any of the assignment sets you marked have a decided lack of creativity?	If so, what do you think caused this?	2a
What impact, if any, do the marking grids have on your ability to reward creativity in assignments?		2a, b
How would you describe the key characteristics of the different grade bands?		1b
Describe some examples of creativity you have encountered when assessing students on school placement.		3a
Are there any differences between student creativity on placement and in assignments?	If yes, why do you think this is?	2a, 3a
What relevance, if any, do you think that creativity has to assessment on the programme?		2a, 3a
Are there any other comments you would like to make about creativity and assessment?		?

Table A.2 First student interviews

What opportunities do you feel you've had to be creative on the course so far?		1a (2a, 3a)
When you get an assignment how do you approach them?	What do you do first? What's your timescale? Do you look much at the marking grid in assignments when you're… ? What are you aiming for (grade-wise)?	2a
Do you feel that creativity has been relevant to any of your assignments?		2a
In terms of school placement, do you feel creativity has been relevant to that?		3a
Do you consider yourself to be a creative person?	And I don't care if you do or you don't	1a
Is there anything else you'd like to say about creativity or assignments or anything at all?		?

Table A.3 Second student interviews

Do you feel that you put any elements of creativity into the assignments you completed over the first semester?	If not, why not? If yes, give examples of the creativity and say what prompted you to include it.	1a, 2a
Was there any reaction from the marker in the feedback about your creativity or lack of it?		2c
What are your perceptions of the different grade bands?	e.g. What makes something an A* or a C or an F?	1b
Do you feel you have been creative in your first two weeks of placement?	If not, why not? If yes, in what way? Examples of creative teaching? Examples of creativity from the pupils?	3a
What factors on placement help or hinder a creative approach?		2a, 3a
What is your definition of creativity?		1a

APPENDIX B - STUDENT QUESTIONNAIRES

Table B.1 Links to Research Questions

Question	Open or closed	Options given	Research questions
How creative do you feel you have been in the following assignments? (all Year 1 assignments listed)	Closed	Very creative Somewhat creative Creativity inhibited Not creative	2a
What factors facilitate or inhibit your creativity on assignments?	Closed	Facilitates Inhibits Either / it depends No effect	2a
What impact does your creativity have on the mark awarded and / or feedback given?	Open		1b, 2a
Year 1: Describe the most creative lesson you taught or observed during any part of PE114. Year 2: Describe your most creative lesson from PE204. Both: What about it was particularly creative?	Open		3a
How did the children respond to the lesson?	Open		3a
What factors facilitate teaching creative lessons?	Open	(e.g. supportive teacher, being observed, not being observed, school atmosphere, flexible timetable, own confidence in subject, *children's behaviour…) *only Year 1	3a
What factors hinder teaching creative lessons?	Open		3a

Free Nodes

| Own creativity | Learning Journey | Process Use |

Parent Tree Nodes

| Approach to Assignments | Assignments | Creativity Definitions |

| Factors for Creativity | Grade Bands | Programme |

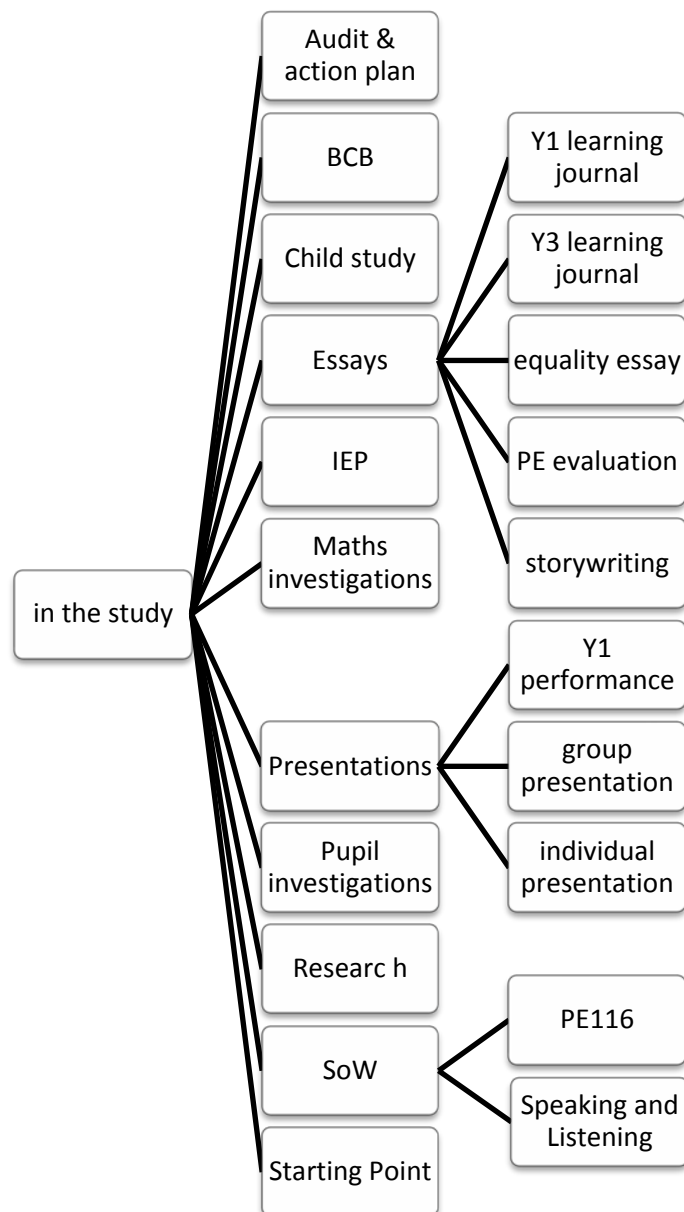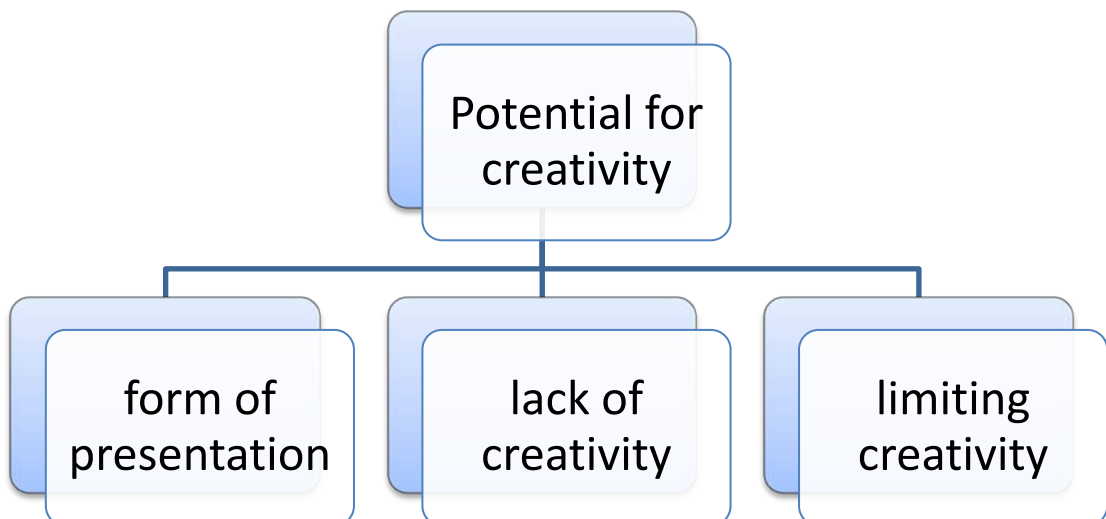| Quality of Experience | School Placement | School Placement versus Assignments |

Approach to Assignments Child Nodes
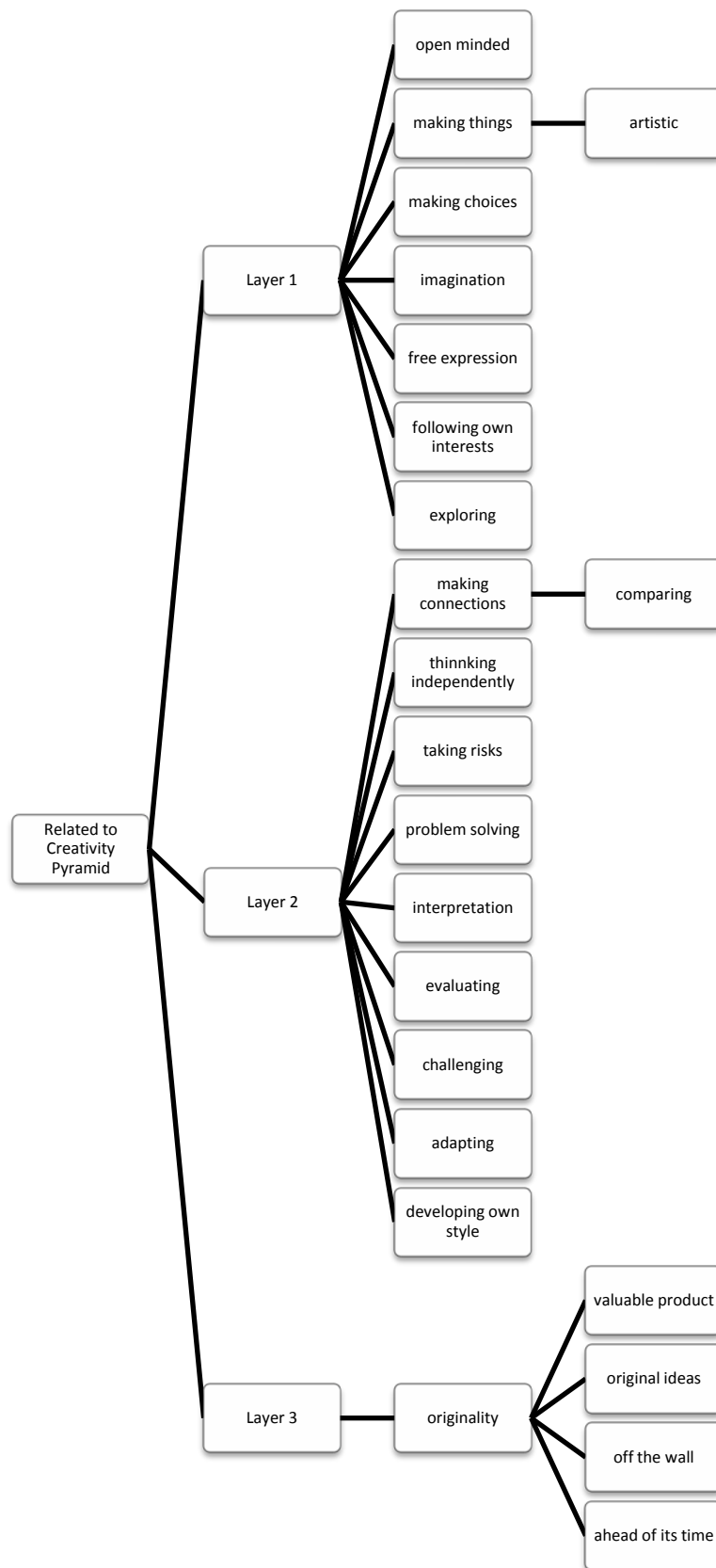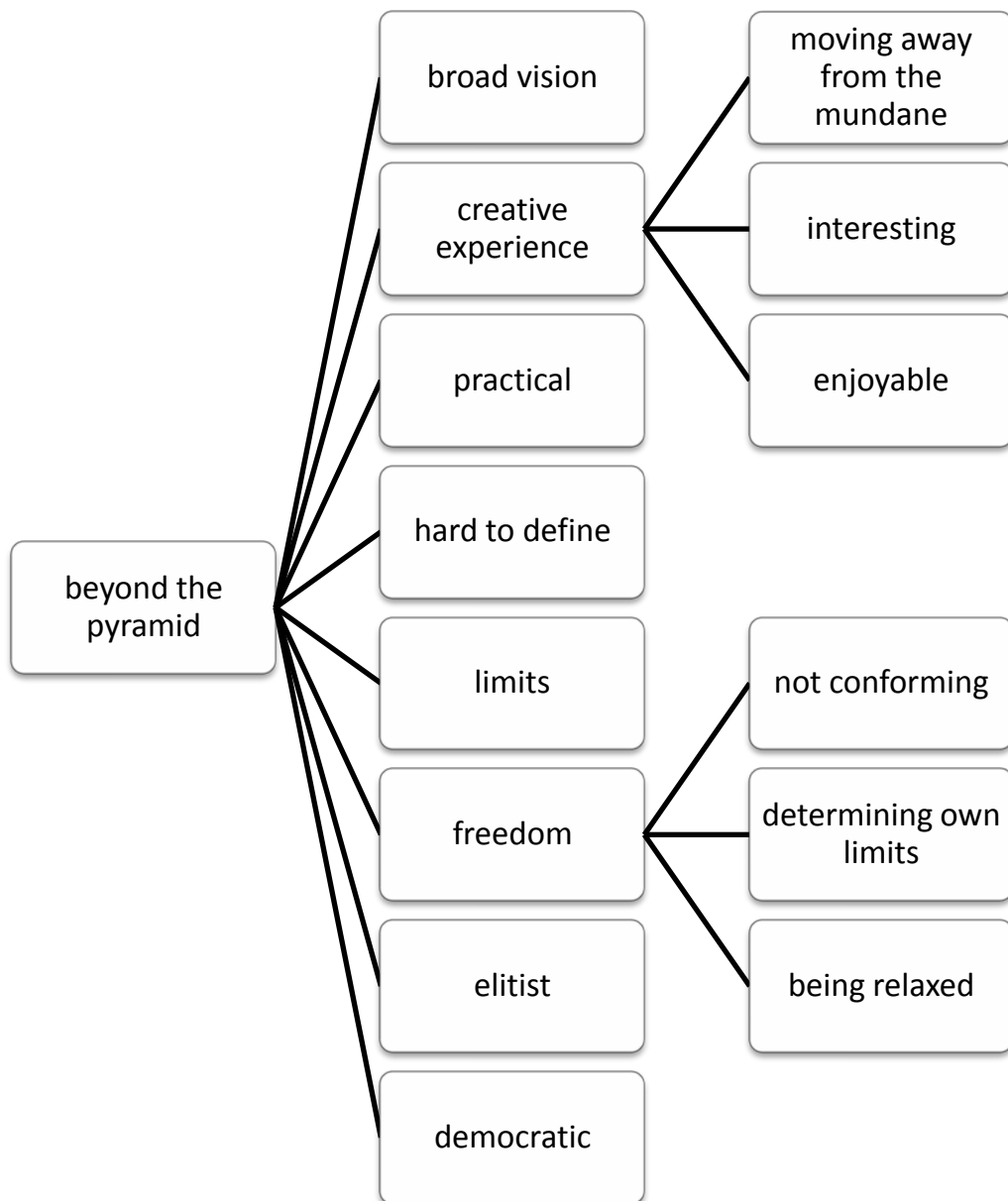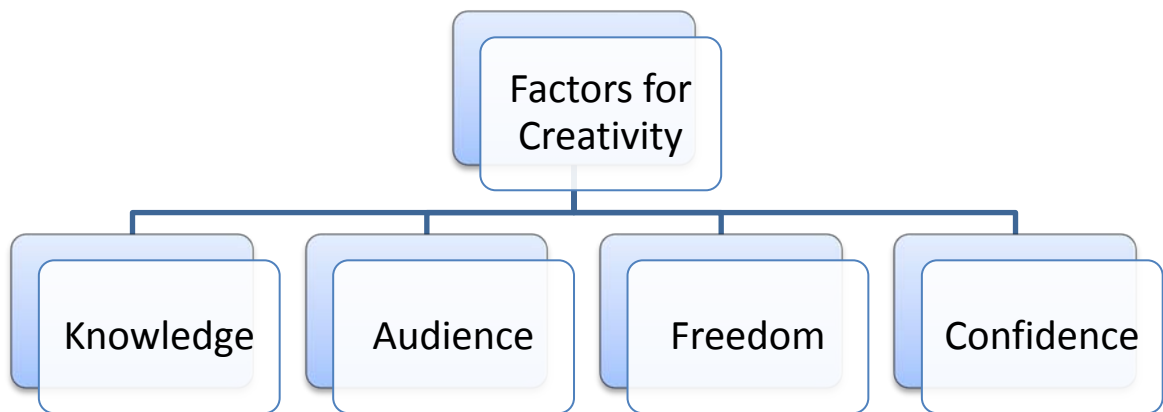
Approach to Assignments Child Nodes continued

Time
- finding time
- incubation
- working in bursts
- early work
- working to deadlines

Support
- assignment briefs
- marking grids
- tutor support
- checking with others
- using exemplars
  - academic language
  - asking questions
  - pressure to conform
  - copying

Process
- plan of attack
- literature search
- writing
  - playing
  - broad
  - reflective
  - redrafting
- setting targets
- applying strengths

Assignments

```
                                              ┌─────────────────┐
                                              │    Art Essay    │
                                              └─────────────────┘
                                              ┌─────────────────┐
                                              │   Enterprise    │
                                              └─────────────────┘
                                              ┌─────────────────┐
                                              │     Display     │
                                              └─────────────────┘
                                              ┌─────────────────┐
                                              │ Portfolio of Tasks │
                 ┌──────────────┐             └─────────────────┘
                 │   Former     │             ┌─────────────────┐
                 │  Programme   │             │    Subject      │
                 └──────────────┘             │   Leadership    │
  ┌──────────────┐                            │   Framework     │
  │  Not current │                            └─────────────────┘
  └──────────────┘             ┌─────────────────┐
                 │   Not our    │             │   Story sack    │
                 │  programme   │             └─────────────────┘
                 └──────────────┘             ┌─────────────────┐
                                              │ Blackboard Audit │
                                              └─────────────────┘
                                              ┌─────────────────┐
                                              │  Investigations │
                                              │     essay       │
                                              └─────────────────┘
```

Potential for creativity

- **form of presentation**
- **lack of creativity**
- **limiting creativity**

Creativity Definitions

Creativity Definitions concept map:

- **Related to Creativity Pyramid**
  - **Layer 1**
    - open minded
    - making things — artistic
    - making choices
    - imagination
    - free expression
    - following own interests
    - exploring
  - **Layer 2**
    - making connections — comparing
    - thinnking independently
    - taking risks
    - problem solving
    - interpretation
    - evaluating
    - challenging
    - adapting
    - developing own style
  - **Layer 3**
    - originality
      - valuable product
      - original ideas
      - off the wall
      - ahead of its time

Factors for Creativity

```
                    Factors for
                     Creativity
                         |
   ┌───────────────┬─────┴─────┬───────────────┐
Knowledge       Audience     Freedom        Confidence
```

Grade Bands

```
                              Grade Bands
                                  |
   ┌──────────┬──────┬──────────┬───┴───┬──────────┬────────┐
 Affect on   Top   Marking   Quality of  Middle   Marker    Bottom
 Creativity         Grids   Communication         Subjectivity
     |        |                          |                |
 Wow Factor  A*    A    B              C    D           E    F
```

Quality of Experience

```
              Quality of
              Experience
                  |
         ┌────────┴────────┐
      Positive          Negative
         |                 |
   ┌─────┴─────┐           |
Interesting  Enjoyable   Boring
```

Programme

School Placement

Pupil Factors

- Pupil creativity
  - Pupil independence
  - Individuality
    - Celebrating difference
- Learning styles
- Engaging pupils
  - Behaviour management

Inhibitors

- Limited teacher role
- Pupil assessment
- Curriculum restrictions
- Being tired

Personal Factors

- Experience in schools
- Teacher image
- Conforming
- Risk taking
  - Having a go
  - Possibility of failure
- Enthusiasm
- Personal rewards

Teacher-mentor

- Restrictive
- Copying
- Learning from
- Facilitator
- Relationship
- Feedback

Versus Coding

school placement v. assignments

formative v. summative

process v. product

on-going v. fixed time

planned v. spontaneous

negotiate v. I did it my way

freedom v. requirements

own ideas v. recipes

teachers v. students

for others v. for self

fun v. worries

playing safe v. taking risks

practical v. abstract

Figure D.1 Starting Point assignment brief

Figure D.2 Starting Point marking grid

Figure D.3 Learning Journal assignment brief

Figure D.4 Learning Journal marking grid

Figure D.5 Audit and Action Plan assignment brief

Figure D.6 Audit and Action Plan marking grid

Figure D.7 Group Performance assignment brief

Figure D.8 Group Performance marking grid

Figure D.9 PE Evaluation assignment brief

Figure D.10 PE Evaluation marking grid
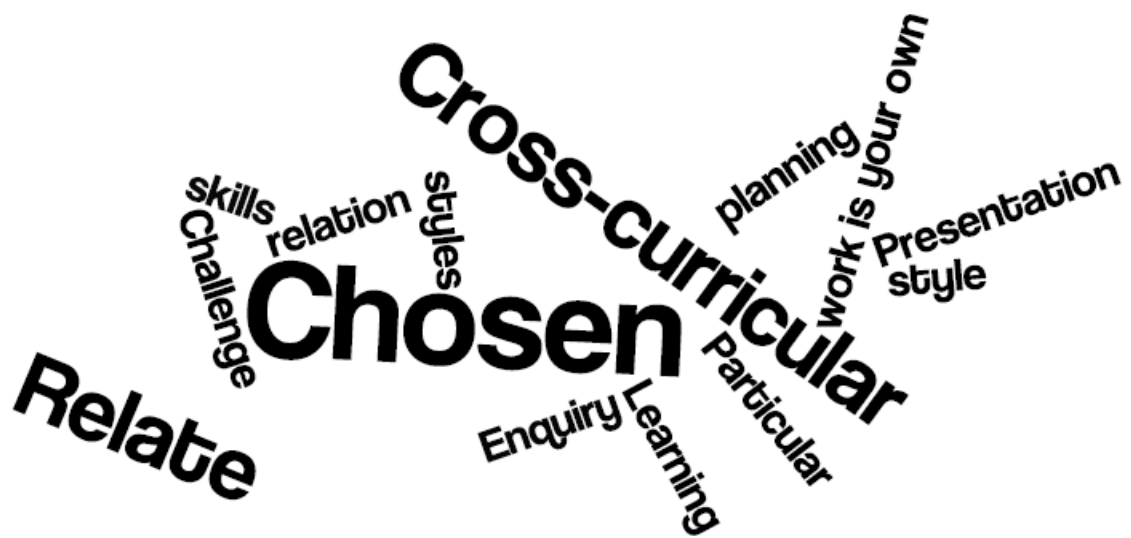
Figure D.11 PE116 SoW assignment brief

Figure D.12 PE116 SoW marking grid

Figure D.13 Investigations essay assignment brief

Figure D.14 Investigations essay marking grid

Figure D.15 Science SoW assignment brief

Figure D.16 Science SoW marking grid

Figure D.17 Subject Leadership Framework assignment brief

Figure D.18 Subject Leadership Framework marking grid

Figure D.19 Subject Leadership Group Presentation assignment brief

Figure D.20 Subject Leadership Group Presentation marking grid

Figure D.21 Child Study assignment brief
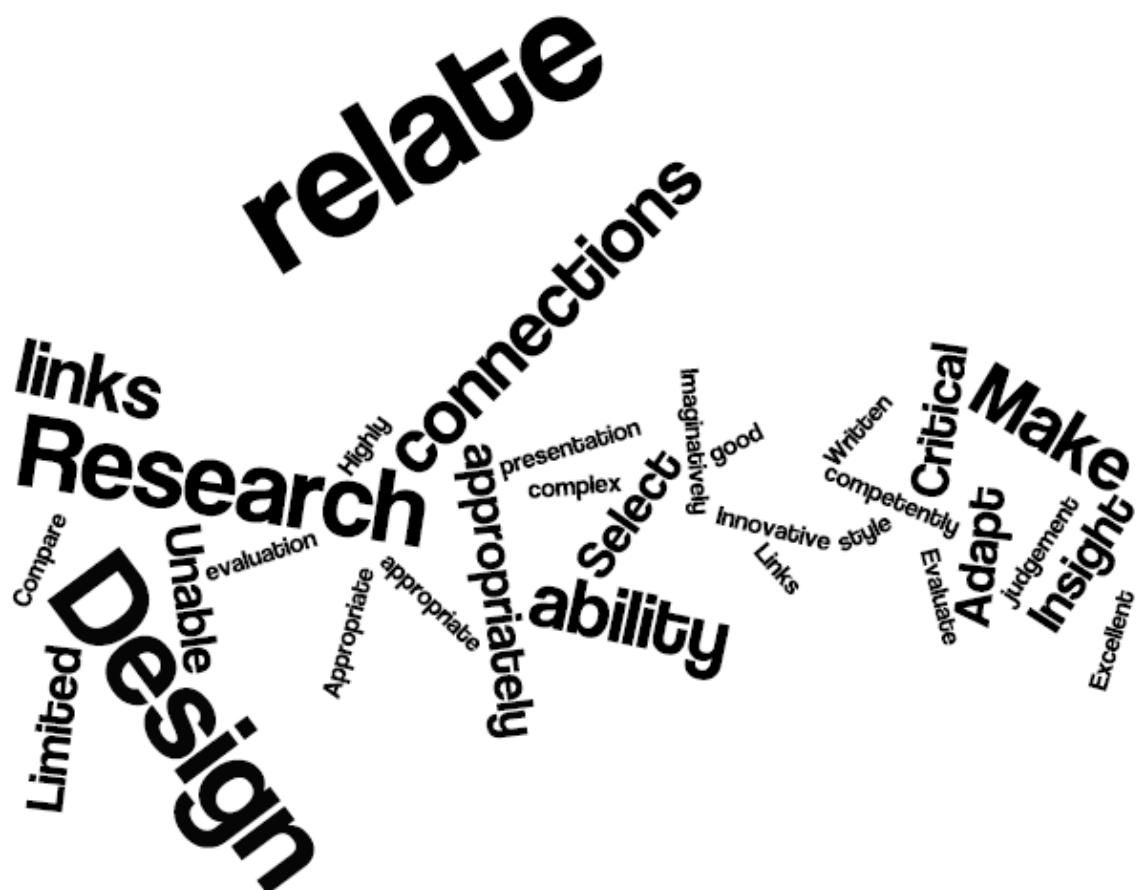
Figure D.22 Child Study marking grid

Figure D.23 PE203 IEP assignment brief
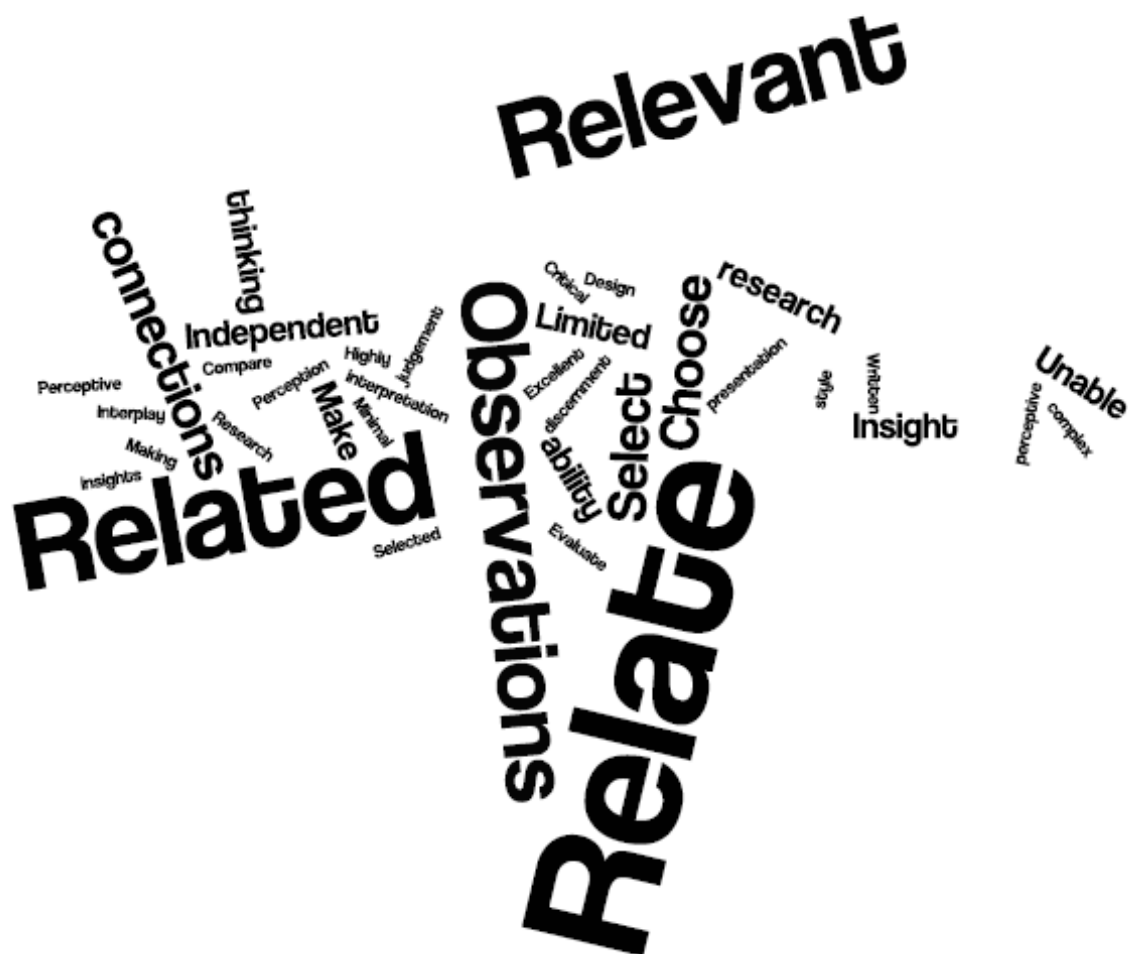
Figure D.24 PE203 IEP marking grid

Figure D.25 PE205 BCB assignment brief

Figure D.26 PE205 BCB marking grid

Figure D.27 PE205 Equality Essay assignment brief

Figure D.28 PE205 Equality Essay marking grid
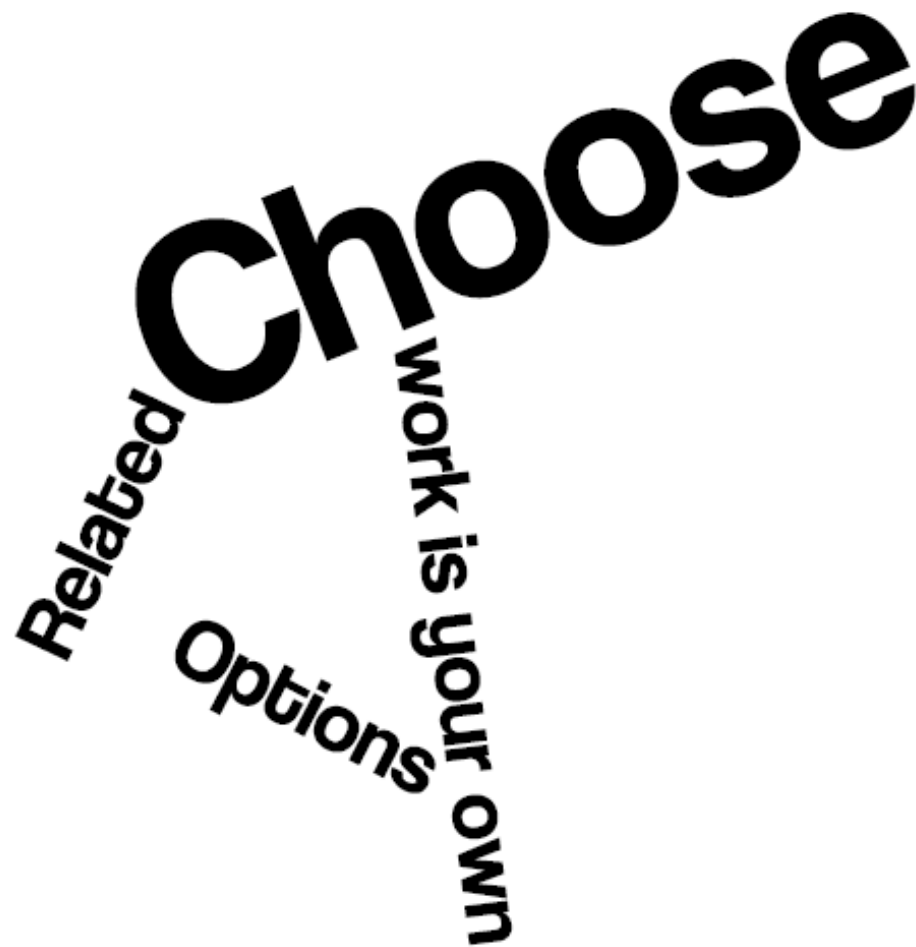
Figure D.29 PE211 Exam assignment brief

Figure D.30 PE211 Exam marking grid

Figure D.31 PE211 IEP assignment brief

Figure D.32 PE211 IEP marking grid

Figure D.33 PE212 Equality Essay assignment brief

Figure D.34 PE212 Equality Essay marking grid

Figure D.35 PE212 Group Presentation assignment brief
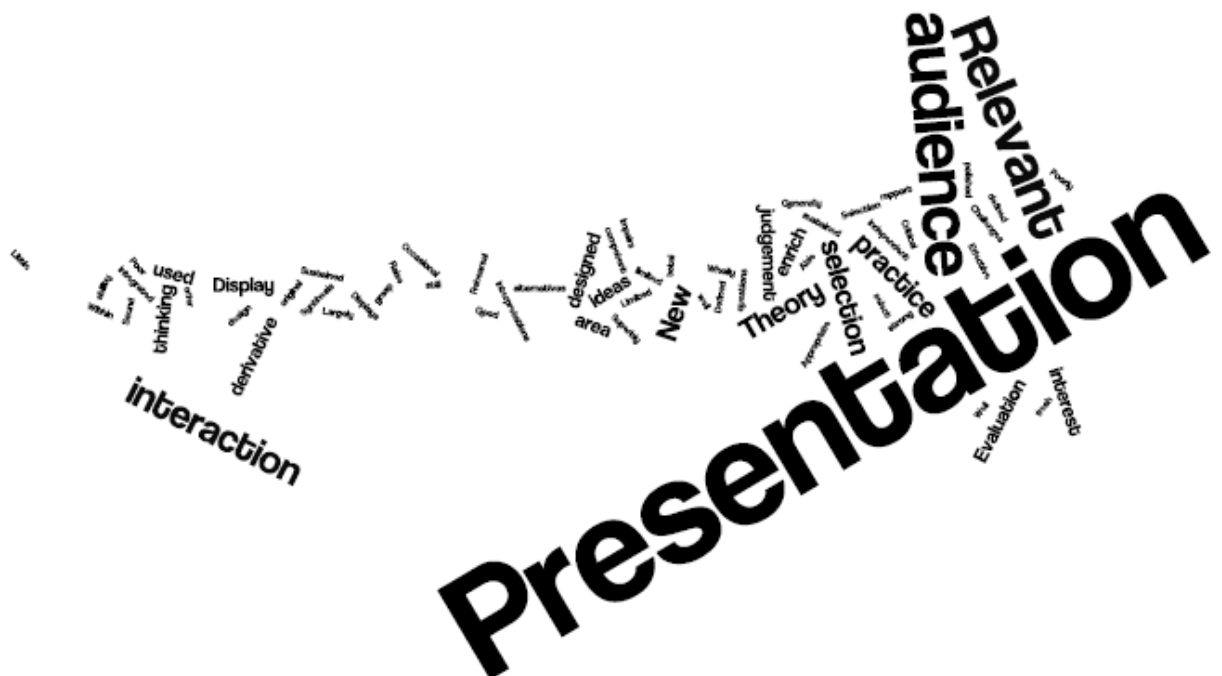
Figure D.36 PE212 Group Presentation marking grid
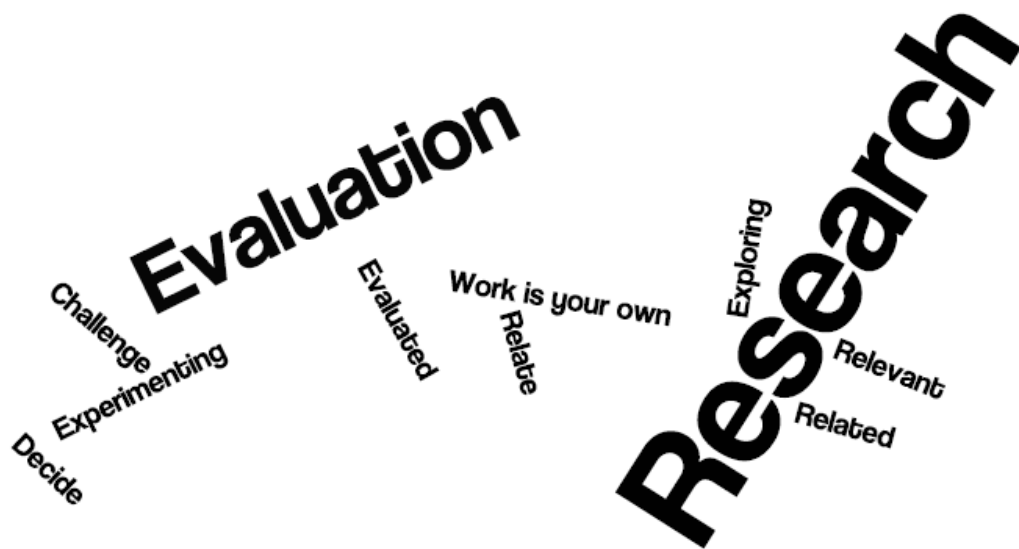
Figure D.37 PE213 Child Study assignment brief

Figure D.38 PE213 Child Study FAQ sheet
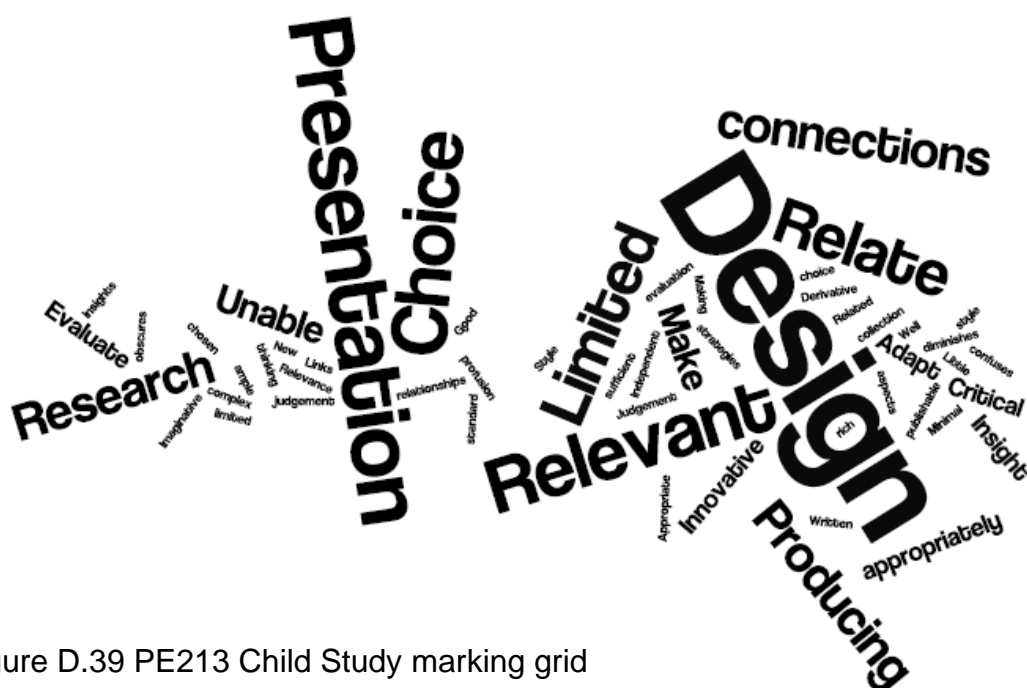
Figure D.39 PE213 Child Study marking grid

Figure D.40 PE215 SoW assignment brief
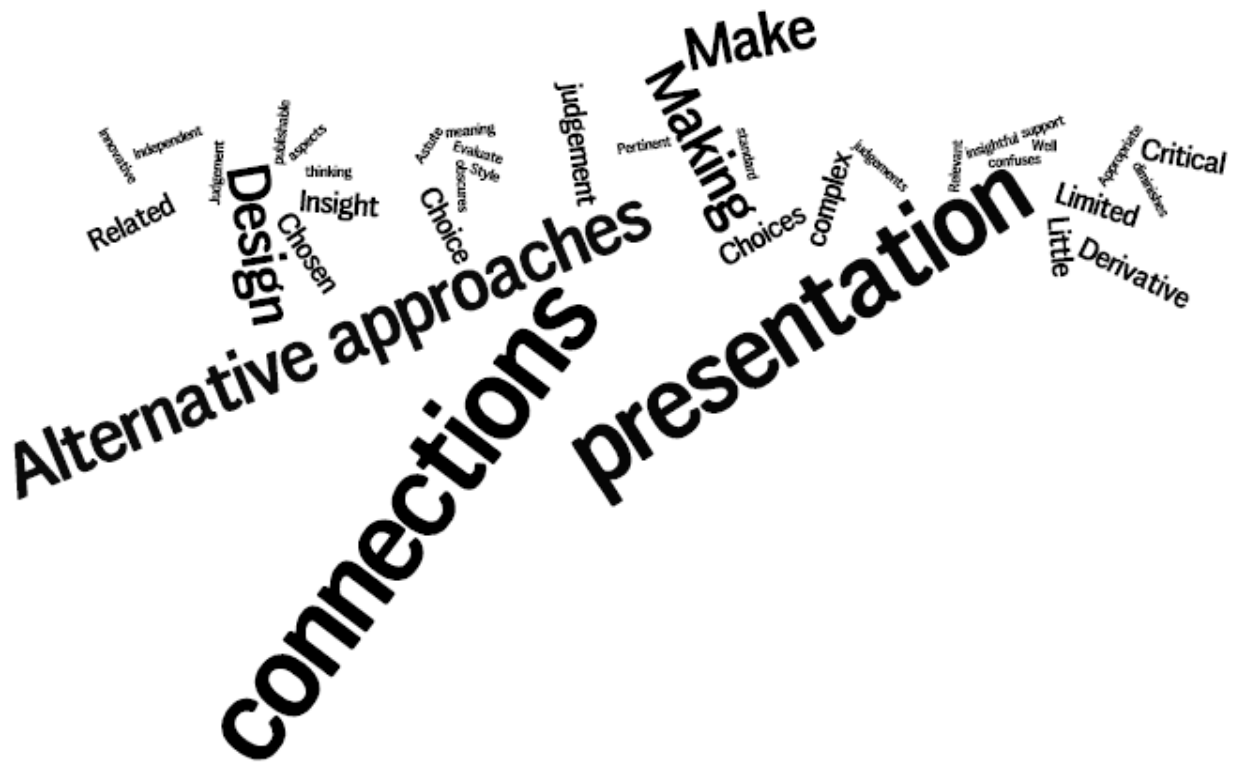
Figure D.41 PE215 SoW marking grid
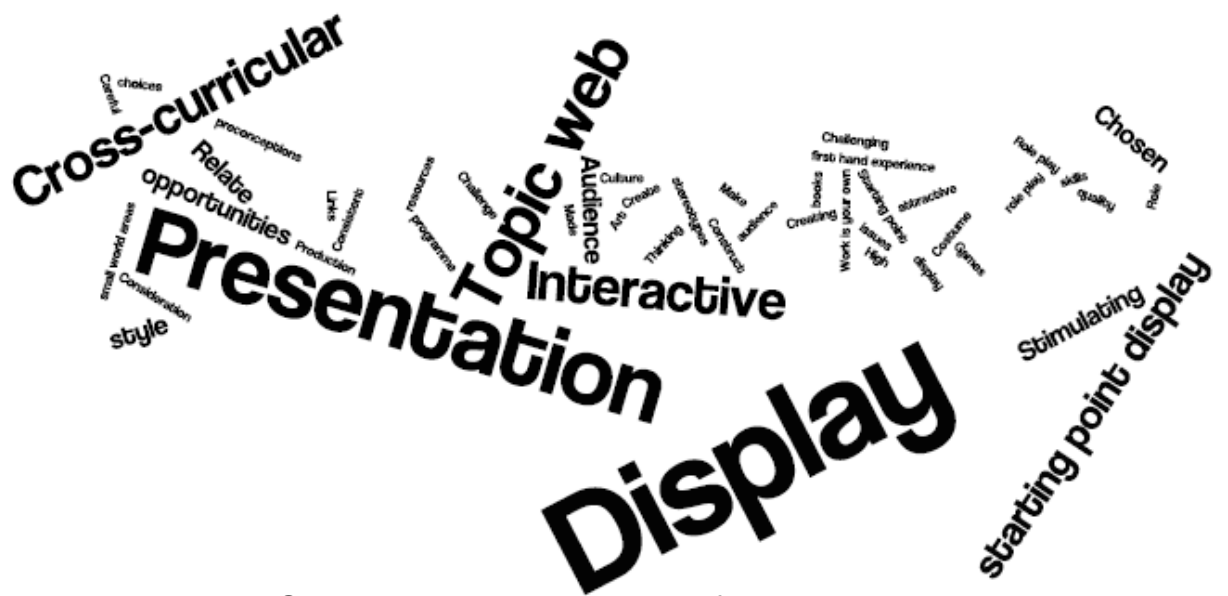
Figure D.42 PE216 Group Display assignment brief
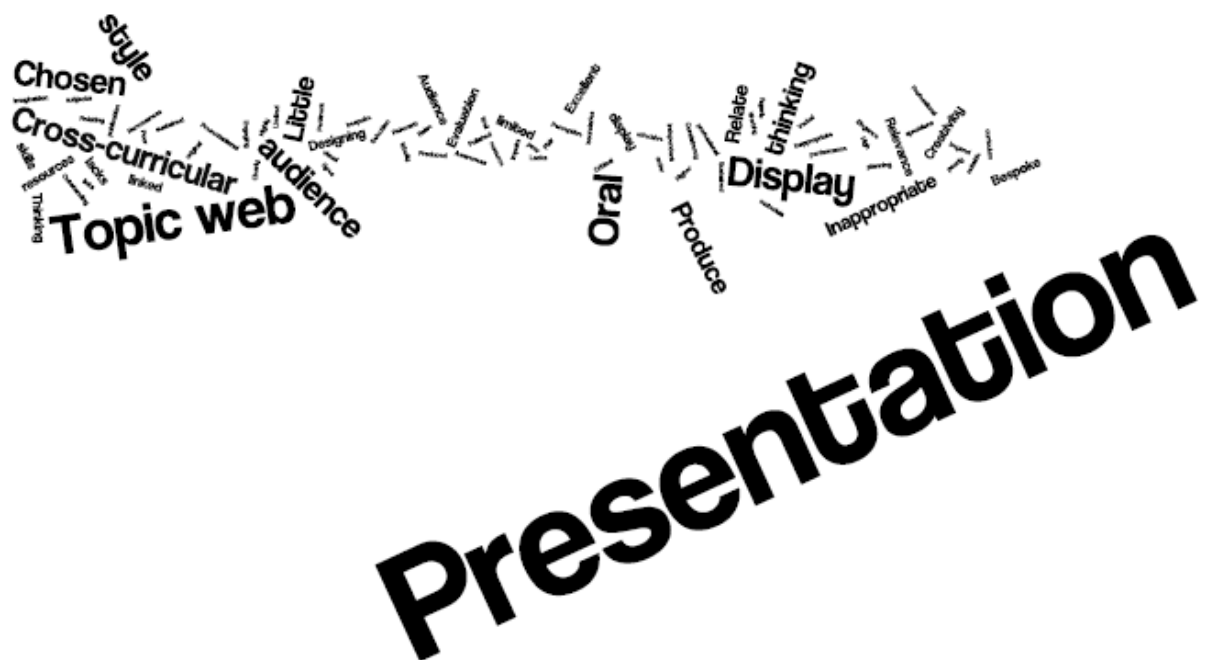
Figure D.43 PE216 Group Display marking grid

Figure D.44 PE216 Rationale assignment brief

Figure D.45 PE216 Rationale marking grid
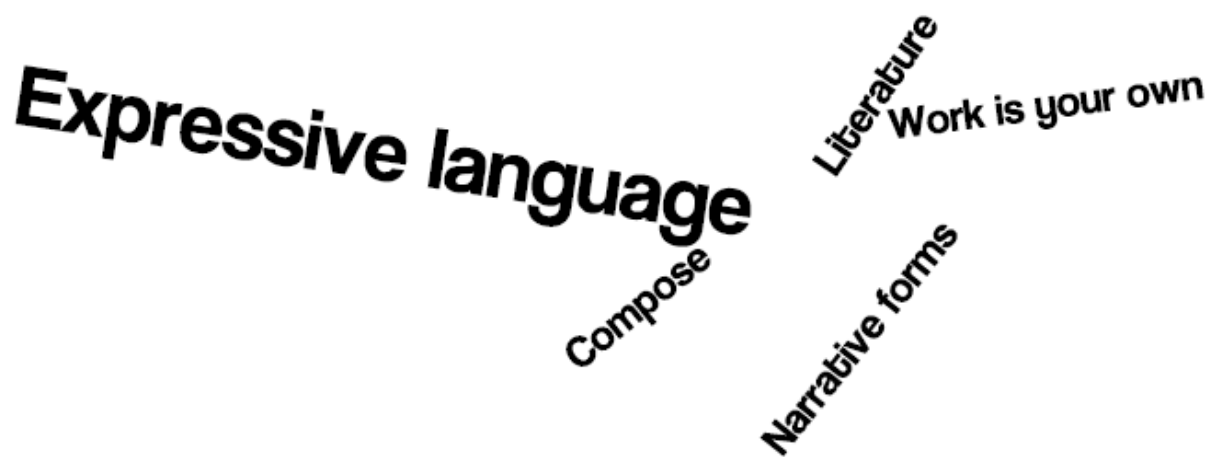
Figure D.46 English Exam assignment brief
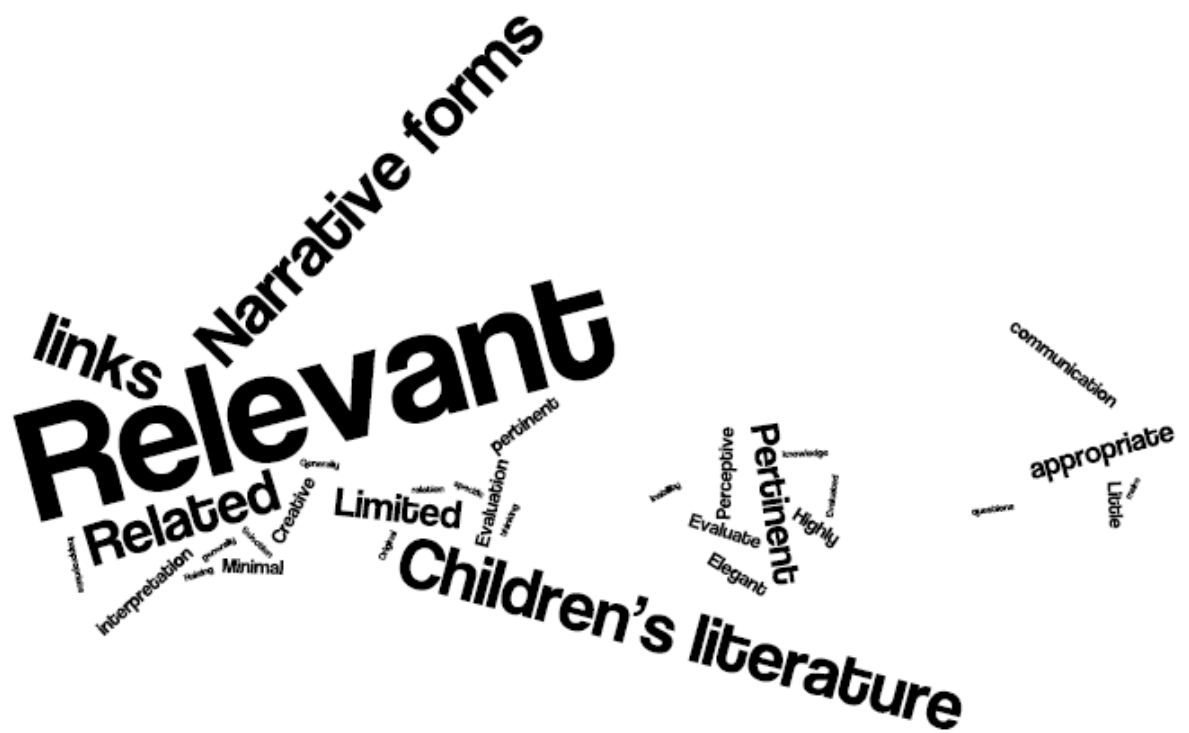
Figure D.47 English Exam marking grid
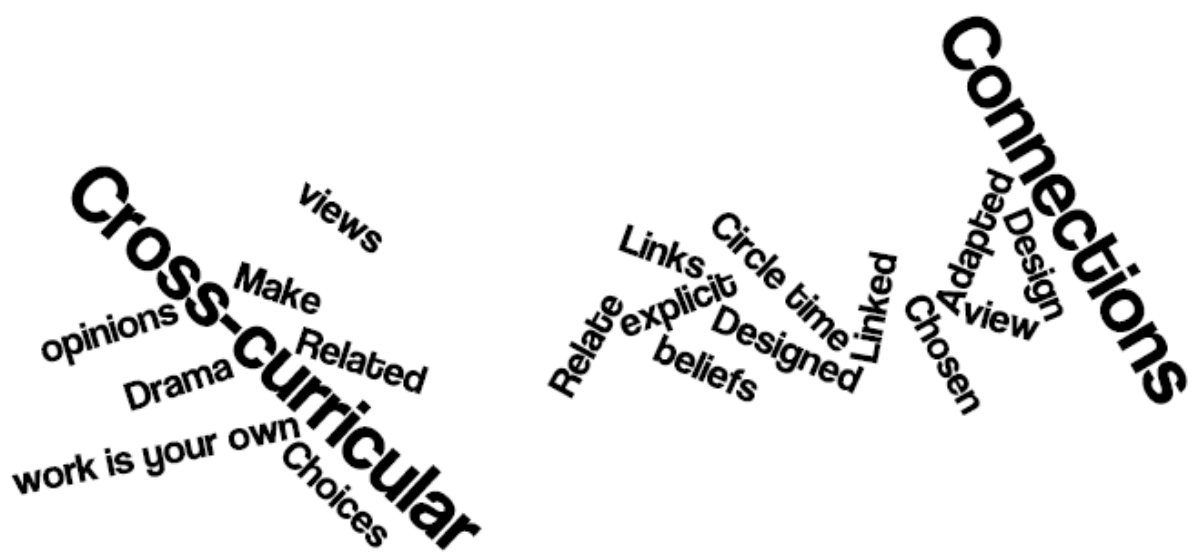
Figure D.48 English SoW assignment brief
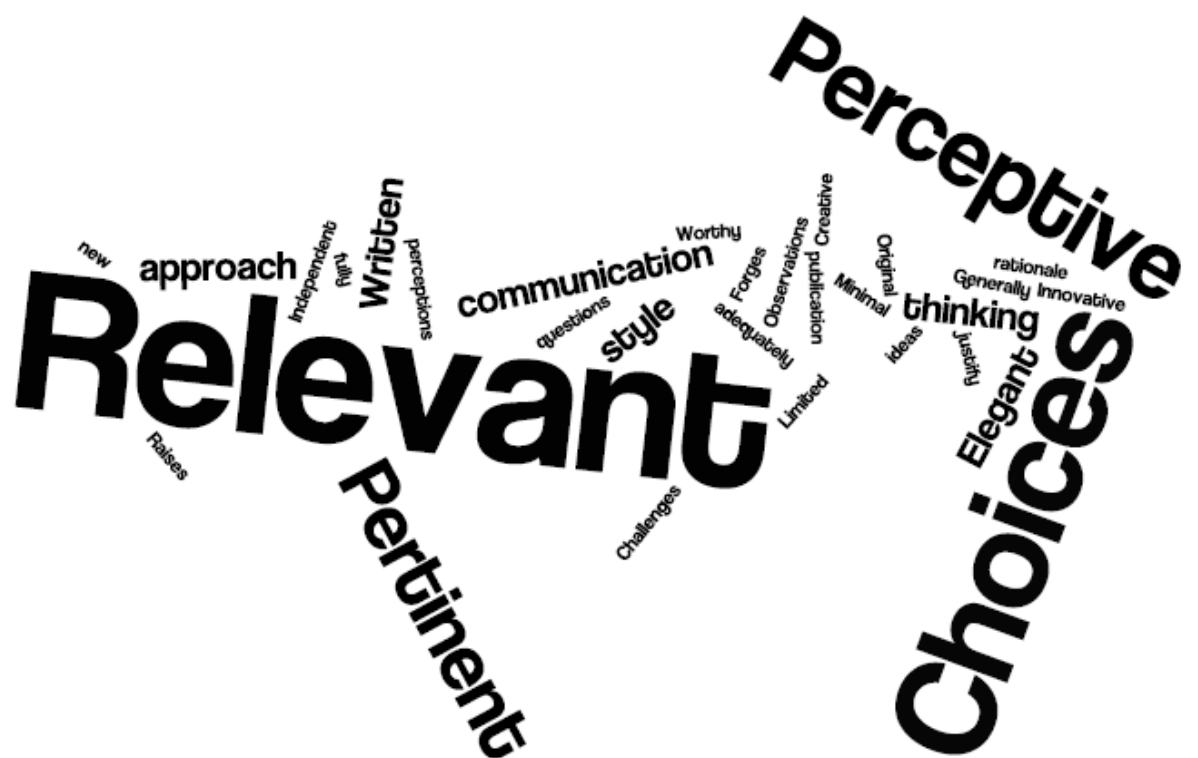
Figure D.49 English SoW marking grid

Figure D.50 Research assignment brief

Figure D.51 Research Proposal marking grid

Figure D.52 Research marking grid

Figure D.53 Individual Presentation assignment brief

Figure D.54 Individual Presentation marking grid
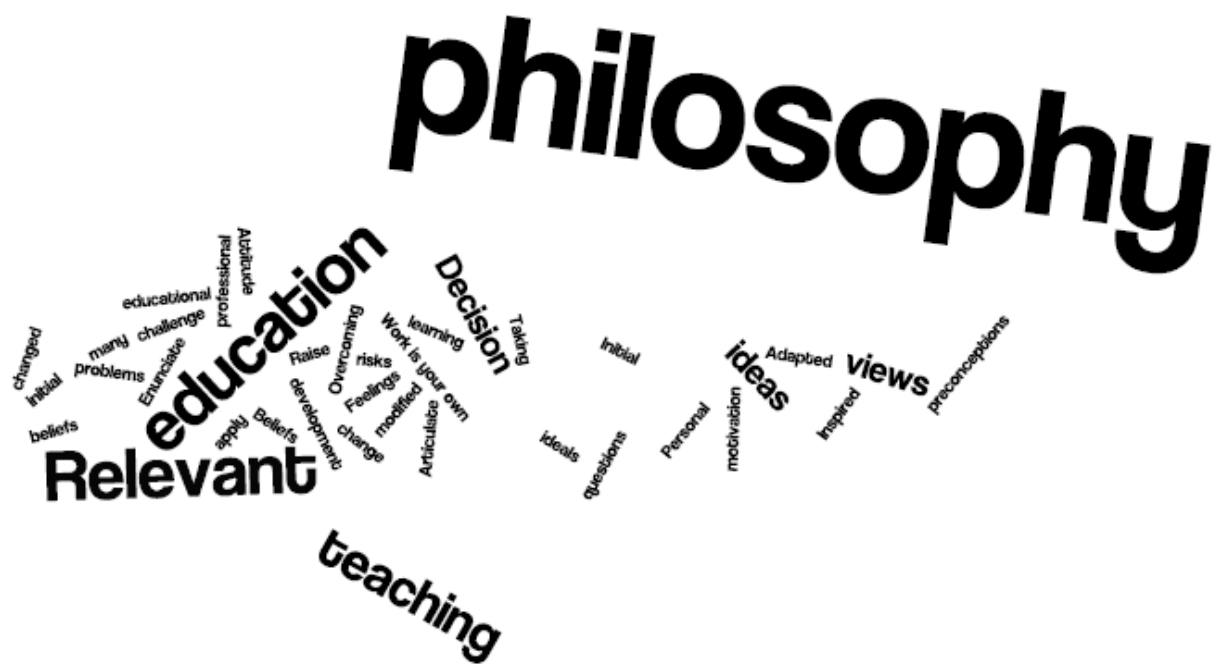
Figure D.55 PE303 Learning Journal assignment brief

Figure D.56 PE303 Learning Journal marking grid

Figure D.57 Own Investigations assignment brief

Figure D.58 Own Investigations marking grid

Figure D.59 Pupil Investigations assignment brief

Figure D.60 Pupil Investigations marking grid

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