

**THE CLASSROOM LEADERSHIP STYLES OF
HONG KONG UNIVERSITY TEACHERS: A CASE
STUDY OF TEACHERS IN A BUSINESS SCHOOL**

By

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Abstract

Student evaluation of teaching (SET) has become a central feature of university teachers' performance assessment and Hong Kong is no exception. However, a number of writers have called into question its accuracy as a performance measurement tool. Regardless of the accuracy question, research indicates that teacher behavioural characteristics are amongst the most significant factors affecting student ratings of teacher performance. One aspect of university teacher behaviour that has received little attention is classroom leadership style.

In this study, a classroom leadership instrument was developed for use in a Hong Kong university context. This instrument was based on the transformational-transactional leadership model because there is evidence that aspects of the model have potential for enhancing student evaluation of teaching scores. Additionally, the transformational style has been associated in the literature with a number of benefits that have prima-facie relevance to the university classroom. The literature has also indicated a possible gender effect in that any enhancement to teaching scores might be especially pronounced in the case of female students.

The central outcome of the study was the development of an instrument that was capable of the valid and reliable measurement of classroom leadership style in a Hong Kong university context. A key finding was that employment, by university teachers, of the transformational and active transactional dimensions of classroom leadership style were significantly and positively associated with student perception of desirable classroom leadership outcomes. In this study, no gender effect was detected. Furthermore, there was an indication that adoption of the transformational and active transactional style in the classroom could have a substantial positive effect on teacher SET scores although this finding was not conclusive due to sample size limitations. Finally, the findings lent support to the view that the transformational-transactional leadership notion is robust across cultures.

Key words: classroom leadership, student evaluation of teaching, transformational leadership, leadership-gender.

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Chapter 1: Introduction

1.1 The Teaching Evaluation Problem

Worldwide pressure on universities to be publicly accountable, and typical university responses to such ‘value for money’ pressures including the ‘student as customer’ approaches to educational delivery (Simpson and Siguaw, 2000) have combined to placed student evaluation of teaching (SET) at the centre of the assessment of university teachers’ performance. Other criteria are employed to appraise university academics but an ever-present feature of this appraisal is some form of teaching evaluation by students. In the US, for example, a study by the Carnegie Foundation for the Advancement of Teaching indicated that 98% of universities surveyed used SET’s as the major component of university teaching evaluation (Magner, 1997). In US business schools, the figure reported was even higher i.e., 99.3% (Comm and Mathaisel, 1998). Theoretically, SET’s are a formative approach to teaching evaluation aimed at giving feedback to university teachers in order for them to enhance the quality of their instruction. However, in practice, SET’s also inform summative decisions on promotion and tenure (Simpson and Siguaw, 2000) and are a critical input to personnel decisions affecting the future of academic staff.

The author of this thesis has been engaged in university teaching in Hong Kong for a period of 18 years. Hong Kong has been as susceptible as the rest of the world to calls for public accountability and has experienced the typical response on the part of its

higher educational establishments including a strong emphasis on student assessment of teaching. All of the Hong Kong higher educational establishments (currently, the University of Hong Kong, the Chinese University of Hong Kong, the Hong Kong University of Science and Technology, the Hong Kong Polytechnic University, the City University of Hong Kong, Hong Kong Baptist University, Lingnan University, and the Hong Kong Institute of Education) that are accredited and funded by the University Grants Committee (UGC), employ a version of the SET as a crucial evaluation mechanism. Furthermore, consistent with the US experience, in Hong Kong, the SET plays a prominent role in personnel decisions pertaining to promotion, substantiation and contract renewal.

However, despite its importance for the university teacher's career, a central problem is that research on the validity of the SET has produced only mixed results. Evidence to suggest that SET's are reasonably valid measures of teaching performance and that they correlate moderately with student learning must be balanced against the fact that they have also been found to be highly susceptible to a variety of contextual variables such as grading leniency, class size, and workload (ibid., 2000).

Particularly relevant to the present study is the finding that behavioural factors such as university teacher attitude can play a major role in student evaluations of teacher effectiveness (Kim et al, 2000). One behavioural factor that has not been fully explored is university teacher's classroom leadership style. This is despite the fact that research from the field of leadership and management indicates that a particular conceptualization of

leadership, namely transformational-transactional leadership can have a profound effect on the degree of subordinate satisfaction with the leader. Assuming one can conceive of the classroom as a small social organization with teacher as leader and students as followers (Cheng, 1994; Luechauer and Shulman, 2002), then it is possible that the extent to which teachers display aspects of transformational-transactional leadership qualities in the classroom may influence the level of student satisfaction with their classroom performance and thus their SET scores.

1.2 Aim of the Study

In light of the above, this study aims to explore students' perception of the effects, in a classroom setting, of the transformational and transactional leadership qualities exhibited by selected teachers in a Hong Kong business school. The emphasis on student perception is consistent with the fact that the SET procedure generally employs perceptual indicators of teaching effectiveness in the form of student ratings. However, the typical SET instrument does not specifically address classroom leadership style and it is therefore difficult to assess the extent to which classroom leadership characteristics influence student perceptions of teacher effectiveness and thus, SET results. Accordingly, the present study seeks to examine a largely unexplored area, namely, the effect of classroom transformational and transactional leadership on student perception of teacher effectiveness.

An issue raised by a classic study of the influence on SET's of university teacher

behaviour (Naflulin *et al.*, 1973) is the degree to which leadership behaviour in the classroom actually adds value to the educative process. In the Naflulin study, an actor knowing nothing about the subject he was delivering posed as a university professor and received excellent student evaluations on the basis of jokes, smiles, communication ability but with a total absence of educational content. Accordingly, aside from the fact that study of the influence of transformational-transactional leadership on SET's is useful given the paucity of prior research in the area, the educational value of employing transformational-transactional leadership attributes in the classroom needs justification and what follows aims to provide this justification.

Arguments supporting the potential of transformational-transactional leadership in the university classroom are as follows:

- i. In today's world, economic success rests on intellectual capital with knowledge replacing energy as the basis for value creation. When knowledge is seen to be at the core of business success, there is an argument for strengthening the connections between business and educational institutions, particularly universities that are at the end of the educational 'chain' and deliver 'knowledge workers' into the economy. In developed economies, the business-university connection has already been strengthened in the sense that universities have embraced many business principles and ideas in the area of university management. Despite some well articulated objections to the application of business principles and practice to university organizations, on the basis that, for

example, it involves “emotional labour” on the part of academic staff and results in exploitation ((Constanti and Gibbs, 2004), it will lead to the ruination of the cultural richness of universities (Readings, 1996; Soley, 1995) and it effectively stifles debate on alternative educational models (Martin and D’Agostino, 2004), it is generally recognized that ‘managerialism’ is at the core of the modern approach to running universities. Supporters of the managerialist trend argue that the former ‘collegial’ approach to university management is ill equipped to deal with the complexities of the environment facing modern universities (see, for example, Meyer, 2004). The present study stems from the view that the general trend of applying business principles and ideas to the management of universities raises an interesting research question: namely, what would be the effect of extending this trend into the teaching environment through an examination of the application of a central business notion i.e., leadership, at the classroom level?

- ii. The notion of teacher-leadership has grown in currency in educational literature. It is used to describe a form of leadership that is not attached to a formal organizational position but is distributed throughout the organization and effected through informal leadership exercised by teachers acting individually or in concert with others (Muijs and Harris, 2003). Whilst not specifically relating leadership to the classroom context, the teacher leadership notion does indicate that teacher leaders tend to be excellent classroom teachers (Crowther, 1997a; Harris, 2003) as well as possessing institutional leadership qualities that may be described as transformational and which presumably they ‘carry with them’ into

the classroom. Accordingly, whilst recognizing that teacher leadership is a characteristic with broad, institution-wide effects, the present study focuses only on leadership in the classroom with a view to exploring the possible behaviours of teacher leaders when they are in a teaching situation.

- iii. The transformational-transactional leadership conceptualization has *prima facie* application to an educational setting. The dimensions of transformational leadership in particular and type of leadership outcomes claimed for the exercise of this style of leadership are generally consistent with views on what constitutes a beneficial university educational process and opinions on desirable university educational outcomes.

The following sections develop the above arguments.

1.3 University Teaching and Intellectual Capital

We live in a world in which organizations are confronted by shortened business cycles, rapid technological change and high customer expectations (Goldstein, 1993; Ojode *et al.*, 1999) and in which intellectual capital is increasingly viewed as at the root of an organization's competitive advantage (Buhner, 1997, Hitt *et al.*, 2001). Stewart (1997) views intellectual capital as a three-dimensional concept comprising:

- Human capital – the knowledge and capabilities of individuals and groups of workers,
- Structural capital – the means by which organizations capture, develop and apply knowledge and;
- Client capital – the ways in which organizations tap into the human and structural capital of suppliers, partners and customers.

Universities are concerned with the first of the above dimensions because they are in the knowledge business (Greenspan, 2001; Rowley, 2000; Thomas, 1999). In the developed world, the information revolution has transformed energy based economies where energy is applied to raw materials to create products of economic value, into knowledge based economies where such value is generated via the use of knowledge (Hooker, 1997). In the age of information, knowledge not things takes centre stage (Dess and Pickens, 1999) and universities are primary actors in the process by which individuals gather and learn to use knowledge (Hooker, 1997). Universities worldwide are also required to be publicly accountable and give ‘value for money’ performance (Pounder 2002). Calls for public accountability have led to the application of business ideas, theories and principles to higher educational management with a view to enhancing university productivity. This phenomenon is termed ‘managerialism’. What has seldom been explored is the application of business ideas, theories and principles to the process of education with a view to enhancing the means by which knowledge is fostered and

used. Nevertheless, the value of such an application has not gone unnoticed as the following statement, made in the context of the US higher education system, conveys:

“But why not incorporate business more intimately in the educational process? Would we benefit from business helping us establish curricula? How would business help us educate students?” (Hooker, 1997, p. 6)

In the spirit of Hooker’s statement, why not explore the influence of leadership in the university classroom? Leadership is an all-pervasive notion in society in the sense that it is applicable to any walk of life where there are potential followers needing direction. It is a central concept in the business world and has *prima facie* application to the university classroom on the basis that the classroom can be conceived of as a small social organization with teacher as leader and students as followers (Cheng, 1994; Luechauer and Shulman, 2002).

1.4 University Teaching and Leadership

In 1995, an impassioned plea was made for transformational leadership in the classroom on the basis that transformational teachers establish an educational vision for students that is compelling and appealing, inspire students’ personal growth and lead students to performances beyond expectations (Bean, 1995). Despite this plea there has been a dearth of studies examining the influence of teachers’ transformational leadership style on the classroom experience. In a university context, review of the literature reveals just two studies i.e., those of Ojode and colleagues (1999) and Walumbwa and Ojode (2000) that have examined the effect of teacher leadership style in a university classroom

context. Both employed the transformational-transactional leadership construct. These initial excursions indicated that ratings of teacher effectiveness are positively associated with transformational leadership style and that student gender has an effect on perceptions of transformational leadership in the classroom.

In a different setting, namely that of a primary school and using the task versus maintenance conceptualization of leadership, Cheng (1994) concluded that teacher leadership style has an influence on student performance and that leadership is an important dimension of the classroom experience. Despite this paucity of research into the teacher-leadership connection, the notion of the teacher-leader has gained currency in recent years (e.g., Crowther (1997a, 1997b). Crowther is particularly interested in studying highly effective teachers in socio-economically disadvantaged schools. He has found that successful educators in disadvantaged schools do indeed display leadership qualities normally associated with the transformational leadership construct despite the fact that such educators tend not to recognize these transformational qualities in themselves. The work of Crowther will be revisited later in this dissertation but suffice it to say at this stage that Crowther's work affirms the connection between teaching and leadership. The notion of transformational leadership discussed in Crowther does appear to have *prima facie* relevance to university classroom teaching and this relevance is discussed below.

1.5 The Transformational-transactional Leadership Construct

A resurgence of interest in leadership began in the mid 1980's and revolves around the notion of transformational leadership. Studies largely suggest that transformational leadership produces desirable leadership outcomes often measured in terms of subordinates' satisfaction with the leader and their assessment of the leader's skills (Avolio and Howell, 1992; Bass, 1985; Hater and Bass, 1988; Seltzer and Bass, 1990). The transformational leadership notion is presented below:

- a. *Idealized Influence or Charisma*: The leader provides vision and a sense of mission, instills pride, gains respect, trust and increases optimism. Such a leader excites and inspires subordinates. This dimension is a measure of the extent of followers' admiration and respect for the leader.
- b. *Inspirational Motivation*: The leader acts as a model for subordinates, communicates a vision and uses symbols to focus efforts. This dimension is a measure of the leader's ability to engender confidence in the leader's vision and values.
- c. *Individual Consideration*: The leader coaches and mentors, provides continuous feedback and links organizational members' needs to the organization's mission. Individual consideration is a measure of the extent to which the leader cares about the individual follower's concerns and developmental needs.

- d. *Intellectual Stimulation*: The leader stimulates followers to rethink old ways of doing things and to reassess their old values and beliefs. This dimension is concerned with the degree to which followers are provided with interesting and challenging tasks and encouraged to solve problems in their own way.

(Source: Den Hartog *et al.*, 1997; Hinkin and Tracey, 1999)

Transformational leadership cannot be considered in isolation from an associated notion termed transactional leadership because it is argued that transformational leadership is built on the foundations of transactional leadership (Bass 1985). Both transformational and transactional leadership are viewed as active forms of leadership concerned with the achievement of goals, but most leadership writing implies, or explicitly argues, that the former is superior to the latter. Dimensions of transactional leadership are as follows:

- a. *Contingent Reinforcement or Contingent Reward*: The leader's rewards to followers are contingent on them achieving specified performance levels.
- b. *Active Management by Exception*: The leader actively seeks out deviations from desired performance on the part of subordinates with a view to taking corrective action.
- c. *Passive Management by Exception*: The leader does not seek out deviations from

desired performance and only takes action when problems present themselves.

- d. *Laissez-faire Leadership*: Conceptually distinct from passive management by exception because passive management by exception guards the status quo by exception whilst laissez faire leadership amounts to an abrogation of leadership responsibility.

(Source: Bass, 1985; Bass and Avolio, 1989; Hater and Bass, 1988; Den Hartog *et al.*, 1997)

Transactional leadership is viewed primarily as a cost benefit exchange process, which reinforces its perceived inferiority to transformational leadership. Certainly, a transactional leader's manipulation of followers' valued outcomes (e.g., wages, promotion) in exchange for followers' compliance with leadership wishes (Burns, 1978; Bass, 1985) is considerably less exciting as a description of effective leadership than the dimensions associated with transformational leadership. Although the transactional leader may motivate subordinates to perform as expected, the transformational leader has the capacity to stir subordinates to levels of performance exceeding expectation (Den Hartog *et al.*, 1997).

1.5.1 Transformational-transactional Leadership and Leadership Outcomes

Strong assertions have been made in leadership literature regarding the beneficial effect of transformational leadership on subordinates. A number of studies have suggested that

transformational leadership has a profound positive influence on subordinates' effort and satisfaction (Bass and Avolio, 1990; Bycio *et al.*, 1995; Howell and Frost, 1989; Kirkpatrick and Locke, 1996; Parry, 2000). This positive influence has been observed in a variety of contexts including that of health care (Gellis, 2001), commerce (Podsakoff *et al.*, 1990), military (Yammarino and Bass, 1990), and education (Hoover, 1991). Other studies have indicated a positive effect on subordinate performance (Howell and Frost, 1989) particularly in a group or team situation (Avolio *et al.*, 1988, Barling *et al.*, 1996; Den Hartog *et al.*, 1997). Specifically in an educational management context, transformational leadership has been viewed as essential to the gaining of confidence and coping with stress among teams (Neumann, 1992). Equally, transformational leadership has been linked with enhanced individual commitment to the group or organization (Barling *et al.*, 1996, Bycio *et al.*, 1995).

From a subordinate development point of view, the intellectual stimulation dimension of transformational leadership in particular has been associated with challenging subordinates to be creative, think critically and independently and find novel ways of solving problems while seeking a wide range of opinions before deciding upon solutions (Bass, 1998). Further, individualized consideration has been viewed as a vehicle for developing subordinates' confidence to tackle problems (Bass, 1985). Regarding transactional leadership, in an educational context, the study of Ojode and colleagues (1999) revealed a positive correlation between the contingent reward dimension, each of the transformational leadership dimensions and leadership outcomes. Additionally, there

is some evidence to suggest that females are more receptive to the transformational qualities of leadership than men (Alimo-Metcalf, 1995; Baugh and Scandura, 1998).

1.5.2 Transformational-transactional Leadership and the University Classroom

Particularly in light of the beneficial effects on subordinates referred to above, it seems justifiable to examine the extent to which such benefits apply to a university classroom setting where university teachers replace managers and students replace subordinates in the leadership dyad. With the exception of the excursion of Ojode and colleagues (1999) and the follow up study by Walumbwa and Ojode (2000), the dearth of studies focusing on the effects of transformational-transactional leadership in the university classroom has already been mentioned. However, the leadership outcomes claimed for the transformational-transactional construct certainly seem to justify further experimentation with transformational-transactional leadership in the university classroom, particularly given the pertinence of those leadership outcomes to education. After all, aside from a possible beneficial effect on SET scores, most university teachers would hope to stimulate students intellectually, to generate effort in the subject under study, to help students to feel satisfied with the study group process, to meet students' educational needs, to give students confidence to tackle real life problems and to conduct an effective class. The relevance of transformational-transactional leadership to a university classroom setting is further reinforced by reference to views on what constitutes a desirable university educational process and desirable university educational outcomes.

1.5.3 Transformational-transactional Leadership and a Total Quality Management Approach to University Teaching

With regard to process, Babbar (1995) has argued strongly in favour of the application of Total Quality Management (TQM) to university teaching. His five building blocks of the TQM oriented approach are as follows:

- i. Communicate your teaching philosophy up-front.
- ii. Influence students by setting a good example.
- iii. Shape the climate for excellence and get the students to stretch their goals.
- iv. Motivate students through fairness, feedback and encouragement while instilling in them a deep sense of values and commitment.
- v. Be sensitive to the many other aspects of the TQM philosophy

Aside from his fifth building block which exhorts university teachers to draw from and apply the TQM philosophy generally, Babbar's building blocks are reflected in the dimensions of the transformational leadership model. Thus, communication of one's teaching philosophy and influencing students by setting a good example is reflected within the Inspirational Motivation dimension of transformational leadership. Equally, shaping the climate for excellence is likely to be generated through the enactment of the

Idealized Influence and Inspirational Motivation aspects of transformational leadership and getting students to stretch their goals, by the Intellectual Stimulation dimension of transformational leadership. Finally, motivating students through fairness, feedback and encouragement is likely to be a product of employing Individual Consideration with the deep sense of values and commitment generated through the use of Inspirational Motivation.

1.5.4 Transformational-transactional Leadership and Desirable University Educational Outcomes

With regard to educational outcomes, the literature is not replete with definitive statements at the university level. Two exceptions are Bourner (1997) who has proposed a clear set of learning aims for universities based on his 30 years as a university professor and Ellington (1999) who has described how his university has developed a set of generic level learning outcomes primarily in response to recommendations in the Dearing Report (1997). Three of Bourner's (1997) six learning aims are as follows:

- i. *Development of a student's capability to use ideas and information:* This goes beyond the mere intellectual assent to an idea; it involves an appreciation of its range of applicability i.e., where and how it can be used.
- ii. *Development of a student's ability to test ideas and evidence:* Teaching students to develop their critical facilities, to subject assumptions, assertions and unsupported statements to critical scrutiny.

- iii. *Development of a student's ability to generate ideas and evidence*: This is about creativity i.e., not just testing existing ideas and evidence, but generating new ideas and evidence.

Reference to the transformational leadership model illustrated above indicates that the Intellectual Stimulation dimension of the transformational leadership construct is particularly relevant to the above learning outcomes. Earlier in this work, the Intellectual Stimulation dimension was described as a leadership characteristic concerned with stimulating followers to rethink old ways of doing things and to reassess their values and beliefs. This involves providing followers with interesting and challenging tasks and encouraging them to solve problems in their own way. Bourner's three learning aims are concerned with the application and critical evaluation of ideas and with creativity, all of which seem to be explicit or implied in the Intellectual Stimulation leadership characteristic. Certainly, a university teacher willing to encourage students to rethink old ways of doing things and willing to encourage students to be independent in solving problems is acting in the spirit of Bourner's aims. This suggests that considerable 'mileage' could be gained by investigating further the benefits of transformational leadership in the classroom delivery of university courses.

Ellington (1999) has identified, amongst others, the following desirable learning outcomes:

- i. *Interactive and group skills*: This is concerned with the ability of the student to

work productively with the instructor and with peers in a group situation.

- ii. *Application*: Concerned with the students ability to apply what has been learned and select real life situations that are appropriate for the application of concepts, principles and theories acquired in the classroom.
- iii. *Analysis*: This is concerned with the extent to which a student can analyse systematically, effectively and critically.
- iv. *Synthesis*: This is about the ability of the student to utilize learning to bring about novel, creative solutions.
- v. *Problem solving*: Concerned with the ability of the student to deal confidently with complex problems through the utilization of knowledge and skills.

As was the case with Bourner's (1997) aims, the Intellectual Stimulation dimension of the transformational leadership model described earlier is consistent with Ellington's (1999) latter four generic learning outcomes. Further, achievement of the first of his outcomes is one of the specific leadership outcomes claimed for the transformational construct (Avolio *et al.*, 1988; Barling *et al.*, 1996; Den Hartog *et al.*, 1997; Neumann, 1992).

From the above, there seems to be ample justification for exploring the potential

of transformational leadership in the university classroom setting, beyond the initial excursions by Ojode and colleagues (1999) and Walumbwa and Ojode (2000). Aside from the potential to enhance teaching assessment scores which may be of immediate import to university teachers, the connection between dimensions of transformational leadership in particular and generic university educational outcomes and also the connection with TQM oriented university teaching, justifies the present study. Furthermore, the leadership outcomes claimed for the transformational construct alone appear to justify a further experimentation with university teacher transformational-transactional leadership. Finally, given that positive aspects of transformational-transactional leadership appear to be teachable (Bass, 1990; Barling *et al.*, 1996; Kelloway and Barling, 2000; Kelloway *et al.*, 2000), there are potential implications for university staff orientation and development.

1.6 The Hong Kong Context

1.6.1 General Context

It is important not to lose sight of the fact that this author's interest in transformational-transactional leadership in the university teaching setting has been stimulated by the prominent role played by SET's in the careers of university teachers generally and of university teachers in Hong Kong in particular. At the beginning of this chapter, it was noted that university teacher behavioural factors tend to colour SET scores (Kim *et al.*, 2000). Some of these behavioural factors may be facile and of no educational value

(Naflulin *et al.*, 1973). However, one of the core aims of this chapter has been to clearly indicate the possible relevance and value to the university classroom of one particular behavioural factor, namely, transformational-transactional leadership. Hence, the relevance of the present study to Hong Kong primarily stems from the fact that, in Hong Kong, SET's are central to a university teacher's performance assessment and hence career advancement and it is useful to explore the extent to which a behavioural factor such as transformational-transactional leadership style can influence SET's. Further, assuming that the exercise of certain features of transformational-transactional leadership are relevant and valuable teacher behavioural traits as has been argued above, then the present study indicates benefits for Hong Kong that go beyond the classroom. For example, it was argued earlier that the exercise of certain dimensions of transformational-transactional leadership could possibly enhance the quality of human capital flowing from universities into society and that high quality human capital was vital to the health of developed, knowledge-based economies.

Hong Kong is the epitome of a well developed economy that has been transformed from a base in energy to a base in knowledge and, as such, this study is very relevant to Hong Kong, locked as it is in a current recession and needing to call on all of its human capital to escape its present downturn. Assuming the present study reveals that there are beneficial effects from the exercise of transformational-transactional leadership in a university classroom setting, the results could have important implications for teaching orientation and development in Hong Kong universities. This in turn could have

a significant impact on the economy given that Hong Kong society places education high on its agenda.

The present study builds upon the initial excursions by Ojode and colleagues (1999) and Walumbwa and Ojode (2000) that were conducted in a USA context and is the first to examine the influence of transformational-transactional leadership in a university classroom setting using Hong Kong data. This study is novel in exploring the university teachers' transformational-transactional leadership styles specifically in Hong Kong and raises the question of the extent to which notions initially developed in the US can cross cultures and their application produce similar results in an Asian culture. This issue will be explored later in this work. Furthermore, the Hong Kong setting is particularly relevant to the author of this dissertation, on account of the fact that Hong Kong is his place of residence and he is currently employed as a university teacher there. Hence, personal interest in a study of this nature and access to data, both resulting from the current employment of the present author, are factors that have weighed in favour of Hong Kong as the setting for this study.

A central issue raised by the selection of Hong Kong as the context for this work is the need to adapt (i.e., tailor to the Hong Kong context) the research instrument i.e., the MLQ (Bass and Avolio, 2000) that was originally designed in the USA. In order to effect this study, the MLQ was first tailored to a classroom setting and then to a Hong Kong context. The procedure employed will be discussed later in Methodology.

1.6.2 The Specific Context

The study took place within a Hong Kong university business faculty of which the author of this dissertation is a member. Confining the study to the business faculty of the university in which the author is employed facilitated the study in the following ways:

- The author's relationship with colleagues within the faculty made possible cooperation on what was likely to be an emotive issue i.e., examining the classroom leadership styles of university teachers, which could be perceived as also assessing the teaching effectiveness of the teacher participants.
- This relationship also enabled the author to gain colleagues' acceptance to situate the study within a particular subject areas of business in the faculty's Bachelor of Business Administration honours (BBA) degree, namely the capstone Strategic Management course, to facilitate analysis by virtue of holding constant the subject matter of the course.

1.7 Hypotheses

All the above has given rise to the following hypotheses written in the positive format:

H1: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the other transformational leadership dimensions (Ojode *et al.*, 1999; Walumbwa and Ojode, 2000).

- H2: Scores on the Contingent Reward transactional leadership dimension will be positively and significantly correlated with scores on each of the transformational leadership dimensions and with scores on each of the leadership outcomes (Ojode *et al.*, 1999; Walumbwa and Ojode, 2000).
- H3: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the leadership outcomes (Avolio and Howell, 1992; Bass, 1985; Hater and Bass, 1988; Ojode *et al.*, 1999; Seltzer and Bass, 1990; Walumbwa and Ojode, 2000).
- H4: Female students will give significantly higher scores on transformational dimensions than will male students (Alimo-Metcalf, 1995; Baugh and Scandura, 1998; Walumbwa and Ojode, 2000).
- H5: Scores on teachers' leadership outcomes will be positively and significantly correlated with teachers' SET scores (Cheng, 1994; Kim *et al.*, 2000).

1.8 Significance and Outcomes of the Research

The present study is the first to examine the influence of transformational-transactional leadership in a university classroom setting in depth and using Hong Kong data. It focuses on the relationship between student perception of university teachers' transformational-transactional leadership styles and their perception of critical classroom

leadership outcomes such as the ability to motivate students and the ability to conduct a successful class. On the basis that university teacher behavioural factors can play a major role in student evaluations of teacher effectiveness (Kim *et al.*, 2000) and that classroom leadership style is one such factor, the findings of this study should inform the practice of teaching. For example, based on the case made earlier in this chapter for the educational value of transformational-transactional leadership in the classroom and the fact it appears to be a teachable leadership approach (Bass, 1990; Barling *et al.*, 1996; Kelloway and Barling, 2000, Kelloway *et al.*, 2000), there are practical implications for university teacher training. For example, university units responsible for teaching enhancement may include classroom leadership training as a distinct element of staff teaching development programmes.

1.9 Structure of The Thesis

The present chapter has focused on the rationale for and aims of the study and has culminated in a set of hypotheses to be tested. Chapters 2 expound the rationale for this study through an examination of relevant literature culminating in a discussion of transformational-transactional leadership and issues associated with the notion. It also focuses on the development of the leadership concept in an educational setting and examines teacher leadership, a notion that is conceptually close to the subject matter of this study, namely the classroom leadership style of university teachers. The chapter reviews the literature on student evaluation of teaching with a particular concentration on studies that have examined the influence of teacher behavioural factors (such as

leadership style) on evaluation outcomes. It closes with a look at some of the cross-cultural issues posed by this study. Chapter 3 focuses on methodology beginning with a discussion of ontological and epistemological issues associated with this research and then moving to a detailed account of the procedures used to test the above hypotheses and closes with a discussion of ethical issues associated with research of this nature. Chapter 4 concentrates on finding and analysis and Chapter 5 presents the conclusions and recommendations which address potential areas for future research and make a specific suggestion for building upon the present study in Hong Kong and elsewhere.

Chapter 2: Review of Relevant Literature

In Chapter 1, it was argued that the influence of transformational–transactional leadership in the university classroom setting has been a largely neglected area of research, despite the fact that application of the transformational leadership style in particular appears to offer considerable promise in an educational context. It was further argued that, amongst the various behavioural factors likely to influence SET's, transformational leadership is one factor that has the potential to produce beneficial effects in the educational process. The latter argument draws on evidence from the commercial world where numerous positive transformational leadership outcomes have been reported. Despite this, it was noted that few studies have examined the influence of transformational-transactional leadership in the university classroom setting, even though universities play a pivotal role in developing the type of knowledge workers needed for the creation of wealth in today's modern economies.

In light of the argument presented in Chapter 1 and summarized above, the following areas of research and literature are relevant to this thesis:

- *The relevance of transformational–transactional leadership to educational leadership:* There is a considerable body of research supporting the relevance of transformational–transactional leadership to educational leadership. The central theme of this study is the applicability of transformational–transactional leadership to the classroom. Accordingly, literature on the applicability of the

transformational notion to educational organizations at a macro level provides the context and a starting point for an examination of the relevance of the notion further down the educational organization hierarchy.

- *Teacher-leadership*: The work on teacher-leadership begins to move the transformational leadership notion down the organizational hierarchy. The latest research on teacher-leadership removes the notion of leadership in education from its conventional managerial setting by examining the attributes of effective teachers who may not hold formal managerial roles in an educational organization but who nonetheless display transformational leadership qualities.
- *The influence of leadership styles of classroom teachers generally*: Arguably, teachers' classroom leadership could be considered an extension of the idea of the non-hierarchical teacher-leadership notion. A review of studies focusing on the influence of teachers' classroom leadership in general indicates that teachers' classroom leadership styles, however they are manifested, have a significant impact on students' perceptions of their educational experience and on educational outcomes.
- *The influence of transformational–transactional leadership in the university classroom*: There is a paucity of research examining the effects of transformational leadership in the classroom. However, the few studies that have been undertaken and that are reviewed here go to the very core of this thesis in

focusing on the influence of transformational-transactional classroom leadership specifically in a university setting. Justification for the university context has been provided in Chapter 1.

- *Factors influencing student evaluations of teaching (SET's):* Literature on the controversy surrounding the accuracy of SET's and particularly the part played by behavioural factors in SET outcomes highlights the fact that teachers' classroom behaviour and specifically their leadership behaviour is likely to have a considerable influence on SET scores.
- *General management findings on the effects of transformational leadership on subordinates:* The potential benefits, for students, of transformational classroom leadership can be examined by reference to the general management literature. This is based on the premise that university teachers may be conceived of as classroom leaders and students as their subordinates (Cheng, 1994; Luechauer and Shulman, 2002). Whether or not this premise is accepted, it appears reasonable to assume that findings from the business field on the value of transformational leadership for subordinates may at least indicate possible beneficial effects of a classroom transformational style on university students.
- *The relevance of the transformational-transactional leadership construct across national cultures:* Given that the present study is set in Hong Kong and the transformational-transactional notion has its roots in a Western conceptualization

of leadership, the debate over the cross-cultural applicability of notions that have been developed initially in a US context is pertinent to this thesis. Here is it argued that an important by-product of the present study is the informing of this debate.

Accordingly, the literature review is structured as follows: The first section examines the relevance of the transformational-transactional style to educational leadership and then in the second section the focus moves to the notion of teacher-leadership and looks at the extent to which transformational leadership is subsumed within the teacher-leadership construct. The third and fourth sections consider the effects of various leadership styles in the classroom, the third section looking more generally at these effects and the fourth section focusing specifically on the influence of the transformational-transactional style in a university classroom context. The fifth section moves to a study of the factors that affect SET results and particularly concentrates on the influence of aspects of teacher behaviour, such as leadership style, on SET's. The sixth section examines general management findings on the effects of the transformational leadership style on subordinates, by way of indicating the potential beneficial effects of classroom transformational leadership on SET results and on the educational process. The chapter closes with a look at the extent to which the transformational leadership construct crosses national cultures particularly as the notion was originally developed in a US context and, in this thesis, is employed in a Hong Kong setting.

2.1 The Transformational-transactional Construct and Educational Leadership

Despite the paucity of studies examining the influence of transformational-transactional in a university or school classroom, the construct has not been neglected in the area of educational leadership. The notion was first introduced into the field of education in the 1990's primarily as a result of the work of Sergiovanni and of Leithwood and his colleagues. Sergiovanni (1990) identified the following stages of leadership for school improvement that convey his conceptualization of the transformational-transactional construct:

- a. *Leadership by Bartering*: The leader and led strike a bargain which involves the leader giving the led something in exchange for something the leader wants. In exchange for good work, the led might receive, for example, promotion or merit pay.
- b. *Leadership by Building*: The leader provides the climate and interpersonal support that enhances the leds' opportunities for fulfilling needs for achievement, responsibility and esteem. The focus is on arousing human potential, satisfying high order needs and raising the expectations of both the leader and the led such that both are aroused to high levels of performance and commitment.
- c. *Leadership by Bonding*: The leader and the led develop a set of shared values and commitment that bond them together in a common cause. The leader here focuses

on elevating school goals and purposes to a shared covenant that bonds together leader and followers in a moral commitment to these goals and purposes.

- d. *Leadership by Banking*: The leader acts as a servant to the organization and its members through systematizing shared values and routinizing the results of school improvement initiatives.

Leadership by bartering is a reflection of the Contingent Reward dimension of transactional leadership whilst the other three leadership stages require transformational leadership qualities. In particular, Leadership by Building requires the exercise of Symbolic Leadership that involves an emphasis on, and modeling of, important goals and behaviours. Equally, Leadership by Bonding requires Cultural Leadership in which the principal helps define, strengthen and articulate the values, beliefs and culture that give a school its identity. Sergiovanni's Symbolic and Cultural Leadership dimensions are reflections of the Idealized Influence and Inspirational Motivation characteristics of the transformational leadership notion described in Chapter 1.

Leithwood and his colleagues have also applied the transformational-transactional notion to school leadership and developing a model of transformational leadership for improved school performance. This model adapts the transformational-transactional leadership model to the school management environment. The latest version of the model (Yu *et al.*, 2002) contains three broad clusters of leadership practices, each of which includes several more specific dimensions. The clusters are as follows:

- *Setting directions* includes building a shared vision, developing consensus about goals and priorities, and creating high performance expectations.
- *Developing people* includes providing individualized support, offering intellectual stimulation, and modeling important values and practices.
- *Redesigning the organization* includes building a collaborative culture, creating and maintaining shared decision-making structures and processes, and building relationships with parents and the wider community.

These clusters include more specific leadership dimensions that are summarized below:

- Identifying and articulating a vision*: practices aimed at identifying new opportunities for a school, and developing, articulating, and inspiring others with a vision of the future.
- Fostering the acceptance of group goals*: practices aimed at promoting cooperation among staff and assisting them to work together toward common goals.
- Creating high performance expectations*: behaviors that demonstrate leaders' expectations for excellence, quality, and high performance on the part of staff.
- Providing individualized support*: indications of respect for staff and concern

about their personal feelings and needs.

- e. *Offering intellectual stimulation*: challenges to staff to reexamine some of the assumptions about their work and to rethink how it can be performed.
- f. *Providing an appropriate model*: setting examples for staff to follow that are consistent with the values leaders espouse.
- g. *Strengthening school culture*: behavior on the part of leaders aimed at developing shared norms, values, beliefs, and attitudes among staff, and promoting mutual caring and trust among staff.
- h. *Building collaborative structures*: providing opportunities for staff, parents and the wider community to participate in decision making about issues that affect them and for which their knowledge is crucial.

Dimensions a, d, e and f closely resemble the four I's of the original transformational leadership construct presented in Chapter 1 and have proven to be the dimensions most consistently related to positive school outcomes. The other dimensions are Leithwood's attempt to tailor the original construct to the specifics of a school environment and these have proven less relevant. Of the transactional dimensions, only Contingent Reward has been associated with positive outcomes (Geijsel *et al.*, 1999; Leithwood *et al.*, 1996). Leithwood (1994) has argued that transformational leadership in

education has arisen due to the inability of the more traditional leadership in education to deal with the fundamental change that has characterized many educational systems in the past decade. Thus, for Leithwood, transformational leadership is a vital component of effective school restructuring exercises. The relevance of transformational leadership to situations of educational change are exemplified in the following four premises that support the usefulness and relevance of transformational leadership in the context of school restructuring:

- The means and ends of school restructuring are uncertain and commitment rather than control is needed to effect the change. Transformational leadership fosters the motivation, commitment and extra effort needed to bring about successful restructuring.
- School restructuring requires both fundamental and incremental change i.e., change to the entire organization as well as to the core technology. Traditional educational leadership can take care of incremental change but transformational leadership is needed for fundamental change.
- The restructuring exercise involves a large and complex school where traditional educational leadership is overstretched already. In such cases, transformational leadership with its emphasis on empowering of staff and dispersed influence must supersede conventional leadership.

- The school restructuring exercise involves highly professional teaching staff where teachers have the competence to assume part of the leadership mantle. Transformational leadership is far more congruent with a professional workforce than is conventional educational leadership.
(Leithwood, 1994)

Various studies have lent support to Leithwood's premise that transformational leadership should be at the centre of today's educational leadership. Research examining the relationship between the transformational qualities of school leaders and school related performance, in primarily a North American context, have generally produced positive results for the transformational leadership style. For example, the study of Silins and Murray-Harvey (1999) indicated that transformational leadership has an indirect, though positive effect via teachers' perceptions, on a variety of school performance measures such as tertiary offers, success rate, school retention rate and completion rates etc. Hallinger and Heck's (1996) review of empirical studies covering over a decade revealed similar results. Leithwood and colleagues (1996) found a positive association between transformational leadership and perceptions of leader effectiveness, the behaviours of teachers, teachers' psychological states, schools' organizational learning and improvement, school culture and students. A study by Leithwood and Jantzi (2000) indicated that transformational leadership is a factor that positively influences two aspects of student engagement with school: (1) affective/psychological i.e., sense of belonging and (2) extent of actual participation in school activities. In a study of schools primarily teaching disabled students, Ingram (1997) found that teachers tended to be

more highly motivated under the leadership of principles who were perceived by teachers to be more transformational than transactional.

Moving out of the North American context, in the Netherlands, Geijsel and colleagues (1999) found that high innovation schools had more transformational leadership than low innovation schools. In a Singaporean context, Koh (1990) has reported a positive relationship between ratings of secondary school principals' extent of transformational leadership and ratings of level of trust and degree of school effectiveness. Similarly, a Hong Kong study (Yu *et al.*, 2002) indicated evidence of a significant relationship between transformational leadership and teachers' commitment to change, and confirmed previous North American findings (Leithwood *et al.*, 1993; Leithwood *et al.*, 1994). However, the Hong Kong study suggested that this relationship is less strong in the Asian context. Further, in a study of Taiwanese schools, Lam and co-authors (2002) found that transformational leadership is one critical element in promoting organizational change.

Despite the above positive findings, transformational leadership as a notion relevant to educational leadership has not received universal endorsement. Thus, for example, in providing an articulate defence of the applicability of transformational leadership to an educational setting, Gurr (1996) has reviewed the articles of Lakomski (1995) and Gronn (1996) that are critical of transformational leadership in education. In brief, both Lakomski (1995) and Gronn (1996) have criticized transformational leadership research from a methodological standpoint arguing that questionnaires are

inappropriate vehicles for capturing respondents' views on abstract notions such as leadership. In response, Gurr (1996) cites various methodological reviews that have affirmed the psychometric principles of test construction and properties of the transformational-transactional leadership measuring instrument: the Multifactor Leadership Questionnaire (MLQ) (Bessai, 1995; Kirman, 1995; Conoley and Impara, 1995). Lakomski (1995) has further argued that the questionnaire approach encourages respondents to merely report pre-fabricated views on leadership that may bear little relationship to the respondents' actual experience of the phenomenon. Again in response, Gurr (1996) notes that there is a considerable body of literature indicating that beliefs about a phenomenon can influence how one responds to and experiences that phenomenon in the 'real world'.

In addition to his criticisms of the research methodology of transformational leadership studies, Gronn (1995) argues that research has failed to demonstrate a link between transformational leadership and organizational outcomes. He further argues that there is a lack of evidence that transformational leadership can be effectively taught (Gronn, 1995; 1996). Gurr (1995) notes that Gronn's point applies not only to transformational leadership but to all leadership studies given that organizational outcomes are not solely the reflection of leadership effectiveness or ineffectiveness but a result of a range of factors. He also notes that leadership involves working with and through others. In light of this, he argues that an examination of literature connecting leader behaviour and follower responses is likely to be more illuminating than attempting to isolate the leadership part in the organizational outcome equation. Countering Gronn's

(1995) assertion regarding the absence of a link between transformational leadership and organizational outcomes, later in this dissertation, the author of this study presents a considerable body of work that has been carried out both inside and outside the educational context that indicates a strong link between transformational leadership and outcomes. Further, consistent with Gurr's (1996) argument that good leadership works through positive subordinate responses, later in this work a number of studies are presented that demonstrate a very positive link between transformational leadership and subordinate satisfaction with their leader, measured in terms of, for instance, perceived leadership effectiveness. Regarding Gronn's (1995; 1996) point that there is little evidence that transformational leadership can be effectively taught, Gurr (1996) argues that, although more needs to be done, there is a burgeoning body of literature indicating that transformational leadership is teachable. Research for the present study supports Gurr's argument (see for example, Barling *et al.*, 1996; Corrigan *et al.*, 2000; Kelloway and Barling, 2000; Kelloway *et al.*, 2000).

The above discussion assumes the traditional hierarchical view of leadership and identifies the transformational-transactional notion with school principals and other senior school management staff. However, a recent notion, namely, teacher-leadership, has challenged the idea that leadership is the exclusive domain of those holding a position in the organizational hierarchy. In the context of the present study, there is some evidence to suggest that effective teacher-leaders display transformational leadership qualities.

2.2 Teacher-leadership

Silva and colleagues (2000) have suggested that there have been three waves of teacher-leadership. The first wave merely placed the concept lower down the organizational hierarchy than the principal level and thus closer to the teaching function. Therefore, in this wave, the department head is the archetypical teacher-leader. Essentially this is a control model with teacher-leaders managing teachers who are viewed as akin to deskilled workers educating students as uniform products (Frymier, 1987). The second wave of teacher-leadership places more emphasis on the instructional dimension of the teaching function but still vests teacher-leadership in formally created organizational positions such as team leader and curriculum developer. Despite moving the concept out of the realm of the conventional organizational hierarchy, the second wave separates out leadership from the teaching function and still emphasizes control with curriculum developers and instructional designers creating prepackaged materials for classroom teachers to implement. This approach has been described as the “remote controlling of teachers” (Darling-Hammond, 1998; Shulman, 1987).

The third wave views the notions of teaching and leadership as fully integrated and emphasizes the empowerment of teachers in their present role as teachers. It is a process rather than a positional concept and recognizes that teachers, in the process of carrying out their teaching duties, can and should be given the opportunity to express their leadership capabilities in the school and classroom. This conceptualization of teacher-leadership is grounded on professionalism and collegiality and is a label reserved for

those teachers who improve a school's educational climate by engaging colleagues in various activities designed to enhance the educational process. Wasley (1991), in Silva and co-authors (2000), views teacher-leaders as those who "help redesign schools, mentor their colleagues, engage in problem.

When teacher-leadership is conceived of as a process or a series of activities rather than a positional concept, it is more difficult to articulate because it comprises an array of behaviours and characteristics rather than formalized positional duties. Various attempts have been made to articulate the behaviours and characteristics of third wave teacher-leadership. For example, Silva and colleagues, have emphasized the ability of the teacher-leader to "navigate the structures of schools, nurture relationships, model professional growth, encourage change, and challenge the status quo" (p. 22). Sherrill (1999) has argued that the core expectations of a teacher-leader are exemplary classroom instruction and sound pedagogical knowledge coupled with an understanding of the theory of learning and of effective classroom practices. Furthermore, according to Sherrill, the teacher-leader should possess research based knowledge about teaching and learning. On the basis of this knowledge and understanding, the teacher-leader should then cultivate desired dispositions in colleagues by engaging in reflective inquiry.

Darling-Hammond and colleagues (1995) have emphasized that teacher-leaders are open to new ways of doing things and are modelers of learning with a view to improving students' educational experience. Berry and Ginsberg (1990) have identified the following three components of the role of what they have termed "lead teachers": (1)

mentoring and coaching other teachers; (2) professional development and review of school practice, and (3) school level decision making. Lieberman and co-authors (1988) identified 18 skills that they felt characterized teacher-leaders. They classified these skills as follows:

- Building trust and rapport
- Organizational diagnosis
- Dealing with the process
- Using resources
- Managing the work
- Building skill and confidence in others

More recently, the third wave of teacher leadership has been articulated by Alma Harris and co-authors as “the exercise of leadership by teachers regardless of position or designation” (Frost and Harris, 2003, p. 482) with a “focus upon improving learning” (Harris and Muijs, 2003, p. 40) based upon a type of leadership that stems from “professional collaboration, development and growth” (ibid., p. 40). For Harris and Muijs, teacher leadership involves:

- “ - the leadership of other teachers through coaching, mentoring, leading working groups;
 - the leadership of developmental tasks that are central to improving learning and teaching; and
 - the leadership of pedagogy through the development and modeling of effective forms of teaching”
- (ibid., p.40)

Despite the above characterizations of teacher-leadership, few studies have attempted to place the teacher-leadership notion within the framework of current theories of educational leadership and, specifically in the context of the present study, within the transformational-transactional leadership framework. One exception is Crowther's (1997a) study of teacher-leadership in a socially disadvantaged setting. Crowther describes teacher-leaders as "individuals acclaimed not only for their pedagogical excellence, but also for their influence in stimulating change and creating improvement in the schools and socio-economically disadvantaged communities in which they work" (p. 6). His criteria for selecting participants in his study convey his particular conceptualization of teacher-leadership as it is manifested in a situation of socio-economic deprivation. The criteria are:

- Concrete evidence of a significant contribution to an aspect of social justice in the school or school community
- Highly esteemed in the community, particularly among socioeconomically disadvantaged individuals and groups.
- Recognized by colleagues as very influential in school decision-making processes
- Accorded a high level of school-based responsibility by colleagues and the school administration.

Crowther's study indicated that his teacher-leader subjects displayed leadership qualities that are broadly transformational. For example, they tended to have a deep

commitment to a set of core values that they were prepared to communicate openly. All the teacher-leaders studied displayed an enthusiasm that was contagious, and the ability to inspire others and raise their expectations. A review of the other attempts to define teacher-leadership that have been described above indicates an affinity between teacher-leadership and transformational leadership. Thus, Silva and co-author's (2000) description of teacher-leaders as nurturers of relationships, models of professional growth, encouragers of change, and challengers of the status quo reflects the spirit of the transformational leadership concept. Similarly, the teacher-leaders' qualities emphasised by Darling-Hammond and others (1995) such as openness to new ways of doing things and the modeling of learning reflect aspects of transformational leadership. Furthermore, the mentoring, coaching and developmental aspects of Berry and Ginsburg's (1990) view of teacher-leaders are totally consistent with the transformational leadership notion.

In summary, third wave teacher-leaders influence colleagues without the formal trappings of leadership but by virtue of a commitment to values, the modeling of behaviour, the ability to inspire others, by a nurturing of relationships, through mentoring and coaching and by encouraging change. All these qualities, characteristics and approaches are central to the transformational leadership construct described in Chapter 1. Noting Sherrill's (1999) argument that one of the core expectations of a teacher-leader is exemplary classroom instruction, Crowther's (1997a) reference to the pedagogical excellence of teacher-leaders and Harris' characterization of teacher leaders as "expert teachers" (Harris and Muijs, 2003, p. 40), an examination of leadership in the classroom appears to be a logical extension of research on teacher-leadership. On the assumption

that teacher-leaders do not suspend their leadership qualities as soon as they enter the classroom, the next section examines literature that has focused on the influence of classroom leadership style generally. However, it was noted above that teacher-leaders tend to display transformational leadership qualities which indicates the relevance of an examination of these qualities in the classroom. Accordingly, later in this work, two studies are described that have specifically investigated the effects of teachers' transformational and non-transformational (transactional) leadership qualities in a classroom environment. These are isolated studies and have been carried out in a university setting which is particularly pertinent to the present work that also focuses on classroom transformational leadership in a university context for the reasons presented in Chapter 1.

2.3 The Effect of Classroom Leadership Style: General Findings

Cheng's 1994 study, conducted in Hong Kong and involving a sample of 678 classrooms in 190 primary schools, employed a task (initiating structure) versus maintenance (consideration) conceptualization of classroom leadership. Cheng worked on the premise that a classroom is a small social organization with teacher as leader and students as followers. He also categorized teachers as high task-low maintenance, low task-low maintenance, high task-high maintenance and low task-high maintenance based on student responses to an adapted version of the Leader Behaviour Description Questionnaire (Halpin, 1966; Ho, 1989). Cheng related classroom leadership to classroom social climate, a notion based on the work of Moos and Trickett (1974) that includes the

following factors: involvement, affiliation, teacher support, task orientation, competition, order and organization, rule clarity, teacher control and innovation. He also examined the influence of classroom leadership on students' affective performance that includes such dimensions as self concept, attitude to peers, attitude to the school, attitude to teachers and self efficacy of learning. Cheng's overall findings are quite detailed but the finding that is especially pertinent to the present study is that leadership style had a strong and positive effect on classroom social climate and student affective performance.

Similarly, in the context of science education in Australian schools, Rickards and Fisher (1996) employed the Questionnaire on Teacher Interaction (QTI) (Wubbels *et al.*, 1991; Wubbels and Levy, 1993) to examine, amongst other things, the effect of students' perceptions of interpersonal teacher behaviour on student achievement and attitude to class. The QTI contains seven dimensions one of which is leadership conceived of as the ability to convey enthusiasm for the subject matter, to display confidence, hold attention and to know what is happening in the classroom. Rickards and Fisher (1996) found that students' achievement and attitude to class was significantly and positively correlated with teachers' classroom leadership as defined in the QTI. Other dimensions of the QTI that were positively correlated with student attitude and achievement were teachers' helpful/friendly and understanding behaviours. Wubbels and colleagues (1997) who have collected data from over 50,000 students have also noted, that according to students, the best teachers are strong classroom leaders who are also friendly and understanding. Thus, the limited research on the influence of leadership in the classroom indicates that

effective classroom leadership can have a positive influence on student attitude in class and student achievement.

Furthermore, in the UK context, the Hay McBer report (2000) on teaching effectiveness in schools identified the following three factors that significantly influenced pupil progress: teaching skills, professional characteristics and classroom climate. Arguably, the professional characteristics factor in particular revolves around teachers' leadership behaviours most of which are operationalised in the classroom. Thus, included within this factor are such behaviours as challenging and supporting pupils, exhibiting self confidence, consistency and fairness, respect for others, setting targets that stretch performance and holding pupils accountable for performance. The Hay McBer report demonstrated that good performers in the above three factors positively impacted classroom climate which, in turn, strongly correlated with student academic progress. In sum, the Hay McBer findings indicated that the classroom leadership behaviours described in the report as professional characteristics were one of the significant factors influencing student academic performance. The above studies suggest that classroom leadership style and behaviours can have an impact on student academic progress. The following section goes to the very core of the present study by describing the two studies that have specifically examined the influence of a transformational-transactional classroom leadership style in a university setting.

2.4 Transformational-transactional Leadership in a University Classroom Context

There is a paucity of research on the influence of transformational-transactional leadership in the university classroom setting even though universities play a pivotal role in the development of the type of knowledge workers needed for the creation of wealth in today's modern economies. Given the dearth of research in the area, the experiments of Ojode and colleagues (1999) and of Walumbwa and Ojode (2000) on the effects of transformational-transactional leadership in the university classroom represent landmark studies. These studies are briefly summarized below.

The study of Ojode and colleagues (1999) employed a version of the Multifactor Leadership Questionnaire (MLQ) (Bass and Avolio, 1995) modified slightly by Ojode and colleagues for a classroom setting. Thus, for example, the term *leader* was changed to read *instructor*, and the term *group* to read *class*. Using a small sample of graduate students (57) in a US university, the study indicated that, generally, the transformational leadership dimensions and one of the transactional leadership dimensions, namely Contingent Reward, were positively and significantly correlated with the outcome variables in the MLQ: student willingness to put in extra effort, classroom leadership effectiveness and student satisfaction with classroom leadership. Walumbwa and Ojode (2000) conducted a follow up investigation, again in a US university context, using a larger sample (429) and including graduate and undergraduate students. The major focus of this study was to examine the effect of student gender on perceptions of transformational-transactional leadership. The study confirmed results of the 1999

research and the authors also concluded that females rated their classroom teachers higher on transformational leadership dimensions than did their male counterparts with the results more significant for the undergraduate sample.

Taken together, the above studies indicate that all the transformational leadership dimensions and one transactional leadership dimension i.e., Contingent Reward, are viewed by students as positively associated with student effort in class, perceptions of teachers' classroom leadership effectiveness and student satisfaction with teachers' classroom leadership. The studies also suggest a gender effect with female students displaying a heightened awareness of teachers' transformational leadership style. The present study will re-examine these findings in a Hong Kong university setting. This re-examination is viewed as significant, particularly in light of the emphasis placed on student evaluation of teaching (SET) in the career development of university teaching staff noted in Chapter 1. The following section examines the various extraneous factors including teacher behaviours that are likely to influence SET results and argues that whilst many of these factors may have little educational value, the exercise of transformational leadership in the classroom is likely to have positive educational results.

2.5 Student Evaluation of Teaching

In Chapter 1, it was noted that the student evaluation of teaching (SET) is a widely used instrument in higher education and can have a profound effect on the career of a university teacher. For example, in 1993, Seldin noted an 86 per cent use of the student

evaluation of teaching (SET) as a central feature of personnel decisions in US higher education, an increase in usage from 68 per cent in 1984 and 28 per cent in 1973 (Seldin, 1984). In a feature for the Chronicle of Higher Education, Wilson (1998) stated that “only about 30 per cent of colleges and universities asked students to evaluate professors in 1973, but it is hard to find an institution that doesn’t today. Such evaluations are now the most important, and sometimes the sole, measure of an instructor’s teaching ability” (p. A12). The extent of reliance on the SET as the predominant measure of university teacher performance is not confined to the US; it is a worldwide phenomenon (Newton, 1988; Seldin, 1989; Stratton, 1990) and Hong Kong, the setting for the present study, is no exception. The present author, having experienced the Hong Kong higher education system for approximately twenty years, can confirm that all the Hong Kong universities recognized by the Hong Kong Government by virtue of being funded through the Hong Kong University Grants Committee (UGC), use a version of the SET as the central means of evaluating the teaching performance of academics. Equally, in Hong Kong, SET scores play a pivotal role in personnel decisions on contract renewal and substantiation (tenure).

The heavy reliance on the SET worldwide would appear justified if ratings of teacher performance were generally reflected in student achievement. However, there is considerable disagreement in the literature on the link between SET scores and student achievement. Despite the existence of studies indicating that SET’s are reasonably valid multidimensional measures (Marsh and Roche, 1997; McKeachie, 1987) and have a moderate correlation with student learning (d’Appollonia and Abrami, 1997), by and large, most investigations have found little correlation between student achievement and

student ratings of their teachers. Cohen's (1983) meta-analysis, for example, found that student achievement accounted for only 14.4 per cent of overall instructor rating variance. Similarly, a meta-analysis by McCallum (1984) found that student achievement explained only 10.1 per cent of overall instructor rating variance. Equally, a 1982 investigation by Dowell and Neal revealed that student achievement accounted for only 3.9 per cent of between-teacher student rating variance. Finally, a comprehensive study by Damron (1996) found that most of the factors contributing to student ratings of university teachers are probably unrelated to an instructor's ability to promote student learning.

It is findings such as those presented above that have led commentators such as Reckers (1995) to state that "nearly 75 per cent of academics judge student course evaluations as unreliable and imprecise metrics of performance, yet nearly 100 per cent of schools use them, frequently exclusively" (p. 33). Therefore, irrespective of whether or not there is some degree of linkage between student achievement and SET scores, this linkage is likely to remain tenuous when teaching staff generally perceive SET scores to be unreliable. This is because such a perception tends to generate teaching behaviours designed primarily to influence SET scores rather than the quality of education. The remainder of this section will examine these behaviours as part of an overall review of the factors influencing SET scores. In the course of this examination, it will be argued that the enactment of transformational leadership in the classroom by university teachers, far from being of marginal educational value, has the potential to be one teaching behaviour that adds value to student learning. The literature is replete with studies of the

SET phenomenon (Wilson, 1998) and it is therefore not possible to review all these studies in detail here. However, it is possible to provide a synopsis of the major findings that largely fall into three categories: student related factors, course related factors, and teacher related factors.

2.5.1 Student Related Factors

2.5.1.1 Gender Effect

More than one study has indicated that student ratings of teachers is influenced by student gender. For example, the study of Walumbwa and Ojode (2000) referred to in the previous section indicated that females, particularly at the undergraduate level, rated their classroom teachers higher on transformational leadership dimensions than did their male counterparts. Bachen and co-authors (1999) found a strong interaction between student gender and professor gender with female students giving especially high ratings to female professors and comparatively lower ratings to male professors on measures reflecting the qualities of being caring-expressive, interactive, professional-challenging, and organized. By contrast, in the same study, the evaluations by male students of male and female professors did not differ significantly on any of these factors. Bachen and colleagues' (1999) study confirmed similar findings by Feldman (1993).

2.5.1.2 Student's Academic Level and Maturity

Frey et al (1975) found that more experienced students were clearly more lenient in their ratings than their younger counterparts. Langbein (1994) suggested that higher level students (i.e., those taking higher level courses) are generally more motivated and discriminating in their evaluation of teaching than lower level students. The implication that SET results will tend to be more favourable for higher level subjects has been confirmed by Marsh (1984) and Holtfreter (1991). Further, Aleamoni's (1981) review of prior research cited eight studies that showed no significant relationship between SET results and student level and 18 studies that reported a positive and significant relationship between these two variables. Furthermore, it is interesting to note that Walumbwa and Ojode's (2000) study, referred to earlier, did reveal differences in sensitivity to transformational-transactional leadership qualities between the undergraduate and graduate samples.

2.5.1.3 Students Punishing Their Teachers via SET Scores

It is expected that students will use the SET to reflect back to their teachers and the institutions in question, poor teaching performance. However, Crumbley and colleagues (2001), in their examination of students' perception of the evaluation system, discovered that poor SET scores may reflect as much the inadequacy of student effort as they do the quality of the instruction they have received. Thus, Crumbley and co-authors (2001) found that students will punish their teachers via the SET for being asked embarrassing

questions (i.e., questions for which the student has no answer), for being graded hard, for being given quizzes and for being given significant homework. Therefore, the SET can be used as a vehicle for students to punish conscientious educators.

2.5.2 Course Related Factors

2.5.2.1 Grading

One of the key course related areas that has been investigated in relation to SET scores is the influence of actual grading and students' expectations of grades on SET's. Perkins and colleagues (1990) concluded that there was evidence that SET scores were sensitive to the grades professors assigned although Johnson and Christian (1990) noted that expected grades were more highly correlated than assigned grades with student ratings. The latter finding appears to reflect the fact that students in the Johnson and Christian study did not know their final grades at the time of the evaluations. Both studies confirmed that students with higher than expected grades gave higher SET scores than those with lower than expected grades. Whilst Brown (1976) found that grades accounted for only 9 per cent of variation in student ratings, he found that grades were substantially more influential than other factors expected to correlate with student ratings. Greenwald (1997) on the other hand, found that grades distort ratings away from the valid measurement of instructional quality by amounts as much as 20 per cent of ratings variance. Centra and Creech (1976) also found a significant correlation between student grade expectations and SET mean rating scores. Basically, students give high ratings in

appreciation for high grades (Aronson and Linder, 1965; Goldman, 1993) or the expectation of high grades irrespective of whether the grades or expectations reflect actual academic achievement.

2.5.2.2 Class Size

Student ratings of university teachers have been found to vary with class size (Meredith, 1984; Toby, 1993) and, with a few exceptions (e.g., Langbein, 1994; Marsh, 1987), this is one of the most consistent findings in the literature (Koh and Tan, 1997). In general, smaller class sizes tend to result in better SET scores (Feldman, 1984; Holtfreter, 1991; Koh and Tan, 1997; Liaw and Goh, 2003) probably because the opportunity for teacher-student interaction and rapport is greater in smaller sized classes than larger ones (Glass *et al.*, 1981; Toby, 1993). There is, however, a non-linear relationship between class size and SET scores with both relatively small and relatively large classes receiving better ratings (Feldman, 1984; Holtfreter, 1991).

2.5.2.3 Course Content

Stodolsky (1984) has argued that some courses are more difficult to teach than others and thus, course content is likely to influence SET results. Stodolsky's contention is supported by Clark (1993), DeBerg and Wilson (1990) and Cranton and Smith (1986). In contrast, Langbein (1994), despite noting that there is a general perception that teachers delivering 'hard' quantitative subjects are likely to receive lower student ratings than

those teaching 'soft' qualitative subjects, found no evidence of a significant relationship between type of course and overall instruction ratings. However, in a Singaporean setting, Koh and Tan (1997) found that, in a three-year undergraduate business programme, better SET results were associated with first and third year courses than with second year courses. Student academic level and maturity (discussed above) is given as a possible explanation for the third year SET scores and the authors have offered relative ease of learning introductory courses plus student prior familiarity with course content via pre-university studies as likely explanations of the first year phenomenon. They also noted that the nature of the programme under study could have had a significant influence on their results because the programme required students to undertake a particular specialized field in the second year that could prove challenging and that this might account for the relatively lower SET results for courses taken in the second year.

Cashin (1990) examined very large databases of students' ratings and found significant differences in how students rate teaching across various academic disciplines. Hence, arts and humanities courses tend to receive the highest student ratings, biological and social sciences and health and other professions fall into the medium group, English language and literature and history both fall into the medium-low group with business, economics, computer science, mathematics, the physical sciences and engineering falling in the bottom group. Finally, Aleomoni (1989) observed a rating bias against required courses as opposed to elective courses and noted that the more students in a class taking a required course, the lower the relevant SET score, presumably a feature of the interaction of required course and class size (discussed above).

2.5.2.4 Class Timing

Cronin and Capie (1986) found that teaching evaluation results vary from day to day. Thus, to the extent that evaluations are conducted during the classes in question, the timing of classes is a factor affecting SET results. DeBerg and Wilson (1990) and Husbands and Fosh (1993) have suggested that the time and day a course is taught can affect SET results and in a Singaporean university business school context, Koh and Tan (1997) found that SET's conducted in the later part of the week seemed to result in better teaching evaluations. Koh and Tan have speculated that a more relaxed atmosphere exists towards the end of the week that might have a positive effect on SET scores.

2.5.3 Teacher Related Factors

2.5.3.1 Gender

A great deal has been written about the affect of teachers' gender on SET results often on the premise that female teachers may be discriminated against in what may still be perceived of as a male dominated profession (Koh and Tan, 1997). However, studies of gender effects on SET results do not support a view that female teachers are consistently discriminated against. Thus, Bennett (1982) found that female instructors were consistently rated as friendlier, having a more positive interpersonal style and possessing greater charisma than their male counterparts. Similarly, female teachers have been rated higher than male teachers on the ability to create a classroom environment that invites

participation (Crawford and Macleod, 1990) and on the fostering of a feeling of closeness and warmth for both male and female students (Sears and Hennessey, 1996). Further, a meta-analysis of gender effect on student evaluations conducted by Feldman (1993) indicated that when significant differences were found, they generally favoured the female teacher.

Research indicates that student ratings are strongly influenced by gender role expectations and, in general, it appears that teacher behaviour perceived by ratees to be inconsistent with traditional gender roles is penalized in student evaluations (Langbein, 1994). Rubin (1981), for example, found that nurturing qualities were perceived of as more important for female professors than male professors and openness (fairness) more important for male professors. Similarly, Kierstead and co-authors (1988), in asking students to evaluate an imaginary teacher who was male in half the surveys and female in the other half, found that, whilst warmth and interpersonal contact were viewed as important qualities for both male and female versions, the presence of these qualities only influenced students' evaluations of a notional female teacher. Equally, accessibility outside the classroom and a friendly attitude in the class (indicated by a regular smile) positively influenced evaluations of the imaginary female teacher and had no effect on ratings of the male version in the case of accessibility and, in the case of 'the ready smile', reduced students' ratings of the male version.

In general, it appears that a number of traits such as warmth, charisma, accessibility, self-assurance and professionalism are valued across faculty gender

(Bennett, 1982; Downs and Downs, 1993) but their influence on SET results tends to reflect gender stereotyping. Thus, female teachers perceived of as warm, charismatic and accessible are likely to be more positively evaluated on these traits than their male counterparts (Bennett, 1982; Cooper *et al.*, 1982, Kierstead *et al.*, 1988). Nevertheless, gender stereotyping of female teachers does not always produce positive results for them. Some studies have indicated that stereotyping may alert raters to a perceived shortcoming based on gender that might result in a severe rating if that shortcoming appears to be evident. Therefore, female teachers may be generally perceived to be less professional (professionalism being perceived of as a male quality) than their male colleagues and if the female teacher does not display such a high standard of professionalism that offsets the perception, the female teacher may incur a more negative rating than might otherwise have been the case (Bennett, 1982; Winocur *et al.*, 1989). In summary, the gender-student evaluation relationship is a complex but nonetheless significant factor influencing SET's.

2.5.3.2 Age, Experience, Rank

Smith and Kinney (1992) have suggested that the age of a teacher has an effect on SET scores and that older and more experienced teachers tend to receive more positive student evaluations. Furthermore, Holtfreter (1991) found a positive but weak relationship between the rank of a university teacher and student ratings. However, Feldman's (1983) comprehensive review of studies focusing of the influence of teachers' academic rank, instructional experience and age on SET's was not conclusive. Langbein (1994), on the other hand, did find a significant relationship between instructional experience and

student ratings although this relationship was non-linear with experience having a positive effect on evaluations up to a point when the effect then became negative. Contrasting with the findings of Smith and Kinney (1992) and Holtfreter (1991), Clayson (1999) found that student evaluations tended to be negatively correlated with the teachers age and years of experience. In summary, research has produced mixed results and indicates only a potential relationship between teacher age, experience and rank and student ratings.

2.5.3.3 Teachers' Influencing Tactics

Earlier, it was noted that despite the widespread use of the SET as the central measure of university teaching performance, academics have little confidence in its accuracy (Reckers, 1995). Furthermore, SET results often are a major input to personnel decisions relating to academic staff. This situation encourages university teachers to use various tactics to influence student evaluations, many of which, at best, have little educational value and at worst, are actually detrimental to the educational process. As one study suggests: "This SET system causes professors to manipulate students and students in turn to manipulate teachers" (Crumbley *et al.*, 2001). Central to this manipulation are grades. A number of authors have noted that a common method used by teachers to court popularity is grade inflation and 'easing up' on course content, assignments and tests (Bauer, 1996; Crumbley, 1995; Handlin, 1996; Ryan *et al.*, 1980; Sacks, 1996). To put it succinctly, university teachers can buy ratings with grades (Hocutt (1987-1988). In a review of faculty tactics aimed at influencing SET outcomes, Simpson and Siguaw

(2000) found that the most significant factor reported by faculty was grading leniency and associated activities such as easy or no exams, unchallenging course material and spoon feeding students on examination content. In brief, university teachers generally believe that lenient grading produces higher SET scores and they act on this belief (Martin, 1998; Powell, 1977; Stumbf and Freedman, 1979; Winsor, 1977; Worthington and Wong, 1979; Yunker and Marlin, 1984).

Various other manipulative tactics are reported in the literature, many of them fatuous in an educational sense to say the least. For example, Emery (1995) found in a study of 2,673 students at a major US university that teachers who brought food to class received the highest ratings of teaching effectiveness. Simpson and Siguaw (2000) reported that university teachers perceived a major influencing tactic to be the serving of snacks etc on the day of the evaluations. Other tactics noted by these authors included consistently letting students out of class early, complimenting the class on its ability immediately before administering the evaluation, administering the evaluation when poor students are absent, having a 'fun activity' during the class on the day before the evaluation and remaining in the room during the evaluation. Not all the tactics noted by the authors were as irrelevant to the educational process. Some respondents stated that they provided their students with academic extras such as small, in-class, discussion groups and extra study sessions and others stated that they clearly outlined to their students what teaching and learning should be at university level and highlighted expectations in the syllabus. These academic extras were viewed as means of enhancing evaluations via improving students' academic performance and influencing student

expectations. Despite these more positive approaches to influencing SET outcomes, it is evident that much of what is done by academics to influence student evaluations is of little or no educational value.

2.5.3.4 Teachers' Behavioural Traits

This section is distinguished from the previous section in concentrating on the influence of the more subtle university teachers' behaviour and character traits on SET's. This is very different from the above focus on the overt, sometimes cynical actions, used by some academics to positively influence SET results. Studies of the effect of personality variables on student evaluations are limited (Simpson and Siguaw, 2000). However, the research that has been done confirms that the behaviour traits of university teachers have a substantial impact on student evaluations. Thus, Feldman (1986) found that the overall relationship of teacher personality to student ratings is substantial. Williams and Ceci (1997) also found that student ratings are significantly influenced by the personal characteristics of the teacher. Similarly, Cardy and Dobbins (1986) found that students' 'liking' of the teacher significantly influenced teaching evaluations. Clayson's (1999) study confirmed that between 50% and 80% of the total variance of student evaluations could be attributed to personality related variables. In a quantitative study, Jackson and colleagues (1999) found that a university teacher's ability to 'get on' with students (rapport) overlapped heavily with more squarely educational factors such as instructor enthusiasm for subject, breadth of subject coverage, group interaction and learning value. An extreme interpretation of the type of findings reported by Jackson and co-authors

(1999) would support Abrami and others' (1982) argument that personable faculty can receive favourable student ratings regardless of how well they know their subject matter. This phenomenon was noted in Chapter 1 of this dissertation (see (Naflulin *et al.*, 1973).

In sum, research indicates that university teachers' behavioural traits have a substantial affect on SET results. Studies such as that of Naflulin and colleagues have also suggested that these behavioural traits may not necessarily be of any educational value. However, it is a central contention of the present work that one particular university teacher behavioural trait, namely transformational leadership, when enacted in the classroom, is likely not only to have a positive influence on the SET scores of those teachers displaying transformational leadership qualities in the classroom, but also to have a positive affect on the educational experience of students. Aside from the work of Ojode and colleagues (1999) and Walumbwa and Ojode (2000) referred to above, little has been done to investigate the educational value of transformational leadership in a university classroom context. However, much has been done in the business field aimed at measuring the effect of the transformational-transactional leadership style on subordinates. To the extent that university teachers may be conceived of as classroom leaders and students as their subordinates (Cheng, 1994; Luechauer and Shulman, 2002), then findings from the business field on the value of transformational leadership for subordinates have relevance for the university classroom and can be used to indicate potential benefits of transformational leadership in a university classroom context.

2.6 Benefits of Transformational Leadership: General Findings

Some authors have indicated difficulties in measuring aspects of the transformational leadership construct (Bycio *et al.*, 1995; Simons, 1999) and others have suggested that the full benefit of transformational leadership is moderated by physical distance from the leader (Howell *et al.*, 1998; Shamir, 1995) and the nature of subordinates (e.g., high growth need versus low growth need) (Klein and House, 1995; Wofford *et al.*, 2001). However, the general body of leadership literature attests to the efficacy of the transformational style. What follows is a brief review of this literature.

2.6.1 Subordinates' Satisfaction with the Leader

Numerous studies have concluded that the enactment of the transformational leadership style is positively and substantially correlated with overall satisfaction with the leader on the part of subordinates, either as individuals or in groups (Bass and Avolio, 1990; Bycio *et al.*, 1995; Brown and Dodd, 1999; Barling *et al.*, 1996; Hater and Bass, 1988; Howell and Frost, 1989; Hinkin and Tracey, 1994; Kirkpatrick and Locke, 1996; Koh *et al.*, 1995; Podsakoff *et al.*, 1990; Shamir *et al.*, 1993; Yammarino and Bass, 1990). Arguably, an important factor contributing to subordinate satisfaction with transformational leadership is the trust that this particular style seems to generate (Barling *et al.*, 1998; Barling *et al.*, 2000; Pillai *et al.*, 1999; Podsakoff *et al.*, 1996). Other contributing factors may be the positive effect that transformational leadership has on subordinates' general level of motivation and commitment (Bennis and Nannus, 1985; Barling *et al.*, 1998;

Barling *et al.*, 1996, Bycio *et al.*, 1995, Dubinsky *et al.*, 1995; Hater and Bass, 1988; House *et al.*, 1991; House and Shamir, 1993; Koh *et al.*, 1995; Masi and Cooke, 2000; Yukl and Van Fleet, 1982), stress levels (Dubinsky *et al.*, 1995; Posdakoff *et al.*, 1995; Sosik and Godshalk, 2000), levels of self confidence (Bass and Avolio, 1993), job satisfaction (Hater and Bass, 1988) and sense that things are fair and equitable (Pillai *et al.*, 1999).

2.6.2 Transformational Leadership and Performance

Research generally indicates that the influence of transformational leadership is not confined to subordinates' satisfaction with the leader. It also has a beneficial effect on individual, team and organizational performance. House and others (1988) have noted that research has yielded an impressive array of empirical findings supporting the relationship between transformational leadership and performance. Hater and Bass (1988), for example, demonstrated that not only did transformational leadership differentiate top-performing managers from ordinary managers according to subordinate perceptions but also differentiated them on the basis of independent criteria. Additional support for the positive impact of transformational leadership on performance has been provided by Howell and Frost (1989) who compared the effects on followers of transformational leadership versus directive and considerate leadership behaviors under experimentally-induced high and low productivity norm conditions. In the Howell and Frost study, transformational leadership was found to have a strong and positive influence on individual task performance.

In terms of group performance, a number of studies have drawn attention to the positive influence of transformational leadership (e.g., Avolio *et al.*, 1988; DeGroot *et al.*, 2000; Shamir *et al.*, 1993; Sosik *et al.*, 1997; Yammarino and Bass, 1990). Lowe and colleagues (1996), in a meta-analysis of over 30 independent empirical studies using the transactional-transformational leadership model, concluded that there were strong positive correlations between all components of transformational leadership and leadership effectiveness measured not only subjectively by subordinates but objectively in terms of organizational performance criteria such as goal achievement and profit. Similarly, Barling and colleagues (1996), Brown and Dodd (1999) and Keller (1992) have used objective performance criteria to demonstrate the superiority of transformational leadership. Barling and others (1998) have highlighted the possible link between subjective assessments of leadership effectiveness (e.g., subordinates' satisfaction with the leader) and objective criteria of performance. Their study has indicated that subordinates' perceptions of supervisors' transformational leadership leads to enhanced affective commitment to the organization and, as a result, enhanced group performance.

2.6.3 Transformational Leadership and Learning

The influence of transformational leadership on subordinates' learning is an issue that goes to the very core of this dissertation given a central argument of this study that the enactment of transformational leadership behaviours in the university classroom not only

tends to lift SET scores but also has intrinsic benefits from an educational standpoint. What better educational benefit than an enhancement of students' learning! In a business context, Slater and Narver (1995) have argued that a "complex environment calls for a complex style of leadership and a transformational or facilitative leader" (p. 69). On the premise that modern organizations need to be learning organizations, Slater and Narver have contended that transformational leadership is necessary to motivate people to want to learn. Empirical support for Slater and Narver's argument has been provided by Farrell (2000) who found that transformational leadership had a positive influence on an organization's learning orientation described as an organization's ability to modify its behaviour to reflect new knowledge through a continuous capacity to learn, adapt and change its culture and to improve performance based on what is learned from experience. Similarly, in examining why companies have varying degrees of success in making the transition from the narrow ISO 9000 conceptualization to the broader notion of total quality management (TQM), Hill and others (2001) found that transformational leadership was of particular importance in stimulating the kind of organizational learning necessary for a successful transition.

In terms of individual learning orientation, an empirical study of professional accountants in the UK conducted by Coad and Berry (1999) found that perceived transformational leadership variables were positively correlated with subjects' learning goal orientation, a concept defined by the authors as follows: "individuals with a learning goal orientation have an intrinsic interest in their work, view themselves as being curious, and choose challenging tasks that provide opportunities for learning. These individuals

are not unduly bothered by mistakes, regarding them as part of the learning process.” (p. 164). It seems reasonable to suppose that university teachers generally will find it highly desirable if they can display classroom leadership behaviour that generates in students an intrinsic interest in academic subject matter, a desire to ‘stretch’ themselves intellectually by choosing challenging tasks and a willingness to learn from mistakes!

2.6.4 Transformational Leadership and Creativity

In Chapter 1, the transformational-transactional leadership construct was related to desirable university educational outcomes. Both of the authors referred to in that section, in proposing their generic university educational outcomes, have each presented a specific learning outcome concerned with creativity. Thus, Bourner’s (1997) learning aim: *development of a student’s ability to generate ideas and evidence* is about innovation and creativity. Similarly, Ellington’s (1999) *synthesis* outcome is concerned with creativity. The prima facie relevance of transformational leadership to subordinate creativity that was noted in Chapter 1, is generally confirmed in the business literature on transformational leadership. Thus, for example, Hoy and Miskel (1996) have argued that transformational leadership, in reframing problems, encouraging subordinates to view issues through different lenses and stimulating them to question assumptions, is highly conducive to creativity. Equally, research has found that transformational leaders provide favourable motivational effects in terms of technological innovation (Howell and Higgins, 1990) and idea generation (Sosik, 1997). Furthermore, a recent article by Al-

Beraidi and Rickards (2003), set in an accounting context, has confirmed the positive relationship between transformational leadership and creativity.

2.6.5 Transformational Leadership, Integrity and Ethics

Ethics has become a hot topic in modern societies fuelled no doubt by such cases as Enron, WorldCom, Tyco and others that have reinforced the need for business schools in particular to produce graduates of character and integrity. In this connection, most writers on leadership have suggested that there is a positive relationship between transformational leadership characteristics and ethical conduct. Although writers such as Giampetro and colleagues (1998) and Howell and Avolio (1992) have recognized that the charismatic element of transformational leadership can be employed for unethical purposes, Bass and Steidlmeier (1999) have argued that only pseudo-transformational leaders lack integrity because authentic transformational leaders are by definition ethical. Certainly, the four dimensions of transformational leadership presented in Chapter 1, namely, Idealized Influence or Charisma, Inspirational Motivation, Individual Consideration and Intellectual Stimulation (Den Hartog *et al.*, 1997; Hinkin and Tracey, 1999) tend to reinforce Bass and Steidlmeier's (1999) argument because there is nothing in these four dimensions to suggest anything other than ethical conduct. Simons (1999) has gone a step further in specifying an additional dimension that is implied in the transformational leadership notion, namely behavioural integrity. Simons asserts that behavioural integrity is a critical component of the transformational leadership style.

It seems also that transformational leaders are generally viewed as ethical by their subordinates. Atwater and co-authors (1991), for example, found that transformational leaders are associated with traits such as “ethical”, “principled” and “wholesome” significantly more frequently by their subordinates than non-transformational leaders. Similarly, Parry and Proctor-Thomson’s (2002) study that employed a large sample covering both public and private sector organizations in New Zealand, found a significant positive correlation between transformational leadership and perceived leadership integrity. In the spirit of such findings, Carlson and Perrewe (1995) have gone so far as to state that “transformational leadership is viewed as the best approach for instilling ethical behaviour in organizations” (p. 5). It appears, therefore, that transformational leadership is an ethical style and is perceived as such by subordinates. It seems to the author of this work that, especially in a business school environment where the present study is located, the display of transformational leadership qualities by university teachers in the classroom can be of great benefit in encouraging ethical conduct amongst students insofar as student behaviour is influenced by the example of their teachers.

In sum, the above findings from the general leadership literature indicate a number of potential benefits deriving from the enactment of transformational leadership behaviours by university teachers in the classroom. On the basis of the above review, aside from the generally favourable impression given to students by university teachers displaying transformational leadership behaviours in the classroom that is likely to be reflected in those teachers’ SET scores, there are also potential educational benefits in terms of performance, learning, creativity and integrity.

2.7 Does the Transformational-transactional Leadership Model Transcend Cultural Boundaries?

The landmark study of Hofstede (1980) has given rise to literature that calls into question the validity of concept, theories and models developed in the West and primarily in the USA, to other national cultures. Hofstede's empirical study of values and attitudes in the IBM corporation involved more than 116,000 questionnaires covering 50 countries. He defined national culture as "the collective programming of the mind" and his analysis gave rise to the following cultural dimensions:

- ***Individualism-Collectivism:*** Focuses on the relationship between an individual and society in general. Cultures high in individualism emphasise fairly loose structured relationships between people. The individual places his or her own interests, and perhaps those of immediate family, at the centre of things. Self is the dominating rationale for behaviour and relationships. Society fosters this individualism through encouraging people to be independent and by enabling the reasonable pursuit of self-interest. In collectivist cultures, the main point of reference is the group rather than the individual. A group may include extended family, ethnic group, clan, tribe, inner circle of close family and close friends etc. Collective interests tend to take precedence over those of the individual. People are expected to be committed to the group and to share its norms and values. In return, the group provides belonging, security and pooled resources. The individual's sense of self and identity is embedded in the group.

- ***Power Distance:*** The focus here is on the distribution of power within a society. Some societies accept large inequalities between those with power and those without. They even think it is the way things should be. This is a large power distance culture. Small power distance cultures are less tolerant of large inequalities and there is a shared commitment to reducing inequalities whenever possible.
- ***Uncertainty Avoidance:*** This dimension is concerned with how society reacts to, and manages, the uncertainty inherent in human situations. In some societies, members are used to 'living with' ambiguity and uncertainty and do not find it threatening. In others, uncertainty tends to create psychological discomfort and is to be avoided. Such societies seek to impose rules to bring order and coherence to things.
- ***Masculine-Feminine:*** This dimension can be viewed at two levels. At the surface level, it is concerned with whether a society is primarily male dominated or there is a more even distribution of power in society between the sexes. At a deeper level, the terms are used to describe the prevalent value system of a society, which encompasses both genders. Masculine societies have a preference for competitiveness, assertiveness, acquisitiveness, materialism and achievement. Feminine societies are concerned with nurturance, relationship-orientation, concern for the quality of life, modesty and caring.

Writers such as Trompenaars (1994) have identified additional dimensions to those of Hofstede (1980) but Hofstede's dimensions have remained at the centre of the debate on cultural differences. In the context of the present study, it is noteworthy that Hofstede found the national culture of the USA to be high on individualism, low on power distance, weak in uncertainty avoidance and embracing masculine values. However, the culture of Hong Kong, at the time of Hofstede's original study, differed from the USA in being low on individualism and high on power distance, but was found to be similar in terms of uncertainty avoidance and its masculine value system. This section of the literature review opened by noting that Hofstede's seminal study has stimulated the debate on the applicability of Western models and theories to non-Western contexts. Hence, writers such as House (1995) have drawn attention to the fact that prevailing leadership theories tend to be rooted in US individualistic culture with the implication that the assumptions upon which they are based may not apply in other cultures. Additionally, in the context of an examination of the transformational-transactional leadership model, Den Hartog and others (1999) have stated that desirable leadership attributes may vary across cultures although their own study of 62 cultures found that, despite some differences in conceptions of ideal leadership across cultures, certain attributes of transformational leadership were universally endorsed as contributing to outstanding leadership.

Other writers on leadership in general such as Adler (1983a; 1983b; 1991), Ayman (1993), Erez (1994), Shamir and Howell (1999), Smith and Bond (1993) and Triandis (1990; 1993) and writers on educational leadership such as Hallinger and Leithwood

(1996) and Walker and Dimmock (1999) have also questioned the generalisability of Western findings to non-Western cultures. Nonetheless, one of the originators of the transformational-transactional leadership construct, Bass (1997), has continued to argue in favour of the universality of the notion with supporting evidence from various organizational contexts and from several continents. Similarly, Pillai and colleagues (1999), in discovering that transformational leadership enhanced perceptions of organizational justice across Western and non-Western cultures, concluded that there are more commonalities than differences in the leadership processes of different cultures.

Sarros and Santora (2001) did not go quite as far as Pillai and colleagues (1999) in claims for the cross cultural commonality of leadership processes but, in their study of Australian, Russian, Japanese and Chinese executives, did conclude that transformational leadership styles are commonly associated with the values of achievement, benevolence, self direction (intellectual autonomy) and stimulation (intellectual challenge) across cultural contexts. With specific reference to transformational leadership, Jung and co-authors (1995) have challenged the implicit assumption in much of the writing that transformational leadership may only be valid for Western cultures. They argue that the high level of value congruence between followers and leaders and the emphasis on group goals, commonly found in Asian collectivist cultures, render the transformation style particularly effective in such cultures.

Specifically in an educational leadership context, Popper and Sleman's (2001) found no significant differences in subordinate perceptions of school principals' exercise

of transformational-transactional leadership qualities across the Jewish and Druze cultures. Similarly, in a Hong Kong context, Yu and co-authors (2002) examined the effect of principals' transformational leadership practices on teachers' commitment to change and after comparing their results with those in North America, concluded that transformational school leadership practices travel well across cultural contexts. In brief, the debate on the extent to which the transformational-transactional leadership construct is applicable across national cultures is on going. One of the by-products of the present study may be to inform this debate through a comparison of results of the study, obtained in a Hong Kong setting, with those obtained in the US by Ojode and others (1999) and Walumbwa and Ojode (2000).

The central purpose of the present study is to examine the influence of classroom transformational-transactional leadership on students in a Hong Kong university setting. In so doing, it focuses on the relationship between student perception of university teachers' transformational-transactional leadership styles and their perception of critical teacher effectiveness criteria such as the ability to motivate students and the ability to conduct a successful class. The study also examines the possible relationship between student perceptions of teacher transformational-transactional style and SET scores. With the central purpose of this thesis in view, the present chapter has addressed various relevant literature themes including transformational leadership per se and in education, teacher leadership, the influence of classroom leadership on students, factors influencing SET's and the cross cultural applicability of Western models.

More specifically, this chapter commenced by acknowledging the dearth of studies that have specifically addressed the issue of transformational leadership in the university classroom. However, in order to demonstrate that the transformational leadership construct is held to be relevant to an educational setting, the chapter then reviewed the considerable body of literature generally supporting the applicability of the construct to educational leadership. This was followed by an examination of the teacher-leadership notion that removes the idea of leadership from the confines of a formal organizational hierarchy and highlights work indicating the centrality of the transformational leadership style to teacher-leadership. This chapter argues that classroom transformational leadership, with its focus on non-formal leadership displayed by teachers in the classroom, is a logical extension of non-formal teacher-leadership that takes place in a collegiate setting. Accordingly, the chapter moved from teacher-leadership to a review of studies suggesting that teacher classroom leadership has a significant influence on students' educational experience and then to an account of the two studies that have specifically examined classroom teachers' transformational-transactional style in a university setting. The latter two studies, in particular, indicate that the exercise, by university teachers, of transformational leadership in the classroom has a positive influence on student perception of the effectiveness of these teachers and the chapter then develops this theme through an examination of the literature on the various factors influencing SET scores. Review of the literature on SET's indicates that the behavioural traits of teachers have a strong bearing on SET results. In this thesis, it is argued that one may reasonably assume that the classroom is somewhat akin to a small organization with teacher as leader and students as subordinates. Thus, based on this

assumption, it is further argued that the classroom transformational leadership style is a particularly valuable behavioral factor not only because it is likely to positively influence SET outcomes but also because of the positive effects it should have on students.

The large volume of transformational literature reviewed in this chapter attests to the potential of the classroom transformational style given that this literature is replete with studies indicating various positive effects on subordinates, particularly with respect to subordinates' satisfaction, performance, and learning. In acknowledgement of the fact that the transformational-transactional leadership notion and its measurement tool, the Multifactor Leadership Questionnaire (MLQ) (Bass and Avolio, 2000) originate in the US and that the present study takes place in Hong Kong, the literature review closes with an examination of views on the cross-cultural applicability of the transformational-transactional leadership conceptualization. Aside from arguments in the literature regarding the applicability of Western constructs such as transformational-transactional leadership to non-Western cultural environments, the next chapter which focuses on methodological issues returns to cross cultural aspects when describing the modifications made to the original MLQ to take account of both the classroom and cultural contexts.

Chapter 3: Methodology

The purpose of the present study was to examine the influence of teachers' classroom transformational-transactional leadership on students in a Hong Kong university business school setting. In so doing, it focused on the relationship between student perception of university teachers' transformational/transactional leadership styles and their perception of critical classroom leadership criteria such as the ability to motivate students and the ability to conduct a successful class. The study also examined the relationship between student perceptions of teacher transformational-transactional style and SET scores. Additionally, possible gender based differences in perception of teacher classroom leadership style were examined. Review of the literature, in particular the initial excursions into this area by Ojode and colleagues (1999) and Walumbwa and Ojode (2000) gave rise to the hypotheses presented in Chapter 1 and restated below. In a university business school classroom context:

- H1: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the other transformational leadership dimensions.
- H2: Scores on the contingent reward transactional leadership dimension will be positively and significantly correlated with scores on each of the transformational leadership dimensions and with scores on each of the leadership outcomes.

H3: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the leadership outcomes.

H4: Female students will give significantly higher scores on transformational dimensions than will male students.

H5: Scores on teachers' leadership outcomes will be positively and significantly correlated with teachers' SET scores.

The central focus of this chapter is a description of the data collection method and analysis specifically employed to address the above hypotheses. Nonetheless, while the above hypotheses have guided the data analysis, other relationships relevant to the analysis are also presented. This chapter also discusses research design issues such as the research orientation or paradigm underlying this study, matters of validity and reliability, and the ethics of conducting research of this kind. The chapter closes with an examination of the limitations of this particular research approach.

3.1 The Research Paradigm

This study has a positivist research orientation. The relative merits of positivism vis-à-vis interpretivism remains a hotly debated issue in educational research and also in a number of other research areas. Attempts to convey the essence of the debate is hindered by the lack of unanimity amongst the exponents of the positivist and interpretivist perspectives.

Thus, within the positivist school, there are marked differences, for example, between Machian positivism and logical positivism and both differ significantly from the positivism of scientific realism. Similarly, within the interpretivist school, one is confronted with an apparent variety of individual philosophies. For example, in the postmodernist movement, it is difficult to find a set of principles sufficiently broad as to apply to the majority of the adherents to this movement.

Finally, the variety of 'labels' given to the two research paradigms by writers on the subject do not simplify matters. For example, Cohen and Mannion (1994) use the term *normative* rather than the *positivist* paradigm. In Cahoon (1996) the distinction between positivism and interpretivism has become a distinction between *modernism* and *postmodernism*. The term *post-positivism* is used by Connell (1997) to describe interpretivism. When one enters the social anthropological arena, the *etic-emic* distinction is used to convey the differences between the positivist and interpretivist research orientations.

Notwithstanding the difficulties of terminology, positivism and interpretivism can be distinguished by reference to conceptions of the nature of reality. The branch of metaphysics dealing with the nature of reality is called ontology. The basic ontological question is whether or not there exists an external 'out there' reality separate from human consciousness. Looked at from the opposite perspective, one might ask whether or not what we term reality is a product of the human mind and a construction of human consciousness. Proponents of the positivist view hold that the phenomena of this world

have an independent existence outside of human perception. Adherents to the interpretivist viewpoint argue that because reality is a human construction, phenomena can have no reality outside of human perception.

The above ontological distinction leads to a similar epistemological distinction. Epistemology is concerned with the relationship between man and knowledge. From an epistemological perspective, one side of the debate proposes that there is an external stock of knowledge comprising universal laws and principles of existence just waiting to be discovered and accessed by the human mind. The contrasting view is that there is no such stock of knowledge and that what we call 'knowledge' is personal to the individual, it being a product of that particular individual's personal perception and experience of living. Harre and Krause (1996) have examined the relationship between the ontological and epistemological foundations of positivism and interpretivism. What follows is a paraphrase of their account:

Ontological Foundation of Positivism

- There are external entities which exist for all people irrespective of their individual points of view or body of personal beliefs.
- These entities are foundations or universals which cannot be broken down by analysis.

Epistemological Implications for Positivism

- There are truths which hold good in all contexts, at all times, and for all persons.
- These truths are incapable of further analysis and provide the foundations of knowledge.

Ontological Foundation of Interpretivism

- The world is different for different people and there are no universals of any kind.

Epistemological Implications for Interpretivism

- There are an infinite number of perspectives on the world and one may hold the view that no perspective is valid or all perspectives are valid. Both positions are tenable.

The ontological and epistemological differences described above lead to equally disparate views on research methodology. Inherent in the pure positivist position is the belief in the uniformity and consistency of human existence. The type of laws which are generally accepted as being applicable to the natural world such as the law of gravity, are just waiting to be discovered in all other aspects of existence. In all areas of life, phenomena can be reproduced and hence predicted and explained. The appropriate research methodology is thus that of the scientist i.e., the scientific method. Generally

this approach may be characterised as a reliance on empirical measurement by an independent observer aimed at testing hypotheses, confirming theories and establishing universal laws.

The interpretivist position, grounded as it is on the premise that we all view the world through personal theoretical lenses, supports research approaches which seek to highlight and discover individual experiences and perspectives. There is an emphasis on the researcher suspending preconceived notions and becoming immersed in the experience of the subject under study in order to give an accurate account of that experience. The aggregate data and statistical analysis associated with the scientific method are largely abandoned in favour of the analysis of individual occurrences and accounts through in depth interviews and case studies. Thus, positivist research tends to orient towards quantitative analysis whilst interpretivism is largely associated with qualitative methodologies.

Earlier it was noted that there is a lack of unanimity amongst adherents of both positivist and interpretivist research perspectives. In the positivist school, Machian positivism (Mach, 1893/1974; 1896/1959), for example, is an extreme form of positivism. It is extreme in the sense of being grounded on a total reliance on what is observable and a total exclusion of any statements in theoretical terms which are not amenable to direct observation. A particular manifestation of Machian positivism is radical behaviourism, a term used to describe the programme of research undertaken by the psychologist Skinner (1938; 1945; 1953; 1974). Skinner's work is also known as

scientific psychology. The essence of Skinner's brand of Machian positivism is that knowledge of human behaviour is derived purely inductively and that a valid focus of enquiry is the relationship between human behaviour and the environment. Thus, laws of human behaviour can be derived from repeat experimentation and examining the consistency of results. Such consistency is the basis for the establishment of these laws.

If Machian positivism (Mach, 1893/1974; 1896/1959), is an extreme version of positivism, then scientific realism (Boyd, 2002; Hunt, 1994) can be characterised as a moderate form. It falls within the positivist ranks because it assumes an external reality or truth outside of human consciousness and emphasises quantitative modes of enquiry. However, it departs from the positivist philosophies discussed thus far in accepting that true knowledge about the world can never be known with absolute certainty. This is because the frames of reference governing scientific experimentation belong to the particular world views of the experimenters. However, knowledge is furthered and truths approximated through subjecting theories to critical scrutiny.

This section opened by confirming the positivist orientation of this study. More specifically, the study reflects a scientific realist perspective in attempting to further knowledge of leadership by taking a theory, namely transformational-transactional leadership, and examining its application outside of the context within which the theory was originally developed. While not making claims of universality for the transformational-transactional conceptualization, the present study is carried out with a view to producing a transformational-transactional leadership notion that could have a

wider application than has hitherto been the case. The scientific realist perspective is reflected in an underlying assumption that the more studies that are carried out that test the applicability of the transformational-transactional leadership construct to a variety of organizational settings and cultural contexts, the more the transformational-transactional leadership notion is refined and begins to approximate a general theory of leadership. The author of this study is well aware that adherents to the interpretivist view would contend that approximating a general theory of leadership is an impossible aspiration given the complexities of human nature and situations. However, positivists can and have challenged the idea that there are no 'universals' on the ground that the long term success of explanatory theories give reason to believe that such theories do actually explain things as they actually are (Hunt, 1990). Hopefully, the present study has something to offer researchers of both positivist and interpretivist persuasions. For the former, the study furthers the movement towards a theory of transformational-transactional leadership with a wider application than at present. For the latter, the study may provide researchers with insight into perceptions of classroom leadership style that could inform future qualitative studies.

3.2 Data Collection

3.2.1 Setting

The study was situated in the Business School of Lingnan University which is one of Hong Kong's eight fully accredited universities. The research examined the teaching of

the capstone course, namely Strategic Management, in the School's major offering which is a Bachelor of Business Administration (BBA) programme. At the time this study took place, this three year programme had a total cohort of 876 spread over the three years and Strategic Management was a required course for all final year students. Focusing the study on a particular course was viewed as necessary to ensure that results were not obscured due to differences in course content. It may be recalled from Chapter 2 that there is a substantial body of opinion holding that course content has an influence on student evaluation of teachers (Aleomoni, 1989; Cashin, 1990; Clark, 1993; Cranton and Smith, 1986; DeBerg and Wilson, 1990; Koh and Tan, 1997; Stodolsky, 1984). Concentrating solely on the Strategic Management course for the purposes of the present study was seen as a way of avoiding distortion from course content factors.

Finally, locating the study in the Lingnan University Business School facilitated the cooperation needed from teachers of Strategic Management for what could be construed as yet another approach to evaluating their teaching. At the time of the study, the author was one of the teachers responsible for delivering two sections (classes) of the Strategic Management course and was able to draw upon the collegiality of the Strategic Management teaching team to enlist their support for the research.

3.2.2 Sample

The sample comprised all the final year students of the Lingnan University BBA Programme (n = 285). The choice of final year students reflected the view that higher-

level students (i.e., those taking higher level courses) are generally more motivated and discriminating in their evaluation of teaching than lower level students, a view supported by Langbein (1994) and discussed in Chapter 2. The use of undergraduate students rather than graduate students in the study reflected the fact that Lingnan University is primarily an institution delivering undergraduate education. Nonetheless, use of undergraduate students was not considered to be a problem in light of the findings of Walumbwa and Ojode (2000) that the gender effect tends to be more pronounced amongst undergraduate students and one of the hypotheses of the present study examined a possible gender effect.

3.2.3 The Instrument

The instrument for data collection was a version of the most recent Multifactor Leadership Questionnaire (MLQ Form 5x-Short) developed by Bass and Avolio (2000) to measure the nine dimensions of the transformational-transactional or full range leadership model. These nine dimensions are as follows: (a) Idealized Influence (Attributed) (b) Idealized Influence (Behaviour) (c) Inspirational Motivation (d) Intellectual Stimulation (e) Individual Consideration (f) Contingent Reward (g) Management-by-Exception (Active) (h) Management-by-Exception (Passive) (h) Laissez-faire Leadership. Descriptions of the dimensions were presented earlier in Chapter 1. The instrument was modified for both an educational and a Hong Kong setting albeit with an effort to maintain, as far as possible, the integrity of the original instrument. Modifications for an educational setting were carried out initially by the

author of this thesis who has been a university teacher of business programmes in Hong Kong for approximately 20 years. These initial modifications were then scrutinized by a senior academic and teacher in the field of educational research with a special interest in transformational-transactional leadership, and an academic and teacher in the field of the use of English language. Further modifications were made as a result of their input. The following are two examples of the modification of items for an educational setting:

Original Wording: *He/she fails to interfere until problems become serious.*

Wording for a Classroom Setting: *He/she does not give me help until my learning problem becomes serious.*

Original Wording: *He/she treats me as an individual rather than just as a member of a group.*

Wording for a Classroom Setting: *He/she treats me as an individual rather than just as a member of the group of students taking this course.*

Brislin's (1976) views guided the modifications that were made to the original instrument to take account of the Hong Kong setting for the study. Brislin has noted the following:

“...the instruments used in much cross-cultural psychological research were developed in one culture (often the middle-class United States). In

the development, the researchers take advantage of common experiences shared by people of that culture. Such instruments may have very limited usefulness in another culture in which people do not attach the same value to those experiences.”

He continues,

“...a major problem is that researchers use instruments (without modification) in one culture (let’s call it *A*) that were designed, pre-tested, revised, validated, and so forth, in another culture (*B*). The problem arises when the researcher tries to reach conclusions about culture *A* by scoring according to the norms derived in culture *B*. The criticism, of course, is that norms for *B* may be irrelevant for *A*, and that the results for such research can be false and misleading.” (p. 216/217)

Whilst Brislin’s argument was viewed as relevant because the transformational-transactional leadership construct and the MLQ were both developed in the US and were used in a Hong Kong context, note was also taken of evidence that the construct ‘travels rather well’ across cultures (see, for example, Bass, 1997; Jung *et al.*, 1995; Pillai *et al.*, 1999; Popper and Sleman, 2001; Sarros and Santora, 2001; Yu *et al.*, 2002). It was also recognized that the medium of instruction for Hong Kong university students in general and for Lingnan University students in particular is primarily English and that any version of the MLQ instrument worded in Chinese would be used to supplement rather than replace an English version. In view of this, Brislin’s (1993) back-translation procedure was employed which involved taking the MLQ modified for a classroom setting as described above, and having it translated into Chinese by a bilingual and then a second bilingual, unfamiliar with the efforts of the first bilingual, translating the Chinese version back into English. Decentering, which allows for modifications of both the source language and the target language such that “...the research project is not centred around any one culture or language. Instead, the idiosyncrasies of each language

under study contribute to the final version of the questionnaire” (Brislin, 1976, p. 223-224), was also employed. After decentering, the items presented above to illustrate modification of the MLQ for a classroom setting, were as follows:

English Version (after decentering): *He/she will offer help only when I have encountered difficulties in my study.*

Equivalent Chinese version of the item: 他/她待我在學習上面臨困境，方才施以援手。

English Version (after decentering): *He/She treats me as a person — an individual entity, not just one among many students.*

Equivalent Chinese version of the item: 他/她把我看作一個人 — 一個獨立個體，而不單是芸芸眾學生其中的一個。

Thus, students participating in this study had both an English and Chinese version of all the items in the MLQ. The finalized instrument is contained in Appendix A and the scoring key is contained in Appendix B. Reference to the instrument indicates that it is the form of a Likert scale where respondents rate an item according to the degree to which they feel that the characteristic described in the item is exhibited in the range *Not at all* to *Frequently, if not always*. Numbers are assigned to each choice in the Likert scale that enables the rater to make a numerical rating against each item in the instrument.

The Likert scale in the instrument is an ordinal scale because assigning a numerical value to each item merely indicates a respondents' perceptions of more or less of a characteristic but does not indicate perceptions of specific measurable differences in the existence of a particular characteristic as would be the case with an interval scale. This has implications for the type of analyses applied to the data and will be returned to later in this chapter.

3.2.4 Administration of the Survey

The survey involved five teachers (four male and one female) and 10 sections (i.e., classes) of students of the Strategic Management capstone course in the Lingnan University BBA degree (teachers deliver the course to more than one class). Class sizes ranged from 17 to 34. The author explained the purpose of the study to each of the teachers involved individually and teachers were made aware that they had the option of not participating and that results would be treated as strictly confidential. Equally, student participating in the survey were informed of the purpose of the study by their class teacher and were made aware of the fact that their participation was not obligatory. The survey took place in the 2002/2003 academic year. The instrument was distributed by the individual teachers to all students attending the class on the 10th week of a 13 week semester to ensure that students had had sufficient experience of their classroom teacher's style to enable them to give informed answers to items in the instrument. The instrument allowed for complete anonymity, as students names were not required on the rater form. All students attending the classes in question opted to participate in the survey and 217

usable responses were received. 94 respondents were male and 123 were female.

3.3 Transformational-transactional Leadership: Validity and Reliability

3.3.1 Validity

Types of validity commonly referred to in the literature on research methodology are content or face validity, criterion-related validity and construct validity. Content or face validity is concerned with the extent to which items in an instrument (e.g., questions in a questionnaire) have *prima facie* relevance to the content area under study. Content validity is usually established by reference to experts in the field. Regarding the MLQ which is the basis for the particular instrument developed for this study, the numerous studies of leadership that have employed the MLQ but have not felt the need to recommend altering the items in the MLQ, attest to its face validity. The classroom leadership instrument developed and used in the present study is content valid insofar as it contains items that reflect the original MLQ as far as possible. Furthermore, such modifications from the original that were made to take account of the classroom and Hong Kong context, resulted from three further sources listed below:

- The author of this study, who is published in the field of leadership and has taught business subjects at university level in Hong Kong for approximately 20 years.
- Dr. Marianne Coleman, a well established UK academic with research expertise in transformational-transactional leadership in an educational context and with publications in the field.

- This author's spouse, Mrs. Elaine Pounder, who has a higher degree in English and specializes in teaching the use of English in Hong Kong for academic and business purposes.
- Dr. Alfred Wong and Mr. Michael Tam, both bi-lingual business academics and Dr. Maureen Tam, a bi-lingual academic in education, all of whom participated in the forward and back-translation procedure.

Arguably, a claim for face validity for the instrument employed in the Hong Kong study can be made on the basis of the expertise employed to bring about the necessary modifications from the original.

Criterion related validity involves validating the measurement results of an instrument against some criterion or criteria external to the instrument. For example, it would be reasonable to expect the results of applying an instrument designed to measure organizational performance that indicated a particular organization to be performing exceptionally well, to be positively correlated with other measures of good organizational performance such as high profitability. Chapter 2 of this study presented a substantial body of evidence indicating a positive association between transformational leadership and external criteria of performance i.e., criterion related validity. In the present study, the central external measure that was employed to ascertain criterion related validity was the relevant SET score.

A construct valid instrument measures what it is supposed to measure and

procedures aimed at enhancing construct validity seek to refine the instrument with a view to also clarifying and better defining the construct the instrument is designed to measure (Pounder, 1997). Nunnally (1978) has noted that validity is a matter of degree and not an all or nothing property and, in this sense, the examination of construct validity is an unending process in which researchers are continually striving for ever more refinement of constructs and their measuring instruments. This process applies to the transformational-transactional leadership construct and the MLQ. The original transformational-transactional model presented by Bass (1985) included six leadership factors (Charisma, Inspirational Leadership, Intellectual Stimulation, Individualized Consideration, Contingent Reward, Management by Exception and Laissez-faire Leadership). However, since the introduction of the model, numerous studies have been conducted aimed at critiquing and refining the original conceptualization (see Avolio *et al.*, 1999). Some studies have recommended a reduction of leadership factors (Bycio *et al.*, 1995, Hinkin and Tracey, 1999) and others have recommended additional factors (Bass and Avolio, 1993; 1994; Simons, 1999).

The version of the MLQ i.e., the MLQ Form 5X (Bass and Avolio, 2000), used as a basis for the instrument developed in the present study is the outcome of a response by the MLQ's authors, Bass and Avolio, to criticisms of previous versions of the instrument and comprises the nine factors discussed earlier in this chapter. Support for the validity of the MLQ Form 5X version has come from a recent study conducted by Bass and Avolio (2000) that employed a large sample. However, a number of studies continue to highlight apparent weaknesses of the transformational-transactional construct, such as the lack of a

clear distinction between the transformational leadership dimensions and the place of the Contingent Reward dimension in the construct i.e., whether it belongs amongst the transformational or transactional dimensions (e.g., Lim, 1997; Sarros and Santora, 2001; Thite, 1999; Yukl, 1999). The present study reexamined the factor structure of the MLQ particularly as the version of the instrument used in this study had been modified to take account of the classroom and Hong Kong context.

3.3.2 Reliability

Reliability in measurement is the degree to which an instrument consistently and accurately measures whatever it is measuring (Gay and Airasian, 2003). It is not the same as validity which is concerned with measuring the *right* things because it is perfectly possible to be measuring the *wrong* things with a great deal of accuracy and consistency. Thus, a good instrument designed to test or measure aspects of human processes (as opposed, for example, to an instrument designed to measure inanimate objectives such as a tape measure) needs to produce results that are *both* valid and reliable. Like validity, there are different tests of reliability. *Stability*, for example, is the test of the extent to which an instrument is reliable over time. It is sometimes termed test-retest reliability because it involves administering a test to a particular group of subjects and then at a later date, administering the same test to the same group of subjects and comparing the results of the two tests for stability. The drawback of this approach to reliability testing is first, ascertaining the length of time that should elapse between the administration of the first and second tests to ensure that the second test results are not contaminated by subjects' recall of the results of the first test. Additionally, it has logistical difficulties in terms of pulling together the same group of subjects and their willingness to participate again in the same exercise. *Equivalence* involves administering two versions of a test to the same

group of subjects to ascertain the extent to which test results are equivalent to each other. Both stability and equivalence tests of reliability are something of a luxury in testing for reliability in the sense of requiring subjects to repeat their involvement in a particular study and most researchers do not have such a luxury. Additionally, stability and equivalence tests of reliability are prone to measurement error due to, for example, differences in testing conditions. In terms of feasibility and avoidance of measurement error, the *internal consistency-reliability* test tends to be preferred in research studies and this particular study is no exception. Internal consistency-reliability involves only one administration of a particular test, instrument or questionnaire. For items in a test or questionnaire with more than two possible scores (e.g., 0, 1, 2, 3 etc), Cronbach's Alpha (Cronbach, 1951) is the appropriate test of an instrument's internal consistency. Cronbach's Alpha measures the extent to which all items in a test or questionnaire relate to all other items in order to ascertain whether the items are measuring similar things and are thus internally consistent. Internal consistency was used as the central test of reliability in the present study.

In summary, the present study addressed validity and reliability issues and may be viewed as contributing to the ongoing investigation of the psychometric properties of the MLQ in general insofar as the modifications made to the original instrument have retained its basic integrity. However, the modifications made to the MLQ for the present study have also sought to produce a version of the MLQ tailored to a Hong Kong classroom context and the analysis employed here may also be viewed as initiating the development of an instrument capable of measuring classroom transformational-transactional leadership in a Hong Kong university setting.

3.4 Data Analysis

Earlier it was noted that the data used in the analysis was ordinal given the nature of Likert scales. However, it should also be noted that some researchers treat Likert scales as if they were interval scales rather than ordinal scales in order to employ the array statistical procedures available for interval data. In the present study, the nonparametric procedures appropriate to ordinal data were employed and supplemented with the parametric procedures relevant to interval data only when the latter served to verify the results of the former.

- The reliability of the twelve scales comprising the transformational-transactional leadership construct (i.e., the nine transformational-transactional scales plus the three scales measuring leadership outcomes) was tested using Cronbach's Alpha available on SPSS version 11.5 (SPSS, 2002).
- Construct validity was ascertained using LISREL 8.54 (Joreskog and Sorbom, 2002). The SIMPLIS procedure available on LISREL 8.54 was employed to confirm the factor structure of the modified version of the transformational-transactional leadership model used in this study based on the factor structure of the original model. Transformational leadership, transactional leadership and leadership results were used as latent variables in the SIMPLIS procedure. Given the controversy of the place of Contingent Reward in the model discussed above, the SIMPLIS procedure was run with the Contingent Reward dimension, first, as

a transactional factor and, secondly, as a transformational factor and the goodness of fit of the two versions of the models compared. In view of the ordinal nature of the data, a correlation matrix based on Spearman's rho was used as a data input to SIMPLIS. For verification purposes, the SIMPLIS procedure was repeated using a correlation matrix based on Pearson's product-moment index applicable to interval data. More details of the procedure involved are presented in Chapter 4 in the context of explicating the results of the analysis.

- With specific reference to hypotheses H1, H2, and H3, correlations amongst the dimensions of the version of the transformational-transactional model used in the study, were calculated using the bivariate correlation procedure available on SPSS version 11.5 (SPSS, 2002) employing the Spearman's rho index. In order to examine possible variations resulting from specific teacher-student dynamics, correlations were calculated for individual teachers and their cohorts of students as well as for the sample overall.
- The gender effect referred to in hypothesis H4 above was examined using both the Mann Whitney test for ordinal data and the t-test for independent samples, both available on SPSS version 11.5. Again, in order to explore possible variations amongst individual classes, the gender effect was examined on an individual teacher basis as well as for the sample overall.
- With reference to hypothesis H5, the bivariate correlation procedure available on

SPSS version 11.5 was employed and used Spearman's rho and Pearson's r to examine the correlation of teachers leadership outcomes with SET scores on a class by class basis.

The above procedures are further elaborated in Chapter 4 in the context of presenting the findings of the study.

3.5 Ethics

Gay and Airasian (2003, p. 194) have presented a comprehensive set of questions that they consider to be relevant particularly to a qualitative study. In this author's view, the questions are equally as pertinent to a quantitative study and are used below as a framework for addressing ethical issues.

a) Have participants knowingly consented to be part of the study?

Staff involved in the study were colleagues of the author working with him in a team responsible for delivering the Strategic Management course to the full cohort of final year students on a sectional basis with each teacher responsible for one or more sections (classes) of students. The Strategic Management teaching team is accustomed to discussing a variety of educational issues concerned with teaching the course including teaching and classroom management approaches. Strategic Management teachers were also aware that the author himself was one of the subjects of the study which reinforced the collegial nature of the research. This author informed the staff participating in the study that participation was optional and could be discontinued at any time. Furthermore,

perhaps the most emotive of issues involved in the present study, namely, access to staff SET scores was not a problem because the university within which the study was located allows access to teaching staff's overall SET scores per course. Nevertheless, this author undertook not to access SET information without the consent of the staff participating in the study. Student participants were fully informed by their class teachers of the nature of the study, and the option not to participate. Furthermore, the questionnaire that students completed did not require student names and therefore anonymity was maintained.

b) Do participants understand what their consent involves?

Colleagues teaching the Strategic Management course were fully informed verbally and by email of the nature of the study, what it involved, that it was purely for research purposes, that it was specifically part of this author's doctoral studies and, most importantly, of the option not to participate if they so wished. It was made clear to staff that the results of the study would not be used for personal administrative purposes. The class teachers gave student participants a similar message with particular emphasis on guaranteeing the anonymity of student respondents.

c) Are participants' rights and consents maintained during and after the study?

Staff and students' rights and consents have been maintained at the time of writing and will be maintained in the future. The results of the survey have not and will not be used for personal administrative decision in respect of staff and students' anonymity has been and will be maintained.

d) Were participants given a description of the study and its purpose?

See the answer to (b) above.

e) Was a clear description given of the procedures in the study?

Staff and student participants were informed generally of the procedures and analysis involved. Student respondents had clear instructions on how to complete the questionnaire based on the instructions contained in the original version of the instrument but tailored to a classroom context by this author.

f) Were participants told what will happen to them if they agree to participate?

Both staff and students were fully assured that there would be no adverse personal repercussions from participating or not participating in the study.

g) Were participants told how the researcher will protect their identities?

The author of this study works closely with participating colleagues and, himself, was one of the class teachers used in the research. Collegiality and the authors personal participation as a subject in the research was viewed by participants as sufficient to ensure the protection of identities. Furthermore, as stated above, the university in which the study was located practices a high degree of transparency regarding teachers' SET scores. Consequently, staff have developed a culture that militates against over-sensitivity to initiatives such as the present study that could be viewed as assessing

aspects of teaching performance. Student participants were assured of protection of their identities by the design of the questionnaire that did not require student names.

- h) Were participants given the address or phone numbers of the researcher(s) and of the responsible individual at the research institution?

The author of this study is well known to participating colleagues by virtue of being part of the team teaching the Strategic Management course which was used for the analysis. He is also highly visible to the students participating in the study by virtue of his role as teacher of the Strategic Management course and Director of the undergraduate programme of which Strategic Management is the capstone course. Both staff and students participating in the study had full access to the authors contact details.

3.6 Limitations

The study was located in the business school of a Hong Kong university and the instrument employed in the methodology was tailored both to a university and a Hong Kong setting. Accordingly, in the strictest sense, claims for generalisability cannot extend beyond the particular context of the research. Specifically, the study surveyed undergraduate business students in the one Hong Kong university only and it would be difficult to justify generalisability beyond this setting. Similarly, the study was confined to one core module, namely Strategic Management, in the final year of the university's BBA programme and the reasons for restricting the study to the one course have been

adduced above. Nevertheless, students of this course who participated in the research had completed two years of a three year business programme and it is possible that their familiarity with business and management theories and principles may have influenced their responses to the items in the instrument. Equally, confining the study to the one course meant that the effect on the results of variations in course content and subject matter was not examined. Additionally, the study took place within a liberal arts university environment, a feature of which is the employment of the sectional approach involving relatively small class sizes and the one teacher instructing the class for the duration of the course. This raises the question of the applicability of the procedure described in the present study to alternative modes of course delivery such as the mass lecture-small tutorial approach and also raises the issue of the effects that such alternative modes might have on research results. Furthermore, the results of the study were fairly consistent across the teachers involved and it is worth noting that these teachers were a cohesive group comprising senior colleagues used to working together in teaching team and who had agreed upon on a particular approach to teaching the Strategic Management course which can be characterized as highly student centred and participative. Also, despite the fact that two of the teachers were Hong Kong born Chinese and the remainder 'Westerners', they had in common with their Western colleagues considerable exposure to Western education with each of the Hong Kong Chinese colleagues receiving a major part of their education in the UK. In sum, the study involved a cohesive team of teachers committed to a particular teaching approach based on what may be broadly described as a Western style of pedagogy involving considerable student participation. The study begs the question as to the possible effects on the results of differing teacher ethnic

backgrounds and differing degrees of exposure to Western modes of teaching. Finally, as with all quantitative studies, this research is limited to the 'what' rather than the 'why'. In other words, the present study has indicated students' views on their teachers' leadership styles in a particular context but has not addressed the question of why students hold these particular views.

Despite the study's limitations, the instrument employed in the research was an adaptation of the MLQ (Bass and Avolio, 2000) which is under continual review and subject to constant refinement but, nevertheless, is accepted by many leadership theorists as essentially psychometrically sound (see, for example, Bessai, 1995; Conoley and Impara, 1995; Gurr, 1996; Kirman, 1995). Equally, there is substantial although not unanimous support in management and education literature for the cross-cultural applicability of the dimensions of the transformational-transactional construct measured by the MLQ (see Bass, 1997; Pillai *et al.*, 1999; Sarros and Santora, 2001; Jung *et al.*, 1995; Popper and Sleman, 2001; Yu *et al.*, 2002). Furthermore, the present study develops the work carried out in the US by Ojode and colleagues (1999) and Walumbwa and Ojode (2000). Thus, despite the limited generalisability of the findings of the present research when considered purely as a stand alone study, the results of the study should inform the general findings on the psychometric properties of the MLQ, on its cross cultural applicability and on the effects of transformational leadership in a classroom context.

Chapter 4: Findings and Analysis

Chapter 3 noted that the purpose of the study was to examine the influence of teachers' classroom transformational-transactional leadership on students in a Hong Kong university business school setting. The study focused on the relationship between student perception of university teachers' transformational-transactional leadership styles and their perception of critical classroom leadership criteria. Additionally, any possible gender effect was explored. The study also examined the relationship between student perceptions of teacher transformational-transactional style and SET scores. The hypotheses presented in Chapters 1 and 3 are repeated here for the reader's reference.

In a university business school classroom context:

- H1: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the other transformational leadership dimensions.
- H2: Scores on the Contingent Reward transactional leadership dimension will be positively and significantly correlated with scores on each of the transformational leadership dimensions and with scores on each of the leadership outcomes.
- H3: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the leadership outcomes.

H4: Female students will give significantly higher scores on transformational dimensions than will male students.

H5: Scores on teachers' leadership outcomes will be positively and significantly correlated with teachers' SET scores.

Data was collected using a version of the Multifactor Leadership Questionnaire (MLQ Form 5x-Short) developed by Bass and Avolio (2000) that was modified for a Hong Kong university classroom context as described in Chapter 3. The full cohort of 285 final year students undertaking the Strategic Management capstone course of the BBA undergraduate degree in Lingnan University, one of Hong Kong's eight fully accredited universities, was sampled. 217 usable responses were received giving a response rate of 76 per cent that is acceptable for questionnaire research (Saunders *et al.*, 2000). Nonparametric statistical procedures were employed given that the data produced by the type of Likert scale used in the present analysis is ordinal. Where appropriate, parametric tests were employed to supplement the nonparametric tests to enable verification of results. Data analysis involved the following:

- The use of Cronbach's Alpha (Cronbach, 1951) available on SPSS version 11.5. (SPSS, 2002) to test the internal consistency-reliability of the twelve scales comprising the modified transformational-transactional leadership instrument employed in this study.

- Employment of the SIMPLIS procedure available on LISREL 8.54 (Joreskog and Sorbom, 2002) to confirm the factor structure of the version of the transformational-transactional leadership model used in this study based on the factor structure of the original model. Transformational leadership, transactional leadership and leadership results were the latent variables in the SIMPLIS procedure. The controversy of the place of Contingent Reward in the model, that was discussed in Chapter 3, was addressed by running the SIMPLIS procedure twice, the first time with the Contingent Reward dimension as a transactional factor and the second time with the Contingent Reward dimension as a transformational factor. The goodness of fit of the two versions of the models was then compared. Correlation matrices based on Spearman's rho and Pearson's product-moment indices were used as data input.
- With specific reference to hypotheses H1, H2, H3, the use of the bivariate correlation procedure available on SPSS version 11.5 (SPSS, 2002), employing Spearman's rho, to examine the correlations amongst dimensions of the transformational-transactional model used in the study. Correlation matrices were produced for each individual teacher and their respective cohorts of students and for the teachers collectively and all students.
- Employment of the Mann Whitney test (ordinal data) and t-test for independent samples (interval data) procedure available on SPSS version 11.5 to examine the gender effect reflected in hypothesis H4.

- With reference to hypothesis H5, use of the bivariate correlation procedure available on SPSS version 11.5 employing Spearman's rho and Pearson's r , to examine the correlation of teachers leadership outcomes with SET scores on a class by class basis.

4.1 Internal Consistency-Reliability of the Instrument

Table 4.1 below illustrates the Cronbach Alpha scores for each of the 12 scales comprising the version of the MLQ developed specifically for this study:

Table 4.1: Cronbach's Alpha Scores for the Classroom Leadership Dimension Scales

LEADERSHIP DIMENSION	NO OF ITEMS IN SCALE	CRONBACH'S ALPHA
Idealized Influence (Attributed)	4	0.75
Idealized Influence (Behaviour)	4	0.60
Inspirational Motivation	4	0.63
Intellectual Stimulation	4	0.70
Individual Consideration	4	0.68
Contingent Reward	4	0.62
Management-by-Exception (Active)	4	0.75
Management-by-Exception (Passive)	4	0.70
Laissez Faire Leadership	4	0.71
Extra Effort	3	0.85
Effectiveness	4	0.81
Satisfaction	2	0.66

(n=217)

Nunnally (1978) and Peter (1979) have argued generally for an internal consistency-reliability criterion of 0.70 for widely used scales and seven of the above scales either

met or exceeded that criterion with the Individual Consideration scale falling marginally short of the standard at 0.68. No scale had a score below 0.60, a criterion that is considered acceptable in social science research (Anastasia, 1990) and particularly in the case of an exploratory study (Nunnally, 1978). Each of the items in the five scales with Alpha scores less than 0.70 was omitted in turn to examine the effect on scale internal consistency-reliability and in all but the case of the Individual Consideration scale, omission of individual items reduced the relevant Alpha scores. Apart from this one item, the general reduction in Alpha scores resulting from the omission of scale items is not surprising because internal consistency/ reliability generally tends to reduce when scale items are omitted (McMurray and Scott, 2003). However, omission of the item: *He/she is willing to provide help outside of class* in the Individual Consideration scale improved the scale internal consistency-reliability marginally from 0.68 to 0.69. This is possibly due to the fact that the item departs from the original item: *Spends time teaching and coaching* in the MLQ Form 5x-Short instrument (Bass and Avolio, 2000) in emphasizing, in an educational context, a somewhat passive *willingness to provide* extra teaching and coaching input rather than the active *actual provision* of extra-over help.

In sum, the classroom leadership questionnaire developed for the present study demonstrated a degree of internal consistency-reliability acceptable in social science studies particularly where the study is an initial excursion into a particular area. Thus, Alpha scores were acceptable given that the present study was an initial experiment in modifying the original MLQ for a classroom setting.

4.2 Construct Validity

Confirmatory factor analysis was employed to ascertain the validity of the classroom version of the transformational-transactional leadership construct devised for this study. Confirmatory factor analysis is a model testing rather than the model generating approach characteristic of exploratory factor analysis and is appropriate to a situation where the model in question is predetermined as are the relationships amongst the variables constituting the model. The confirmatory method seeks to determine the ‘goodness of fit’ of the predetermined model based on a given data set. Confirmatory factor analysis uses either a correlation matrix or a covariance matrix as input and tests the relative ‘goodness of fit’ of versions of models predetermined by the researcher. The use of a correlation matrix as input to the analysis emphasizes the confirmation of the pattern of relationships amongst the variables in the model whereas using a covariance matrix places emphasis on explaining the total variance of a construct (Broderick, 1999).

The confirmatory procedure using a correlation matrix as input was particularly appropriate in this study because the classroom leadership model departed from the original transformational-transactional leadership conceptualization only in terms of aspects of item wording in the MLQ and not in terms of the relationship among the variables in the model. Thus, the factor analysis procedure was designed to confirm that the original relationships held good despite the changes to item wording. Equally, the confirmatory method enabled the thorny issue of the place of the Contingent Reward dimension in the transformational-transactional model to be re-examined using the

classroom leadership version of the MLQ. This was carried out by comparing the 'goodness of fit' of first, a version of the model with the Contingent Reward dimension as a transactional factor, with the 'goodness of fit' of an alternative model in which the Contingent Reward dimension was included as a transformational factor.

The actual confirmatory factor analysis was conducted using the latest version of LISREL i.e., LISREL 8.54 (Joreskog and Sorbom, 2002) published by Scientific Software International, Inc. A recent review of the literature (Huang, 2003) has indicated that there is little agreement amongst researchers as to the 'best' index to use to ascertain goodness of fit. However, the LISREL programme provides a number of goodness of fit indices, some of which are widely used in research and have rule of thumb acceptance/rejection (of the model) standards associated with them (ibid., 2003). Table 4.3 shows a comparison of the relevant goodness of fit indices resulting from application, in this study, of LISREL using the SIMPLIS command language and a correlation matrix based on Spearman's rho (ordinal data) to first, a model of classroom leadership specifying the Contingent Reward dimension as a transactional leadership factor and secondly, to a model of classroom leadership specifying the Contingent Reward dimension as a transformational leadership factor. The table also shows the results of the procedure using a Pearson's product-moment correlation matrix (interval data) as data input. It also illustrates the rule of thumb acceptance standards for each goodness of fit index.

It should be noted that the chi-squared test is not included in table 4.3. This is

because a number of researchers have shown that the chi-squared test almost invariably gives significant results with large samples and thus can be a misleading index with smaller samples. Accordingly, they have advocated the use instead of other goodness of fit measures such as those contained in table 4.3 (Anderson and Gerbing, 1998; Avolio *et al.*, 1999; Bentler, 1990; Bollen, 1989; James *et al.*, 1982)

Table 4. 2: LISREL Output for Two Models of Classroom Leadership Based on Spearman's rho Correlation Matrix - Goodness of Fit Indices and Rule of Thumb Standards

GOODNESS OF FIT INDEX	RULE OF THUMB STANDARD FOR ACCEPTANCE OF MODEL	CLASSROOM LEADERSHIP (CONTINGENT REWARD A TRANSACTIONAL FACTOR)	CLASSROOM LEADERSHIP (CONTINGENT REWARD A TRANSFORMATIONAL FACTOR)
Goodness of Fit (GFI)	≥ 0.9	0.934 (0.952)	0.924 (0.953)
Adjusted Goodness of Fit (AGFI)	≥ 0.9	0.900 (0.926)	0.884 (0.928)
Standardized Root Mean Square Residual (SRMR)	≤ 0.8	0.063 (0.054)	0.114 (0.053)
Root Mean Square Error Approximation (RMSEA)	≤ 0.1	0.085 (0.070)	0.092 (0.068)
Comparative Fit Index (CFI)	≥ 0.9	0.937 (0.943)	0.918 (0.946)
Incremental Fit Index (IFI)	≥ 0.9	0.937 (0.943)	0.918 (0.946)
Non-Normed Fit Index (NNFI)	≥ 0.9	0.919 (0.932)	0.894 (0.930)

Note: Figures in parenthesis based on a Pearson product-moment correlation matrix as data input.

Reference to the goodness of fit parameters contained in the above table based on a Spearman's Rho correlation matrix, particularly the SRMR and NNFI indices, indicated that the version of the classroom leadership model that has Contingent Reward as a transactional factor was a better fit to the data than the model that has Contingent Reward

as a transformational factor. When a Pearson's product moment correlation matrix was employed as data input, the SIMPLIS procedure was unable to clearly distinguish between the two versions of the model in terms of goodness of fit. In general, confirmatory factor analysis employing the SIMPLIS procedure within LISREL 8.54 (Joreskog and Sorbom, 2002) indicated that both versions of the classroom leadership model used in this study fitted the data well with the version of the classroom leadership model specifying Contingent Reward as a transactional leadership factor being a particularly good fit to the data i.e., capable of producing construct valid measurement.

4.3 Correlation Analysis: Transformational-transactional Leadership Dimensions

The bivariate correlation procedure available on SPSS version 11.5 (SPSS, 2002) employing Spearman's rho for ordinal data was used to examine the correlations amongst selected dimensions of the transformational-transactional model used in the study. Tables 4.3 to 4.7 illustrate the correlation matrices resulting for each of the teachers participating in the study and are presented to indicate any possible effect on the results, of specific teacher-student dynamics. Table 4.8 shows the correlation matrix for the study overall. The responses of all students to each of the items in the instrument were used as data points. Hence, for the leadership dimensions such as *Contingent Reward* and *Individual Consideration* that contained four items each, n equaled 868 i.e., 217 respondents multiplied by four, in the matrix for the study overall. Equally, for an item such as *Satisfaction* that contained two items only, n equaled 434. The same approach was used in developing the correlation matrices for the individual teachers. In the following tables,

significant correlations (i.e., two-tailed significance of 0.05 or below) that equal or exceed 0.3 have been highlighted on the basis that 0.3 is considered a strong correlation, particularly for ordinal measurement (Boutillier, 2001; Healey *et al.*, 1999). The use of the 0.3 standard is designed to facilitate overall interpretation of the tables. In the tables, the variable labels represent the transformational-transactional leadership dimensions as follows:

CR = Contingent Reward, IS = Intellectual Stimulation, MBEP = Management by Exception (Passive), MBEA = Management by Exception (Active), LF = Laissez Faire Leadership, IIB = Idealised Influence (Behaviour), IM = Inspirational Motivation, IIA = Idealised Influence (Attitude), IC = Individual Consideration, E = Effectiveness, S = Satisfaction, EE = Extra Effort.

Table 4.3: Correlation Matrix for Teacher A (Spearman's rho)

	CR	IS	MBEP	MBEA	LF	IIB	IM	IIA	IC	E	S	EE
CR	1.000	.225**	.082	.156	-.134	.096	.308**	.279**	.332**	.216**	.120	.150
Sig. (2-tailed)		.005	.314	.055	.100	.239	.000	.000	.000	.007	.300	.111
N	152	152	152	152	152	152	152	152	152	152	76	114
IS	.225**	1.000	-.071	.132	-.076	.151	.052	.212**	.175*	.237**	.123	.306**
Sig. (2-tailed)	.005		.382	.105	.351	.064	.525	.009	.031	.003	.291	.001
N	152	152	152	152	152	152	152	152	152	152	76	114
MBEP	.082	-.071	1.000	-.140	.260**	-.134	-.113	-.190*	.026	-.197*	-.363**	-.171
Sig. (2-tailed)	.314	.382		.086	.001	.100	.165	.019	.746	.015	.001	.069
N	152	152	152	152	152	152	152	152	152	152	76	114
MBEA	.156	.132	-.140	1.000	.018	.269**	.230**	.318**	.379**	.298**	.295**	.351**
Sig. (2-tailed)	.055	.105	.086		.829	.001	.004	.000	.000	.000	.010	.000
N	152	152	152	152	152	152	152	152	152	152	76	114
LF	-.134	-.076	.260**	.018	1.000	.038	-.136	-.111	-.120	.019	-.215	-.057
Sig. (2-tailed)	.100	.351	.001	.829		.639	.096	.172	.142	.815	.062	.546
N	152	152	152	152	152	152	152	152	152	152	76	114
IIB	.096	.151	-.134	.269**	.038	1.000	.162*	.104	.230**	.148	.220	.301**
Sig. (2-tailed)	.239	.064	.100	.001	.639		.046	.201	.004	.068	.056	.001
N	152	152	152	152	152	152	152	152	152	152	76	114
IM	.308**	.052	-.113	.230**	-.136	.162*	1.000	.399**	.181*	.141	.222	.380**
Sig. (2-tailed)	.000	.525	.165	.004	.096	.046		.000	.026	.083	.054	.000
N	152	152	152	152	152	152	152	152	152	152	76	114
IIA	.279**	.212**	-.190*	.318**	-.111	.104	.399**	1.000	.228**	.460**	.384**	.429**
Sig. (2-tailed)	.000	.009	.019	.000	.172	.201	.000		.005	.000	.001	.000
N	152	152	152	152	152	152	152	152	152	152	76	114
IC	.332**	.175*	.026	.379**	-.120	.230**	.181*	.228**	1.000	.195*	.376**	.428**
Sig. (2-tailed)	.000	.031	.746	.000	.142	.004	.026	.005		.016	.001	.000
N	152	152	152	152	152	152	152	152	152	152	76	114
E	.216**	.237**	-.197*	.298**	.019	.148	.141	.460**	.195*	1.000	.427**	.396**
Sig. (2-tailed)	.007	.003	.015	.000	.815	.068	.083	.000	.016		.000	.000
N	152	152	152	152	152	152	152	152	152	152	76	114
S	.120	.123	-.363**	.295**	-.215	.220	.222	.384**	.376**	.427**	1.000	.515**
Sig. (2-tailed)	.300	.291	.001	.010	.062	.056	.054	.001	.001	.000		.000
N	76	76	76	76	76	76	76	76	76	76	76	76
EE	.150	.306**	-.171	.351**	-.057	.301**	.380**	.429**	.428**	.396**	.515**	1.000
Sig. (2-tailed)	.111	.001	.069	.000	.546	.001	.000	.000	.000	.000	.000	
N	114	114	114	114	114	114	114	114	114	114	76	114

**Correlation is significant at the .01 level (2-tailed).

*Correlation is significant at the .05 level (2-tailed).

Table 4.4: Correlation Matrix for Teacher B (Spearman's rho)

	CR	IS	MBEP	MBEA	LF	IIB	IM	IIA	IC	E	S	EE
CR	1.000	.391**	.269**	.396**	.120*	.450**	.449**	.368**	.440**	.355**	.288**	.409**
Sig. (2-tailed)		.000	.000	.000	.047	.000	.000	.000	.000	.000	.001	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
IS	.391**	1.000	.078	.369**	.031	.456**	.405**	.426**	.417**	.428**	.444**	.349**
Sig. (2-tailed)	.000		.199	.000	.606	.000	.000	.000	.000	.000	.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
MBEP	.269**	.078	1.000	.221**	.503**	.221**	.182**	.034	.169**	.084	.048	.187**
Sig. (2-tailed)	.000	.199		.000	.000	.000	.002	.574	.005	.165	.579	.007
N	276	276	276	276	276	276	276	276	276	276	138	207
MBEA	.396**	.369**	.221**	1.000	.125*	.417**	.406**	.378**	.416**	.411**	.417**	.399**
Sig. (2-tailed)	.000	.000	.000		.038	.000	.000	.000	.000	.000	.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
LF	.120*	.031	.503**	.125*	1.000	.176**	.146*	-.007	.131*	-.001	-.073	.149*
Sig. (2-tailed)	.047	.606	.000	.038		.003	.015	.911	.030	.980	.393	.032
N	276	276	276	276	276	276	276	276	276	276	138	207
IIB	.450**	.456**	.221**	.417**	.176**	1.000	.435**	.384**	.442**	.375**	.289**	.375**
Sig. (2-tailed)	.000	.000	.000	.000	.003		.000	.000	.000	.000	.001	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
IM	.449**	.405**	.182**	.406**	.146*	.435**	1.000	.471**	.370**	.453**	.366**	.395**
Sig. (2-tailed)	.000	.000	.002	.000	.015	.000		.000	.000	.000	.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
IIA	.368**	.426**	.034	.378**	-.007	.384**	.471**	1.000	.347**	.442**	.436**	.307**
Sig. (2-tailed)	.000	.000	.574	.000	.911	.000	.000		.000	.000	.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
IC	.440**	.417**	.169**	.416**	.131*	.442**	.370**	.347**	1.000	.377**	.455**	.409**
Sig. (2-tailed)	.000	.000	.005	.000	.030	.000	.000	.000		.000	.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
E	.355**	.428**	.084	.411**	-.001	.375**	.453**	.442**	.377**	1.000	.555**	.522**
Sig. (2-tailed)	.000	.000	.165	.000	.980	.000	.000	.000	.000		.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
S	.288**	.444**	.048	.417**	-.073	.289**	.366**	.436**	.455**	.555**	1.000	.404**
Sig. (2-tailed)	.001	.000	.579	.000	.393	.001	.000	.000	.000	.000		.000
N	138	138	138	138	138	138	138	138	138	138	138	138
EE	.409**	.349**	.187**	.399**	.149*	.375**	.395**	.307**	.409**	.522**	.404**	1.000
Sig. (2-tailed)	.000	.000	.007	.000	.032	.000	.000	.000	.000	.000	.000	
N	207	207	207	207	207	207	207	207	207	207	138	207

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Table 4.5: Correlation Matrix for Teacher C (Spearman's rho)

	CR	IS	MBEP	MBEA	LF	IIB	IM	IIA	IC	E	S	EE
CR	1.000	.338**	.141*	.265**	.047	.213**	.329**	.265**	.265**	.427**	.176*	.233**
Sig. (2-tailed)		.000	.019	.000	.437	.000	.000	.000	.000	.000	.039	.001
N	276	276	276	276	276	276	276	276	276	276	138	207
IS	.338**	1.000	.109	.261**	.081	.071	.212**	.284**	.284**	.282**	.220**	.316**
Sig. (2-tailed)	.000		.071	.000	.179	.237	.000	.000	.000	.000	.009	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
MBEP	.141*	.109	1.000	.127*	.305**	.017	.059	-.011	.013	.135*	-.025	.043
Sig. (2-tailed)	.019	.071		.036	.000	.774	.329	.859	.827	.025	.769	.535
N	276	276	276	276	276	276	276	276	276	276	138	207
MBEA	.265**	.261**	.127*	1.000	.091	.194**	.231**	.307**	.262**	.319**	.249**	.303**
Sig. (2-tailed)	.000	.000	.036		.133	.001	.000	.000	.000	.000	.003	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
LF	.047	.081	.305**	.091	1.000	-.055	.006	.059	.041	.130*	-.128	.026
Sig. (2-tailed)	.437	.179	.000	.133		.366	.927	.326	.498	.031	.134	.705
N	276	276	276	276	276	276	276	276	276	276	138	207
IIB	.213**	.071	.017	.194**	-.055	1.000	.339**	.285**	.276**	.246**	.401**	.212**
Sig. (2-tailed)	.000	.237	.774	.001	.366		.000	.000	.000	.000	.000	.002
N	276	276	276	276	276	276	276	276	276	276	138	207
IM	.329**	.212**	.059	.231**	.006	.339**	1.000	.311**	.295**	.314**	.353**	.272**
Sig. (2-tailed)	.000	.000	.329	.000	.927	.000		.000	.000	.000	.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
IIA	.265**	.284**	-.011	.307**	.059	.285**	.311**	1.000	.306**	.435**	.432**	.411**
Sig. (2-tailed)	.000	.000	.859	.000	.326	.000	.000		.000	.000	.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
IC	.265**	.284**	.013	.262**	.041	.276**	.295**	.306**	1.000	.288**	.352**	.218**
Sig. (2-tailed)	.000	.000	.827	.000	.498	.000	.000	.000		.000	.000	.002
N	276	276	276	276	276	276	276	276	276	276	138	207
E	.427**	.282**	.135*	.319**	.130*	.246**	.314**	.435**	.288**	1.000	.376**	.525**
Sig. (2-tailed)	.000	.000	.025	.000	.031	.000	.000	.000	.000		.000	.000
N	276	276	276	276	276	276	276	276	276	276	138	207
S	.176*	.220**	-.025	.249**	-.128	.401**	.353**	.432**	.352**	.376**	1.000	.506**
Sig. (2-tailed)	.039	.009	.769	.003	.134	.000	.000	.000	.000	.000		.000
N	138	138	138	138	138	138	138	138	138	138	138	138
EE	.233**	.316**	.043	.303**	.026	.212**	.272**	.411**	.218**	.525**	.506**	1.000
Sig. (2-tailed)	.001	.000	.535	.000	.705	.002	.000	.000	.002	.000	.000	
N	207	207	207	207	207	207	207	207	207	207	138	207

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Table 4.6: Correlation Matrix for Teacher D (Spearman's rho)

	CR	IS	MBEP	MBEA	LF	IIB	IM	IIA	IC	E	S	EE
CR	1.000	.179*	.096	.345**	-.136	.181*	.295**	.159	.362**	.294**	-.094	.095
Sig. (2-tailed)		.047	.288	.000	.132	.044	.001	.077	.000	.001	.467	.365
N	124	124	124	124	124	124	124	124	124	124	62	93
IS	.179*	1.000	.051	.284**	.051	.207*	.203*	.438**	.438**	.465**	.179	.332**
Sig. (2-tailed)	.047		.573	.001	.575	.021	.023	.000	.000	.000	.165	.001
N	124	124	124	124	124	124	124	124	124	124	62	93
MBEP	.096	.051	1.000	.157	.199*	-.031	-.052	-.192*	.145	.063	-.273*	-.165
Sig. (2-tailed)	.288	.573		.082	.027	.730	.569	.033	.108	.490	.032	.114
N	124	124	124	124	124	124	124	124	124	124	62	93
MBEA	.345**	.284**	.157	1.000	.045	.313**	.382**	.257**	.478**	.369**	.049	.277**
Sig. (2-tailed)	.000	.001	.082		.623	.000	.000	.004	.000	.000	.705	.007
N	124	124	124	124	124	124	124	124	124	124	62	93
LF	-.136	.051	.199*	.045	1.000	.047	-.134	-.067	.005	-.006	-.176	-.090
Sig. (2-tailed)	.132	.575	.027	.623		.606	.138	.457	.956	.950	.170	.390
N	124	124	124	124	124	124	124	124	124	124	62	93
IIB	.181*	.207*	-.031	.313**	.047	1.000	.382**	.336**	.253**	.259**	.175	.221*
Sig. (2-tailed)	.044	.021	.730	.000	.606		.000	.000	.005	.004	.175	.033
N	124	124	124	124	124	124	124	124	124	124	62	93
IM	.295**	.203*	-.052	.382**	-.134	.382**	1.000	.429**	.352**	.190*	.009	.170
Sig. (2-tailed)	.001	.023	.569	.000	.138	.000		.000	.000	.035	.945	.103
N	124	124	124	124	124	124	124	124	124	124	62	93
IIA	.159	.438**	-.192*	.257**	-.067	.336**	.429**	1.000	.343**	.464**	.351**	.400**
Sig. (2-tailed)	.077	.000	.033	.004	.457	.000	.000		.000	.000	.005	.000
N	124	124	124	124	124	124	124	124	124	124	62	93
IC	.362**	.438**	.145	.478**	.005	.253**	.352**	.343**	1.000	.358**	-.148	.223*
Sig. (2-tailed)	.000	.000	.108	.000	.956	.005	.000	.000		.000	.250	.032
N	124	124	124	124	124	124	124	124	124	124	62	93
E	.294**	.465**	.063	.369**	-.006	.259**	.190*	.464**	.358**	1.000	.368**	.598**
Sig. (2-tailed)	.001	.000	.490	.000	.950	.004	.035	.000	.000		.003	.000
N	124	124	124	124	124	124	124	124	124	124	62	93
S	-.094	.179	-.273*	.049	-.176	.175	.009	.351**	-.148	.368**	1.000	.681**
Sig. (2-tailed)	.467	.165	.032	.705	.170	.175	.945	.005	.250	.003		.000
N	62	62	62	62	62	62	62	62	62	62	62	62
EE	.095	.332**	-.165	.277**	-.090	.221*	.170	.400**	.223*	.598**	.681**	1.000
Sig. (2-tailed)	.365	.001	.114	.007	.390	.033	.103	.000	.032	.000	.000	
N	93	93	93	93	93	93	93	93	93	93	62	93

*.Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Table 4.7: Correlation Matrix for Teacher E (Spearman's rho)

	CR	IS	MBEP	MBEA	LF	IIB	IM	IIA	IC	E	S	EE
CR	1.000	.526**	.133	.170	.127	.616**	.380*	.293	.324*	.248	.211	.510**
Sig. (2-tailed)		.000	.413	.295	.435	.000	.016	.067	.042	.123	.372	.004
N	40	40	40	40	40	40	40	40	40	40	20	30
IS	.526**	1.000	.220	.478**	.141	.645**	.672**	.553**	.579**	.438**	.228	.436*
Sig. (2-tailed)	.000		.172	.002	.385	.000	.000	.000	.000	.005	.333	.016
N	40	40	40	40	40	40	40	40	40	40	20	30
MBEP	.133	.220	1.000	.060	.567**	.161	.221	.133	.299	.024	.016	.108
Sig. (2-tailed)	.413	.172		.711	.000	.320	.171	.414	.061	.881	.946	.571
N	40	40	40	40	40	40	40	40	40	40	20	30
MBEA	.170	.478**	.060	1.000	.287	.310	.380*	.518**	.262	.471**	.239	.476**
Sig. (2-tailed)	.295	.002	.711		.073	.052	.016	.001	.102	.002	.311	.008
N	40	40	40	40	40	40	40	40	40	40	20	30
LF	.127	.141	.567**	.287	1.000	.268	.233	.379*	.257	.176	.088	.362*
Sig. (2-tailed)	.435	.385	.000	.073		.094	.148	.016	.109	.277	.713	.049
N	40	40	40	40	40	40	40	40	40	40	20	30
IIB	.616**	.645**	.161	.310	.268	1.000	.623**	.504**	.356*	.478**	.565**	.603**
Sig. (2-tailed)	.000	.000	.320	.052	.094		.000	.001	.024	.002	.009	.000
N	40	40	40	40	40	40	40	40	40	40	20	30
IM	.380*	.672**	.221	.380*	.233	.623**	1.000	.582**	.635**	.444**	.325	.632**
Sig. (2-tailed)	.016	.000	.171	.016	.148	.000		.000	.000	.004	.163	.000
N	40	40	40	40	40	40	40	40	40	40	20	30
IIA	.293	.553**	.133	.518**	.379*	.504**	.582**	1.000	.545**	.360*	.347	.574**
Sig. (2-tailed)	.067	.000	.414	.001	.016	.001	.000		.000	.022	.133	.001
N	40	40	40	40	40	40	40	40	40	40	20	30
IC	.324*	.579**	.299	.262	.257	.356*	.635**	.545**	1.000	.122	-.023	.165
Sig. (2-tailed)	.042	.000	.061	.102	.109	.024	.000	.000		.452	.923	.383
N	40	40	40	40	40	40	40	40	40	40	20	30
E	.248	.438**	.024	.471**	.176	.478**	.444**	.360*	.122	1.000	.472*	.561**
Sig. (2-tailed)	.123	.005	.881	.002	.277	.002	.004	.022	.452		.035	.001
N	40	40	40	40	40	40	40	40	40	40	20	30
S	.211	.228	.016	.239	.088	.565**	.325	.347	-.023	.472*	1.000	.451*
Sig. (2-tailed)	.372	.333	.946	.311	.713	.009	.163	.133	.923	.035		.046
N	20	20	20	20	20	20	20	20	20	20	20	20
EE	.510**	.436*	.108	.476**	.362*	.603**	.632**	.574**	.165	.561**	.451*	1.000
Sig. (2-tailed)	.004	.016	.571	.008	.049	.000	.000	.001	.383	.001	.046	
N	30	30	30	30	30	30	30	30	30	30	20	30

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

**Table 4.8: Overall Correlation Matrix (All Teachers and All Students)
(Spearman's rho)**

	CR	IS	MBEP	MBEA	LF	IIB	IM	IIA	IC	E	S	EE
CR	1.000	.338**	.152**	.315**	.019	.291**	.365**	.292**	.361**	.365**	.209**	.279**
Sig. (2-tailed)		.000	.000	.000	.574	.000	.000	.000	.000	.000	.000	.000
N	868	868	868	868	868	868	868	868	868	868	434	651
IS	.338**	1.000	.052	.310**	.039	.274**	.270**	.371**	.342**	.383**	.323**	.353**
Sig. (2-tailed)		.000	.123	.000	.247	.000	.000	.000	.000	.000	.000	.000
N	868	868	868	868	868	868	868	868	868	868	434	651
MBEP	.152**	.052	1.000	.114**	.393**	.035	.067*	-.079*	.093**	.020	-.096*	.017
Sig. (2-tailed)		.123		.001	.000	.302	.048	.020	.006	.550	.046	.658
N	868	868	868	868	868	868	868	868	868	868	434	651
MBEA	.315**	.310**	.114**	1.000	.118**	.302**	.313**	.345**	.371**	.381**	.280**	.367**
Sig. (2-tailed)		.000	.001		.000	.000	.000	.000	.000	.000	.000	.000
N	868	868	868	868	868	868	868	868	868	868	434	651
LF	.019	.039	.393**	.118**	1.000	.059	.032	-.013	.044	.037	-.133**	.057
Sig. (2-tailed)		.247	.000	.000		.085	.350	.706	.191	.280	.006	.144
N	868	868	868	868	868	868	868	868	868	868	434	651
IIB	.291**	.274**	.035	.302**	.059	1.000	.364**	.316**	.321**	.309**	.343**	.319**
Sig. (2-tailed)		.000	.302	.000	.085		.000	.000	.000	.000	.000	.000
N	868	868	868	868	868	868	868	868	868	868	434	651
IM	.365**	.270**	.067*	.313**	.032	.364**	1.000	.411**	.324**	.320**	.289**	.342**
Sig. (2-tailed)		.000	.048	.000	.350	.000		.000	.000	.000	.000	.000
N	868	868	868	868	868	868	868	868	868	868	434	651
IIA	.292**	.371**	-.079*	.345**	-.013	.316**	.411**	1.000	.318**	.474**	.425**	.405**
Sig. (2-tailed)		.000	.020	.000	.706	.000	.000		.000	.000	.000	.000
N	868	868	868	868	868	868	868	868	868	868	434	651
IC	.361**	.342**	.093**	.371**	.044	.321**	.324**	.318**	1.000	.294**	.317**	.324**
Sig. (2-tailed)		.000	.006	.000	.191	.000	.000	.000		.000	.000	.000
N	868	868	868	868	868	868	868	868	868	868	434	651
E	.365**	.383**	.020	.381**	.037	.309**	.320**	.474**	.294**	1.000	.467**	.521**
Sig. (2-tailed)		.000	.550	.000	.280	.000	.000	.000	.000		.000	.000
N	868	868	868	868	868	868	868	868	868	868	434	651
S	.209**	.323**	-.096*	.280**	-.133**	.343**	.289**	.425**	.317**	.467**	1.000	.498**
Sig. (2-tailed)		.000	.046	.000	.006	.000	.000	.000	.000	.000		.000
N	434	434	434	434	434	434	434	434	434	434	434	434
EE	.279**	.353**	.017	.367**	.057	.319**	.342**	.405**	.324**	.521**	.498**	1.000
Sig. (2-tailed)		.000	.658	.000	.144	.000	.000	.000	.000	.000	.000	
N	651	651	651	651	651	651	651	651	651	651	434	651

**Correlation is significant at the .01 level (2-tailed).

*Correlation is significant at the .05 level (2-tailed).

The above tables have been analysed below with reference to the relevant hypotheses of this study.

H1: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the other transformational leadership dimensions.

Correlation Matrix for Teacher A (Table 4.3)

Scores on most of the transformational leadership dimensions are significantly intercorrelated at the 0.01 (i.e., IIA-IS, IIB-IC, IIA-IC) and 0.05 (i.e., IM-IIB, IS-IC, IM-IC) levels of significance (two-tailed). The correlations: IIB-IS, IM-IS, and IIA-IIB are not significant. Additionally, the IIA-IM (0.399) correlation is strong in terms of the above definition i.e., ≥ 0.3 .

Correlation Matrix for Teacher B (Table 4.4)

Scores on all the transformational leadership dimensions are significantly intercorrelated at the 0.01 level of significance (two-tailed) and all are strong correlations.

Correlation Matrix for Teacher C (Table 4.5)

Scores on the transformational leadership dimensions are significantly intercorrelated at the 0.01 level of significance (two-tailed) except for the IIB-IS correlation which is weak and non significant. The following are strong correlations: IIB-IM (0.339), IIA-IM (0.311), IIA-IC (0.306).

Correlation Matrix for Teacher D (Table 4.6)

Scores on the transformational leadership dimensions are significantly intercorrelated at the 0.01 level of significance (two-tailed) except for the IIB-IS and IM-IS correlation which is significant at the 0.05 significance level (two-tailed). The following are strong correlations: IIB-IM (0.382), IIA-IS (0.438), IIA-IB (0.336), IIA-IM (0.429), IC-IS (0.438), IC-IM (0.352), IC-IIA (0.343).

Correlation Matrix for Teacher E (Table 4.7)

Scores on the transformational leadership dimensions are significantly and positively intercorrelated at the 0.01 level of significance (two-tailed) except for the IC-IIB correlation that is significant at the 0.05 level (two-tailed). All are strong correlations.

Overall Correlation Matrix (All Teachers and All Students) (Table 4.8)

Scores on all the transformational leadership dimensions are significantly and positively intercorrelated at the 0.01 level of significance (two-tailed). The following are strong correlations: IIB-IS (0.364), IIA-IS (0.371), IIA-IIB (0.316), IIA-IM (0.411), IC-IS (0.342), IC-IIB (0.321), IC-IM (0.324), IC-IIA (0.318).

In summary, the findings of the study supported hypothesis (H1).

H2: Scores on the Contingent Reward transactional leadership dimension will be positively and significantly correlated with scores on each of the

transformational leadership dimensions and with scores on each of the leadership outcomes.

Correlation Matrix for Teacher A (Table 4.3)

Scores on the Contingent Reward (CR) transactional leadership dimension are positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores on each of the transformational leadership dimensions except for the IIB dimension. The following are strong correlations: CR-IM (0.308), CR-IC (0.332). Scores on the Contingent Reward (CR) transactional leadership dimension are also positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores on the Effectiveness (E) leadership outcome dimension.

Correlation Matrix for Teacher B (Table 4.4)

Scores on the Contingent Reward (CR) transactional leadership dimension are positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores on each of the transformational leadership dimensions. All correlations are strong. Scores on the Contingent Reward transactional leadership dimension are also positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores for each of the leadership outcome dimensions. The following are strong correlations: CR-E (0.355), CR-EE (0.409).

Correlation Matrix for Teacher C (Table 4.5)

Scores on the Contingent Reward (CR) transactional leadership dimension are

positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores on each of the transformational leadership dimensions. The following are strong correlations: CR-IS (0.338), CR-IM (0.329). Scores on the Contingent Reward transactional leadership dimension are also positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores on the Effectiveness (E) and Extra Effort (EE) leadership outcome dimensions and at the 0.05 level of significance (two-tailed) with scores on the Satisfaction (S) leadership outcome dimension. The following is a strong correlation: CR-E (0.427).

Correlation Matrix for Teacher D (Table 4.6)

Scores on the Contingent Reward (CR) transactional leadership dimension are positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores on the Inspirational Motivation (IM) and Individual Consideration (IC) transformational leadership dimensions. The CR scores are also positively and significantly correlated at the 0.05 level of significance (two-tailed) with scores on the Intellectual Stimulation (IS) and the Idealised Influence (Behaviour) (IIB) transformational leadership dimensions. The CR-IIA correlation is weak and not significant. Scores on the Contingent Reward (CR) transactional leadership dimension are positively and significantly correlated with scores on the Effectiveness (E) leadership outcome dimension at the 0.01 level of significance (two-tailed). Scores on the Contingent Reward (CR) transactional leadership dimension are not significantly correlated with scores on the Satisfaction (S) and Extra Effort (EE) leadership outcome dimensions.

Correlation Matrix for Teacher E (Table 4.7)

Scores on the Contingent Reward (CR) transactional leadership dimension are positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores on the Intellectual Stimulation (IS) and Idealised Influence (Behaviour) (IIB) transformational leadership dimensions. Both are strong correlations i.e., CR-IS (0.526), CR-IIB (0.616). Scores on the Contingent Reward (CR) transactional leadership dimension are positively and significantly correlated at the 0.05 level of significance (two-tailed) with scores on the Inspirational Motivation (IM) and Idealised Influence (Attributed) (IIA) transformational leadership dimensions. The CR-IM correlation is strong (0.380). Scores on the Contingent Reward (CR) transactional leadership dimension are positively and significantly correlated at the 0.05 (two-tailed) level of significance with scores on the Extra Effort (EE) leadership outcome dimension. The CR-EE correlation is strong (0.510). Correlations with the scores on the remaining leadership outcome dimensions i.e., Effectiveness (E) and Satisfaction (S), are not significant.

Overall Correlation Matrix (All Teachers and All Students) (Table 4.8)

Scores on the Contingent Reward (CR) transactional leadership dimension are positively and significantly correlated at the 0.01 level of significance (two-tailed) with scores on each of the transformational leadership dimensions and with each of the leadership outcome dimensions. The following are strong correlations: CR-IS (0.338), CR-IM (0.365), CR-IC (0.361), CR-E (0.365).

The above indicates general support for hypothesis (H2).

H3: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the leadership outcomes.

Correlation Matrix for Teacher A (Table 4.3)

Most scores on each of the transformational leadership dimensions are positively and significantly correlated at the 0.01 significance level (two-tailed) with scores on each of the leadership outcomes. The following correlations are not significant: IS-S, IIB-E, IIB-S, IM-E, IM-S. The following are strong correlations: IS-EE (0.306), IIB-EE (0.301), IM-EE (0.380), IIA-E (0.460), IIA-S (0.384), IIA-EE (0.429), IC-S (0.376), IC-EE (0.428).

Correlation Matrix for Teacher B (Table 4.4)

Scores on each of the transformational leadership dimensions are positively and significantly correlated at the 0.01 significance level (two-tailed) with scores on each of the leadership outcomes. The following are strong correlations: IS-E (0.428), IS-S (0.444), IS-EE (0.349), IIB-E (0.375), IIB-EE (0.375), IM-E (0.453), IM-S (0.366), IM-EE (0.395), IIA-E (0.442), IIA-S (0.436), IIA-EE (0.307), IC-E (0.377), IC-S (0.455), IC-EE (0.522).

Correlation Matrix for Teacher C (Table 4.5)

Scores on each of the transformational leadership dimensions are positively and

significantly correlated at the 0.01 significance level (two-tailed) with scores on each of the leadership outcomes. The following are strong correlations: IS-EE (0.316), IM-E (0.314), IIB-S (0.401), IM-E (0.314), IM-S (0.353), IIA-E (0.435), IIA-S (0.432), IIA-EE (0.411), IC-S (0.352).

Correlation Matrix for Teacher D (Table 4.6)

The following correlations are positive and significant at the 0.01 significance level (two-tailed): IS-E, IS-EE, IIB-E, IIB-EE, IIA-E, IIA-S, IIA-EE, IC-E. Of these, IS-E (0.465), IS-EE (0.332), IIA-E (0.464), IIA-S (0.351), IIA-EE (0.400), IC-E (0.358) are strong correlations. The following correlations are positive and significant at the 0.05 significance level (two-tailed): IIB-EE, IM-E, IC-EE.

Correlation Matrix for Teacher E (Table 4.7)

The following correlations are positive and significant at the 0.01 significance level (two-tailed): IS-E, IIB-E, IIB-S, IIB-EE, IM-E, IM-EE, IIA-EE. Each of these correlations is also strong i.e., IS-E (0.438), IS-EE (0.438), IIB-E (0.478), IIB-S (0.565), IIB-EE (0.603), IM-E (0.444), IM-EE (0.632), IIA-EE (0.632). The following correlations are positive and significant at the 0.05 significance level (two-tailed): IS-EE, IIA-E. Both are strong i.e., IS-EE (0.436), IIA-E (0.360).

Overall Correlation Matrix (All Teachers and All Students) (Table 4.8)

Scores on each of the transformational leadership dimensions are positively and significantly correlated at the 0.01 significance level (two-tailed) with scores on

each of the leadership outcomes. Additionally, all except the IM-S (0.289) and IC-E (0.294) correlations are strong as defined in this study and the figures in brackets indicate that the IM-S and IC-E correlations closely approximate the 0.3 standard that has been used here to define a strong correlation for ordinal data.

The findings generally support hypothesis H3.

4.4 Related Findings

4.4.1 Correlations of Contingent Reward Scores with Management by Exception (Active) and Management by Exception (Passive) Scores

Apparently, confirmation of hypothesis (H2) above contradicts the results of the confirmatory factor analysis described earlier which indicated that, on the basis of goodness of fit, the classroom leadership model places Contingent Reward amongst the transactional leadership rather than the transformational leadership dimensions. This apparent contradiction may be explained by reference to Table 4.8 that indicates not only significant positive correlations of scores on the Contingent Reward dimension with scores on each of the transformational leadership but also significant positive correlations with scores on the Management by Exception (Active) and Management by Exception (Passive) dimensions (0.01 significance level—two tailed). The correlation with scores on the Management by Exception (Active) dimension is strong (0.315). Perusal of Tables 4.3 to 4.7 reveals a similar pattern of correlations between Contingent Reward and Management by Exception (Active) and Management by Exception (Passive). It seems

that Contingent Reward ‘straddles’ the transformational-transactional leadership continuum, a feature borne out by the fact that the confirmatory factor analysis conducted for this study found that a version of the classroom leadership model situating Contingent Reward amongst the transformational leadership dimensions, whilst not fitting the data as well as the version of the model with Contingent Reward as a transactional factor, still fitted the data well in terms of the standards employed for goodness of fit.

4.4.2 Correlation of Management by Exception (Active) Scores with Leadership Outcome Scores

Reference to Table 4.8 indicates the somewhat unanticipated finding that Management by Exception (Active) scores are significantly and positively correlated with each of the leadership outcome scores (0.01 level of significance – two tailed). The correlations MBE(A)-E (0.381) and MBE(A)-EE (0.367) are also strong as defined in this study. Thus, responses to the classroom leadership instrument employed in this study suggest a perception that Active Management by Exception is a leadership dimension conducive to positive classroom leadership outcomes.

4.4.3 Teacher- Student Dynamics

Overall, there was a high degree of consistency in finding amongst the various teachers and their student groups. Minor inconsistency with the general findings was evidenced in some of the correlation matrices for individual teachers, particularly in the matrices for Teachers A, D, and E. These were, however, isolated inconsistencies in a general pattern

of consistency of findings across teachers. In sum, generally, there is scant evidence of a teacher-student dynamics effect on the data given the high level of consistency of findings amongst the teachers participating in the study.

4.5 Gender Effect

The study specifically addressed the gender effect that has been suggested by, for example, the previous study of Walumbwa and Ojode (2000). This was reflected in the following hypothesis:

H4: Female students will give significantly higher scores on transformational dimensions than will male students.

The above hypothesis was examined with reference to the Mann Whitney test appropriate for ordinal data with the median as the measure of central tendency and the results confirmed by relaxing the ordinal data constraint and applying the t-test for independent samples (interval data) procedure based on the mean. Both procedures are available on SPSS version 11.5 (SPSS, 2002). In addition to testing the overall sample, tests of individual teacher and their student cohorts were carried out to identify possible individual teacher-student group variations. The following tables illustrate the relevant SPSS output.

Table 4.9: Mann-Whitney and T-Test For Independent Groups (Teacher A)

Gender	N	Mann-Whitney <i>p</i> -value (2-tailed)	T-test <i>p</i> -value (2-tailed)
Male	13	0.742	0.776
Female	25		

Table 4.10: Mann-Whitney and T-Test For Independent Groups (Teacher B)

Gender	N	Mann-Whitney <i>p</i> -value (2-tailed)	T-test <i>p</i> -value (2-tailed)
Male	44	0.414	0.234
Female	69		

Table 4.11: Mann-Whitney and T-Test For Independent Groups (Teacher C)

Gender	N	Mann-Whitney <i>p</i> -value (2-tailed)	T-test <i>p</i> -value (2-tailed)
Male	28	0.525	0.264
Female	41		

Table 4.12: Mann-Whitney and T-Test For Independent Groups (Teacher D)

Gender	N	Mann-Whitney <i>p</i> -value (2-tailed)	T-test <i>p</i> -value (2-tailed)
Male	10	0.928	0.680
Female	21		

Table 4.13: Mann-Whitney and T-Test For Independent Groups (Teacher E)

Gender	N	Mann-Whitney <i>p</i> -value (2-tailed)	T-test <i>p</i> -value (2-tailed)
Male	4	0.819	0.846
Female	6		

Table 4.14: Mann-Whitney and T-Test For Independent Groups (Overall Study)

Gender	N	Mann-Whitney <i>p</i> -value (2-tailed)	T-test <i>p</i> -value (2-tailed)
Male	94	0.380	0.478
Female	123		

Large two-tailed *p* values (i.e., > 0.05) in both the Mann-Whitney and the T-test for Independent Samples SPSS output for each of the teachers participating in the study and for the study overall indicated that there was no significant difference in scoring on the classroom leadership instrument resulting from gender. Accordingly, hypothesis H4 was not supported by the Hong Kong data.

4.6 Leadership Outcome and SET Scores

H5: Scores on teachers' leadership outcomes will be positively and significantly correlated with teachers' SET scores.

Lingnan University, where this study was located, has an SET system for all its university teachers. The instrument employed for this purpose is called a 'Course and Teaching Evaluation' (CTE), and an example is contained in Appendix C. The Lingnan system

involves the conduct of SET's for every class. The critical measure of teaching performance used for both formative and summative purposes in the university is the overall mean score for teaching that has been circled in Appendix C. Teachers participating in this research agreed to provide this author with the mean SET scores for each of the classes under study. For comparison purposes, given that the mean score per class is employed in the CTE teaching evaluations, the mean score for leadership outcomes was calculated i.e., the mean scores for Effectiveness, Satisfaction and Extra Effort and the overall mean scores for these leadership outcomes, for each class involved in the study. Thus, as there were ten classes participating in the study, ten mean leadership outcome scores resulting from the application of the classroom leadership instrument, were correlated with ten overall mean teaching scores resulting from the Lingnan University CTE system. Given that the mean was employed in the correlation analysis, both Spearman's rho and Pearsons r were calculated and the results are shown in Table 4.14.

Table 4.15: Classroom Leadership Outcome Scores and SET Scores: Correlation Analysis

		Effectiveness	Satisfaction	Extra Effort	Overall
Spearman's rho	SET	0.517	0.444	0.486	0.419
	Sig. (2-tailed)	(0.126)	(0.199)	(0.154)	(0.288)
Pearson's r	SET	0.409	0.343	0.352	0.399
	Sig. (2-tailed)	(0.241)	(0.331)	(0.318)	(0.254)

n = 10

Table 4.14 indicates that none of the correlations are significant at the 0.05 level. However, levels of significance are affected by sample size (Frieman *et al.*, 1978; Kirby

et al., 2002) and the Hong study involved a relatively small sample. Interestingly, using a correlation coefficient of 0.3 as the standard of a strong correlation for ordinal data as described earlier in this chapter, all the Spearman rho correlation coefficient were strong. In sum, hypothesis H5 was partially supported by the analysis i.e., scores on teachers' leadership outcomes were positively and strongly correlated with teachers' SET scores but none of the correlations were significant at the 0.05 level of significance.

4.7 Hypotheses and Findings: A Summary

H1: Scores on each of the transformational leadership dimensions will be positively and significantly correlated with scores on each of the other transformational leadership dimensions.

The overall findings supported this hypothesis. Scores on all the transformational leadership dimensions were significantly and positively intercorrelated at the 0.01 level of significance (two-tailed).

H2: Scores on the Contingent Reward transactional leadership dimension will be positively and significantly correlated with scores on each of the transformational leadership dimensions and with scores on each of the leadership outcomes.

The overall findings supported this hypothesis. Scores on the Contingent Reward (CR) transactional leadership dimension were positively and significantly correlated at the 0.01

level of significance (two-tailed) with scores on each of the transformational leadership dimensions and with each of the leadership outcome dimensions.

H3: Scores on each of transformational leadership dimensions will be positively and significantly correlated with scores on each of the leadership outcomes.

The overall findings supported this hypothesis. Scores on each of the transformational leadership dimensions were positively and significantly correlated at the 0.01 significance level (two-tailed) with scores on each of the leadership outcomes.

H4: Female students will give significantly higher scores on transformational dimensions than will male students.

The findings of the study did not support this hypothesis. Both the Mann-Whitney test and the T-test for Independent Samples indicated that there was no significant difference in scoring on the classroom leadership instrument resulting from gender.

H5: Scores on teachers' leadership outcomes will be positively and significantly correlated with teachers' SET scores.

The findings provided only partial support for this hypothesis. Whilst the data indicated strong positive correlations between teachers' leadership outcomes and teachers' SET scores, none of these correlations were significant at the 0.05 level.

4.8 Synopsis of Other Relevant Findings

4.8.1 Validity and Reliability

Confirmatory factor analysis using the SIMPLIS procedure in LISREL 8.54 (Joreskog and Sorbom, 2002) indicated that a model of classroom leadership employing an instrument based on the Multifactor Leadership Questionnaire (MLQ Form 5x-Short) developed by Bass and Avolio (2000) and modified for a Hong Kong university classroom context was a good fit to the data and thus capable of producing valid measurement (i.e., measuring what it purports to measure). This was particularly the case with a version of the model that places the Contingent Reward dimension within the transactional factors. The findings of this study also indicated that the scales in the classroom leadership instrument were capable of producing measurement at an acceptable level of reliability (Anastasia, 1990; Nunnally, 1978).

4.8.2 Correlation Analysis

4.8.2.1 Contingent Reward, Management by Exception (Active) and Management by Exception (Passive)

The overall findings indicated that, in addition to the significant positive correlations of scores on the Contingent Reward dimension with scores on each of the transformational leadership dimensions, scores on the Contingent Reward dimension were also significantly and positively correlated with scores on the Management by Exception (Active) and Management by Exception (Passive) dimensions. This finding lent support

to the LISREL analysis that indicated a model of classroom leadership including the Contingent Reward dimension within the transactional leadership factors rather than within the transformational factors as marginally the best fit to the data.

4.8.2.2 Management by Exception (Active) and Leadership Outcomes

Overall findings indicated that Management by Exception (Active) scores were significantly and positively correlated with each of the leadership outcome scores. In terms of the transformational-transactional leadership conceptualization, it is interesting that, in the Hong Kong study, a squarely transactional dimension was perceived as conducive to positive classroom leadership outcomes.

4.8.3 Teacher-Student Dynamics

Wherever possible, analysis was conducted and reported at the individual teacher and cohort of students level. This was done to explore any possible variations to the general findings that might result from the particular relationship that a teacher could have with his or her students and vice-versa. Minor variations were found but none which were other than marginal and thus having no material effect on the overall findings.

Chapter 5: Conclusions and Recommendations

In Chapter 4, the findings of the study were presented together with an initial analysis of those findings. In the conclusions section of this chapter, the finding and analysis provide the basis for a discussion of issues that go the core of this study. These discussions are placed in a wider context by reference to the relevant literature. Aside from addressing general areas for further research, the recommendations section also contains specific suggestions for moving the present research forward.

5.1 Conclusions

5.1.1 Summary of Findings and Conclusions

A brief summary of the findings and analysis detailed in Chapter 4 is presented below:

- i. As anticipated in hypothesis (H1), scores on all the transformational leadership dimensions were significantly and positively intercorrelated.
- ii. In support of hypothesis (H2), scores on the Contingent Reward transactional leadership dimension were positively and significantly correlated with scores on each of the transformational leadership dimensions and on each of the leadership outcome dimensions.

- iii. Confirming hypothesis (H3), scores on each of the transformational leadership dimensions were positively and significantly correlated with scores on each of the leadership outcomes.
- iv. The findings of the study did not support hypothesis (H4) because there was no significant difference in scoring on the classroom leadership instrument resulting from gender.
- v. In connection with hypothesis (H5), whilst the data indicated strong positive correlations between teachers' leadership outcomes and teachers' SET scores, none of these correlations were significant.
- vi. Confirmatory factor analysis verified the pattern of intercorrelations described in i to iii above by indicating that a model of classroom leadership employing an instrument based on the Multifactor Leadership Questionnaire (MLQ Form 5x-Short) developed by Bass and Avolio (2000) and modified for a Hong Kong university classroom context, was a good fit to the data and thus capable of producing valid measurement (i.e., measuring what it purports to measure). This was particularly the case with a version of the model that placed the Contingent Reward dimension within the transactional factors. This latter point was supported by findings showing that, in addition to the significant positive correlations of scores on the Contingent Reward dimension with scores on each of the transformational leadership dimensions, scores on the Contingent Reward

dimension were also significantly and positively correlated with scores on the Management by Exception (Active) and Management by Exception (Passive) dimensions.

- vii. The findings indicated that the scales in the classroom leadership instrument were capable of producing measurement at an acceptable level of reliability (Anastasia, 1990; Nunnally, 1978).
- viii. Management by Exception (Active) scores were significantly and positively correlated with each of the leadership outcome scores. In terms of the transformational-transactional leadership conceptualization (Bass and Avolio, 2000) on which the classroom leadership instrument is based, it is interesting that, in the Hong Kong study, a squarely transactional dimension i.e., Management by Exception (Active) was perceived to be conducive to positive classroom leadership outcomes.
- ix. The findings did not identify any particular teacher-student effect on the results. In other words, no material variations to the general findings could be detected that were attributable to the particular relationship that a teacher might have with his or her students and vice-versa.

The study also supports the following conclusions that are elaborated later in this chapter.

- i. The classroom leadership instrument developed for the present research is capable of the valid and reliable measurement of student perception of teachers' classroom leadership style.
- ii. Teachers rated highly as transformational classroom leaders by students are also rated highly on their ability to stimulate students' extra effort.
- iii. The classroom leadership instrument developed for the present research reflects a model of classroom leadership that retains the integrity of the original full range (transformational-transactional) leadership conceptualization. Thus, those teachers rated highly on the transformational and active transactional dimensions of classroom leadership should potentially generate the beneficial leadership outcomes associated with the original conceptualization except that students replace subordinates in the leadership dyad. These outcomes include the stimulation of commitment to learning, the development of creativity and the fostering of ethical conduct.
- iv. The Active Management by Exception dimension of classroom leadership appears to take on more significance in terms of producing desirable leadership outcomes than does this dimension in the original full range leadership model. This is due to the fact that the Management by Exception dimension in a university classroom

context is primarily concerned with teacher-student and student-teacher feedback, a process which, arguably, takes on particular significance in a university teaching situation.

- v. There is no evidence in the present research that female students are more responsive to transformational classroom leadership than male students.
- vi. There is potentially a strong association between effective classroom leadership and SET scores despite the fact that the study did not reveal statistically significant correlations most likely due to the small sample size.
- vii. There is support for Bass's (1997) argument in favour of the generalisability of the transformational-transactional (full range) leadership paradigm across cultures.

5.1.2 The Integrity of the Classroom Transformational-transactional Leadership Construct

Findings i, ii, iii, v, vi, vii and viii above are concerned with the integrity of the classroom leadership construct measured by the instrument developed for this study. This instrument attempts to achieve a balance between maintaining the essence of the MLQ Form 5x-Short instrument (Bass and Avolio, 2000) used to measure the core transformational-transactional leadership conceptualization (Avolio *et al.*, 1995; 1999; Bass, 1985; Bass

and Avolio, 2000) and making such modifications as were deemed necessary to reflect a higher educational and Hong Kong setting. Thus, evaluating the integrity of the classroom leadership construct reflected in the classroom leadership instrument produced for this study involves (1) assessing the extent to which the classroom leadership instrument is capable of measurement that has face validity (the instrument is acceptable to 'experts' in the area), has external validity (the measurement results produced by employing the instrument can be verified by reference to external data) and is reliable in its own right (2) evaluating the extent to which the instrument measures what it is supposed to measure i.e., the instrument is capable of construct valid measurement. The classroom leadership instrument purports to reflect and measure the essence of the transformational-transactional leadership notion developed by Bass and his colleagues (Avolio *et al.*, 1995; 1999; Bass, 1985; Bass and Avolio, 2000) considered in a classroom setting. Thus, evaluation of construct validity involves examining whether the pattern of intercorrelations among the various dimensions of the classroom leadership instrument replicates, or is similar to, the pattern of intercorrelations reported in research using the Bass and Avolio's versions of the MLQ and (3) demonstrating that the transformational-transactional leadership model developed by Bass and his colleagues that is at the centre of the classroom leadership instrument, is itself psychometrically sound. This is on the grounds that the integrity of the classroom leadership instrument developed in this research depends on it being rooted in a conceptualization of leadership that itself possesses psychometric rigour.

5.1.2.1 Classroom Leadership -Validity and Reliability Issues

Regarding point (1) above, namely, the potential of the Hong Kong instrument for face and externally valid and reliable measurement of classroom leadership, in Chapter 4 it was noted that the use of experts in the developmental process was conducive to face validity. Equally, strong positive correlations between classroom leadership outcome scores and SET scores, although not significant given the small sample, were indicative of criterion related or external validity. Furthermore, Cronbach's Alpha scores (Cronbach, 1951) for all scales comprising the Hong Kong version of the transformational-transactional leadership instrument, were acceptable for a social science research study (Anastasia, 1990) and particularly in the case of exploratory research (Nunnally, 1978). The issue concerned the possible deletion or modification of the item: *He/she is willing to provide help outside of class* in the Individual Consideration scale that might serve to effect a marginal improvement in that scale's Alpha score does not contradict the overall finding that all scales attained an acceptable level of internal consistency-reliability.

Moving to point (2) above i.e., the question of the extent to which the classroom leadership instrument reflects the original transformational-transactional leadership conceptualization, it was noted in Chapter 4 that confirmatory factor analysis using LISREL ((Joreskog and Sorbom, 2002) verified that the instrument generated data that was a good fit to a model of classroom transformational-transactional leadership. This model is generally consistent with the original construct developed by Bass and his colleagues (Avolio *et al.*, 1995; 1999; Bass, 1985; Bass and Avolio, 2000) with

Contingent Reward placed amongst the transactional dimensions. Thus, the findings of the study indicate that the classroom leadership model is capable of valid and reliable measurement of a series of leadership dimensions modeled on the original transformational-transactional leadership conceptualization which has become known as 'full range' leadership (Bass and Avolio, 1994). From an educational standpoint, some of the relationships between dimensions of the classroom leadership model that have been revealed by this study are promising. Reference to Table 4.8 in Chapter 4 indicates that, without exception, scores on the transformational dimensions of the classroom leadership instrument are strongly (defined in Chapter 4 as ≥ 0.3) and significantly correlated with scores on the Extra Effort dimension. This dimension comprises the following three items:

- *He/she motivates me to do more than what is required*
- *He/she has strengthened my commitment to success*
- *He/she has strengthened my determination to work hard*

There can be little doubt that a style of classroom leadership that is perceived by students as stimulating the kind of behaviours illustrated in the above items has considerable potential educational value. In this connection, Table 4.8 also indicates two further relationships of interest i.e., scores on the Contingent Reward dimension are significantly and positively correlated with scores on Extra Effort and correlations between scores on the Management by Exception (Active) dimension and Extra Effort are significant, positive and strong. The place of Contingent Reward and Management by

Exception (Active) in the classroom leadership model and the full range leadership construct on which it is based, will be discussed later in this thesis.

5.1.2.2 The Value of Grounding Classroom Leadership on the Full Range Leadership Model

With regard to point 3 above, it is a central assertion of this study that the classroom transformational-transactional leadership construct derives integrity from the fact that it has been grounded on a conceptualization of transformational-transactional or full range leadership that is generally accepted as psychometrically sound to the extent that it has attained a status akin to that of an operational definition of modern leadership. This assertion can be demonstrated with reference to the literature presented below.

5.1.2.2.1 Full Range Leadership: Towards an Operational Definition of Leadership

The transformational-transactional or full range leadership model developed by Bass and his colleagues has become a central theme in modern leadership literature. The concept and its measuring instrument, namely the various versions of the MLQ, have been used in over 200 studies (Bass and Avolio, 2000; Ardichvili and Gasparishvili, 2001) and in a variety of settings including business, educational, military, governmental and private organizations in several different continents (Bass, 1997). According to Bass, the consistency of results across different types of organizations and different continents argue for a universality in the transformational-transactional leadership paradigm. The cross-cultural applicability of the transformational-transactional leadership model will be

discussed later in this thesis but suffice it to say at this stage that the centrality of the full range leadership construct in leadership literature has, seemingly, afforded the construct, if not total universal acceptance, the status of an operational definition of modern leadership. Thus, one of the strengths of the classroom leadership instrument developed in the present study is that, despite modifications to item wording designed to reflect an educational and Hong Kong context, analysis using LISREL 8.54 (Joreskog and Sorbom, 2002) indicates that the instrument measures a classroom leadership construct that retains the conceptual integrity of the original transformational-transactional leadership model and the relationships amongst these dimensions.

Thus, the classroom leadership version of the transformational-transactional construct developed in this study has the advantage of being based on solid ground, namely, on a conception of leadership that is widely accepted as a valid and reliable approach to measuring leadership. This is not to suggest that the full range leadership model is exempt from criticism and there is an on-going debate aimed at recommending modifications to the components of the model (see, for example, Bryman, 1992; Bycio *et al.*, 1995; Den Hartog *et al.*, 1997; House and Podsakoff, 1994; Hunt, 1991; Waldman *et al.*, 1987; Yammarino and Bass, 1990; Yukl, 1994). However, despite disagreement and debates over what, in this author's view, are essentially marginal refinements, there remains a high level of agreement on the essential integrity of the transformational-transactional leadership conceptualization. The following discussion of validity and reliability issues related to the full range leadership model confirms the essential integrity of the model.

5.1.2.2.2 Full Range Leadership and Criterion-Related Validity

The literature is replete with studies highlighting indicators (criteria) external to the transformational-transactional leadership model that collectively serve to validate the efficacy of the transformational style in particular. A synopsis of this literature, summarizing and supplementing some of the literature reviewed in Chapter 2 of this thesis, is presented here to demonstrate that the full range leadership model can justifiably lay claim to criterion-related or external validity. Essentially, criterion-related validity is gauged by comparing transformational-transactional leadership measurement results with some criterion or criteria external to the transformational-transactional construct that could reasonably be viewed as confirming these results. For example, one of the central premises of the transformational-transactional leadership notion is that the transformational style is conducive to positive leadership effectiveness. External or criterion-related validity might be demonstrated by, for example, comparing high scores on transformational leadership for a particular supervisor with scores on an external measure of group performance for the group of subordinates supervised by this particular leader. When a particular supervisor receives high scores on transformational leadership dimensions from his group of subordinates and these same subordinates also receive high scores on measures of group effectiveness by some other criterion or, hopefully, more than one criterion, then external (criterion-related) validity is indicated.

Research generally confirms that the influence of transformational leadership is not confined to subordinates' satisfaction with the leader or their purely subjective

perceptions of leader effectiveness. Transformational leadership also has a beneficial effect on individual, team and organizational performance according to empirical research. House and colleagues (1988) have noted an impressive array of empirical findings supporting the relationship between transformational leadership and performance. Hater and Bass (1988), for example, demonstrated that, not only did transformational leadership differentiate top-performing managers from ordinary managers according to subordinate perceptions, but also differentiated them on the basis of external criteria. In a study by Howell and Frost (1989), transformational leadership was found to have a strong and positive influence on individual task performance.

Additionally, a number of studies have drawn attention to the positive influence of transformational leadership on group performance (e.g., Avolio *et al.*, 1988; DeGroot *et al.*, 2000; Keller, 1992; Shamir *et al.*, 1993; Sosik *et al.*, 1997; Yammarino and Bass, 1990). Lowe and colleagues (1996) in a meta-analysis of over 30 independent empirical studies using the transactional-transformational leadership model, concluded that there were strong positive correlations between all components of transformational leadership and leadership effectiveness measured not only subjectively by subordinates but objectively by external criteria such as goal achievement and profit. The findings of Lowe and others (*ibid*) have been confirmed in two other meta-analyses (Gaspar, 1992; Patterson *et al.*, 1995). In a study of Austrian branch bank managers, Steyrer (1998) demonstrated that MLQ transformational ratings predicted long term branch market share and customer satisfaction. In Canada, Howell and Avolio (1993) noted that high transformational scores of departmental supervisors in a large Canadian financial

institution predicted consolidated departmental performance one year later. Similar findings have been reported in a Chinese state enterprise (Davis, *et al.*, 1997), Polish and Dutch organizations (Den Hartog, 1997) and in relation to supervisors on North Sea oil platforms off the coast of Scotland (Carnegie, 1995). Such results have also been confirmed by, for example, Barling and others (1996), Brown and Dodd (1999) and Keller (1992) who have used objective performance criteria to demonstrate the superiority of transformational leadership over other leadership styles. Barling and colleagues (1998) have attempted to identify the possible link between subjective assessments of leadership effectiveness (e.g., subordinates' satisfaction with the leader) and objective criteria of performance. Their study indicated that subordinates' perceptions of supervisors' transformational leadership leads to enhanced affective commitment to the organization and, as a result, enhanced group performance.

A number of studies have linked transformational leadership to externally measured 'softer' or more subjective performance criteria such as the type of commitment referred to by Barling and colleagues (*ibid*). Avolio (1999) and Bass (1998) have both found that transformational leadership generates high commitment amongst followers. Similarly, in the educational field, Koh and co-authors (1991) have noted that organizational commitment of schoolteachers and students is related to the extent of principals' transformational leadership. Associated with commitment is conformity or compliance and Patterson and others (1995) reported in their meta-analysis, greater follower compliance resulting from transformational rather than transactional leadership. Going beyond commitment and compliance, in a Spanish study, Molera and Morales

(1994) linked transformational leadership to lower role conflict, enhanced feelings of autonomy and improved interpersonal relations amongst subordinates.

In addition to hard external evidence of enhanced performance, there is evidence that the transformational style enhances performance in softer, less tangible, areas. One such area is learning which is an issue of central importance to this study given that one of the critical arguments in favour of the use of the transformational leadership style in the university classroom is that it not only influences SET scores in a positive direction but also has intrinsic benefits from an educational standpoint. A crucial educational benefit is the enhancement of students' learning and Farrell (2000) found that transformational leadership had a positive influence on an organization's learning orientation. He described organizational learning orientation as an organization's ability to modify its behaviour to reflect new knowledge through a continuous capacity to learn, adapt and change its culture and to improve performance based on what is learned from experience. Similarly, in examining why companies have varying degrees of success in implementing total quality management (TQM), Hill and colleagues (2001) found that transformational leadership was of particular importance in stimulating the kind of organizational learning necessary for successful implementation.

Regarding individual learning orientation, an empirical study of professional accountants in the UK conducted by Coad and Berry (1999) found that perceived transformational leadership variables were positively correlated with subjects' learning goal orientation, a concept defined by the authors as follows: "individuals with a learning goal orientation have an intrinsic interest in their work, view themselves as being curious,

and choose challenging tasks that provide opportunities for learning. These individuals are not unduly bothered by mistakes, regarding them as part of the learning process.” (p. 164). It seems reasonable to suppose that university teachers generally will find it highly desirable if they can display classroom leadership behaviour that generates in students the type of learning orientation described above.

Moving from enhanced student learning to creativity, it has been argued that transformational leadership is conducive to creativity by virtue of encouraging subordinates to view issues through different lenses and stimulating them to question assumptions (Hoy and Miskel, 1996). There is some empirical evidence to suggest that transformational leadership has a positive effect on subordinates’ levels of creativity. For example, Howell and Higgins (1990) found that transformational leaders provide favourable motivational effects on technological innovation. Similarly, Sosik (1997) found a positive association between transformational leadership and idea generation. Such findings have been echoed in a recent article by Al-Beraidi and Rickards (2003), set in an accounting context, that has confirmed the positive relationship between transformational leadership and creativity.

In light of the publicity given to cases such as Enron, WorldCom, Tyco and others, there is little doubt that business school teachers are likely to favour any classroom approach that will contribute to producing graduates of character and integrity. In this connection, Carlson and Perrewé (1995) have stated that “transformational leadership is viewed as the best approach for instilling ethical behaviour in organizations”

(p. 5). Confirming Carlson and Perrewe's assertion, Atwater and co-authors (1991) found that transformational leaders are associated with traits such as "ethical", "principled" and "wholesome" far more than those displaying a transactional style. Equally, Parry and Proctor-Thomson's (2002) found a significant positive correlation between transformational leadership and perceived leadership integrity. It appears, therefore, that transformational leadership is an ethical style and is perceived as such by subordinates. Assuming that the leader's behaviour is perceived to be a model to be emulated by subordinates, one may argue that transformational leadership may be conducive to the development of ethical behaviour amongst subordinates. Research support for the learning, creativity and ethical benefits of the transformational dimensions of full range leadership are particularly pertinent to the present study in its development and measurement of a concept of classroom leadership based on the full range leadership model. The setting of this study is a liberal arts university that emphasizes the development, in graduates, of generic skills. Amongst these generic skills are a commitment to life-long learning, an ethical awareness, adaptability and creativity i.e., the very qualities in subordinates that appear to be engendered by the transformational leadership style.

In sum, there is strong support in the literature for the external validity of the full range leadership model. The transformational behaviours of leaders have been validated against 'hard' objective performance criteria such as financial performance. Transformational leadership has also been positively associated with 'soft' performance areas such as subordinates' commitment, interpersonal relations, learning and creativity.

Equally, assuming subordinates emulate the leadership behaviours of leaders they respect, then transformational leadership is likely to influence subordinates' behaviour along ethical lines. The present analysis has indicated that the classroom leadership construct developed in this study retains the integrity of the full range leadership model and thus has the potential to realize the benefits associated with the latter. Aside from the present findings indicating that transformational classroom leadership is likely to have a strong and positive effect on SET's, it is reasonable to assume that most university teachers will be happy with a classroom approach that enhances student learning, stimulates commitment to the learning task, improves classroom interpersonal relations (particularly relevant given the amount of classroom exercises requiring teamwork on the part of typical undergraduate students in business), engenders creativity and facilitates ethical awareness and behaviour.

5.1.2.2.3 Full Range Leadership and Construct Validity

One of the central criticisms leveled at the conceptualization of transformational-transactional (full range) leadership originating with Bass (1985) has been that some empirical studies have not been able to replicate the original model. Bass proposed a seven factor model that included Charisma, Inspirational Leadership, Intellectual Stimulation, Individualized Consideration, Contingent Reward, Management by Exception and Laissez Faire Leadership, that he subsequently refined into a six factor model combining the Charismatic and Inspirational Leadership constructs (Bass, 1988). Those researchers that have failed to replicate exactly the six factor model, have made

various criticisms and, in some cases, suggestions for 'fine-tuning' (see Avolio *et al.*, 1999; Bass, 1990; Bass and Avolio, 1990; 1993; 1994; Bryman, 1992; Bycio *et al.*, 1995; Den Hartog *et al.*, 1997; Hater and Bass, 1988; House *et al.*, 1991; House and Posdakoff, 1994; Hunt, 1991; Waldman *et al.*, 1987; Yammarino and Bass, 1990; Yukl, 1994). Hater and Bass, for example, suggested that the original Management by Exception construct be divided into two sub factors: active versus passive. However, more recent studies indicated that Management by Exception (Passive) might usefully be combined into a single high order factor with Laissez Faire Leadership (Den Hartog *et al.*, 1997; Druskat, 1994; Yammarino and Bass, 1990), a recommendation that is more in line with Bass's original notion. Hater and Bass (1988) also reported that Charisma and Inspirational Leadership scored as two components of the same factor in their empirical study. Similarly, a confirmatory factor analysis conducted by Bycio and colleagues (1995) indicated a five-factor model that combines Charisma and Inspirational Leadership. By contrast, House and colleagues (1991) and Hunt (1991) recommended that behavioural and attributed Charismatic Leadership be differentiated on the basis that charisma is demonstrated by leadership behaviour and is also a quality attributed to a leader by followers. Capturing to the full this dimensions of leadership was viewed as necessarily trading off the behavioural purity of the MLQ instrument to include the element of attribution involved in perceptions of charisma.

The above studies make often-contradictory recommendations, as one would expect with a model of leadership that has been employed so often in research studies. Nonetheless, the authors of the full range leadership conceptualization have been

responsive to, rather than defensive about, the various critiques of the model and many of the suggestions for refining the MLQ and underlying transformational-transactional leadership model have been reflected in the MLQ Form 5x-Short (Bass and Avolio, 2000). They have proposed a six factor structure represented by the 5x version by using confirmatory factor analysis available on LISREL 7 on a sample of 14 independent studies (Bass and Avolio, 2000; Joreskog and Sorbom, 1989). The six factor model (excluding Satisfaction, Effectiveness and Extra Effort that are the three outcome factors) represented in the MLQ Form 5x-Short (Bass and Avolio, 2000) that has been the basis for developing the classroom leadership instrument used in this study, includes the following leadership dimensions: Idealized Influence (Attitude), Idealized Influence (Behaviour), Inspirational Motivation, Intellectual Stimulation, Individual Consideration, Contingent Reward, Management by Exception (Active), Management by Exception (Passive), and Laissez Faire Leadership.

Despite there being nine leadership dimensions contained in the MLQ Form 5x-Short, Bass and Avolio (2000) have not claimed discriminant validity for each of the nine dimensions, rather claiming that Idealized Influence (Attitude), Idealized Influence (Behaviour) and Inspirational Motivation measure aspects of the same dimension which they have called Charisma/Inspirational leadership. The merging of these three transformational dimensions into one is on the basis that a number of studies have reported high intercorrelations amongst these dimensions (Bass and Avolio, 1993). Equally, the authors have noted that, despite evidence from Hater and Bass (1988) indicating Management by Exception Active and Passive should be separate components,

when Laissez Faire items have been included in surveys based on MLQ Form 5x, they have typically correlated very highly with items representing Passive Management by Exception (Den Hartog *et al.*, 1997; Yammarino and Bass, 1990). Thus, a factor called passive-avoidant leadership is included in the six-factor model that combines the Laissez Faire and Passive Management by Exception scales. The six-factor version of transformational-transactional leadership is viewed by its authors as measuring full range leadership (Bass and Avolio, 1994) i.e., a notion of leadership that is operational defined as follows:

“Charisma/Inspirational: Provides followers with a clear sense of purpose that is energizing; a role model for ethical conduct which builds identification with the leader and his/her articulated vision.

Intellectual Stimulation: Gets followers to question the tried and true ways of solving problems; encourages them to question the methods they use to improve upon them.

Individualized Consideration: Focuses on understanding the needs of each follower and works continuously to get them to develop to their full potential.

Contingent Reward: Clarifies what is expected from followers and what they will receive if they meet expected levels of performance.

Active Management by Exception: Focuses on monitoring task execution for any problem that might arise and correcting those problems to maintain current performance levels.

Passive Avoidant: Tends to react only after problems have become serious to take corrective action. Oftentimes will avoid making any decisions at all.”

(Bass and Avolio, 2000, p. 29)

The notion of full range leadership conveys the idea that leaders, in practice, are likely to display some or all of these leadership styles but that effective leaders display more active than passive behaviours (Sosik *et al.*, 2002).

Bycio and others (1995) noted that “the transformational factors were highly correlated, and more importantly they generally did not have strong differential relationships with the outcome variables” (p.474). In other words, Bycio and colleagues also noted one of the consistent criticisms leveled at the transformational-transactional leadership model, namely, an apparent lack of discriminant validity especially amongst the transformational dimensions (Carless, 1998; Curphy, 1990; Sarros and Santora, 2001; Thite, 1999; Yammarino and Dubinsky, 1994). Aside from the fact that the six factor conceptualization of full range leadership reflected in the latest version of the MLQ i.e., Form 5x-Short (Bass and Avolio, 2000) accepts the merging of some of the leadership

dimensions as described above, Avolio and co-authors (1999) have also noted that the findings of Bycio and others (1995) have to be qualified because they did not include the Laissez Faire scale in their analysis and this exclusion may have affected the pattern of results. Equally, findings that indicate a lack of discrimination amongst the dimensions of the transformational-transactional model are in contrast with those of Howell and Avolio (1993) who found relatively low intercorrelations amongst the transformational-transactional leadership dimensions. Furthermore, Den Hartog and colleagues (1997) have suggested that, regardless of any apparent lack of discriminant validity amongst some of the transformational leadership dimensions, “distinguishing between different components of transformational leadership may remain useful, particularly for training purposes” (p. 32). Thus, for instance, a study by Dvir (1998) indicated that allowing for separate rating of transformational dimensions that, arguably, may lack discriminant validity, permitted discrimination amongst these dimensions in terms of training effect.

Another feature of the full range leadership model that has generated debate is the place of Contingent Reward in transformational-transactional leadership i.e., is it a transformational or transactional dimension? Although the transformational-transactional leadership model as conceived of by its authors (Avolio *et al.*, 1995; 1999; Bass, 1985; Bass and Avolio, 2000) has Contingent Reward as a transactional dimension, Thite (1999), for example, found that there were high correlations between the subscales of transformational leadership and the Contingent Reward subscale in the leadership of Australian information systems projects. Similarly, Humphreys (2002) and Avolio and others (1999) reported positive correlations between Contingent Reward and the

transformational dimensions. Going further, Bycio and colleagues (1995), Goodwin and co-authors (1997) and Wofford and others (1998) found that, in their studies, Contingent Reward loaded on the transformational rather than the transactional leadership factor. To a lesser extent, a similar debate revolves around the Management by Exception (Active) transactional dimension of the model. For example, Avolio and colleagues' (1999) analysis of 14 separate samples found that scores on the Management by Exception (Active) dimension were negatively correlated with those on each of the transformational dimensions. However, Yammarino and Bass (1988) found small positive correlations between Active Management by Exception and Charisma, Individualized Consideration and Intellectual Stimulation. Yammarino and others (1989) reported more substantial correlations between Active Management by Exception and the same dimensions i.e., 0.46, 0.41, and 0.62 respectively. Further, Spangler and Braiotta (1990) reported that Active Management by Exception correlated 0.85 with transformational leadership.

In summary, the full range leadership model and its measuring instrument, the MLQ, have received considerable attention in the literature. In fact, it is the most researched measure of organizational leadership in use today (Den Hartog *et al.*, 1997). Given the number of studies that have employed the model, it may not be too surprising that findings have varied and that there have been debates over the merits of the full range leadership conceptualization. Some of these debates may have been the consequence of “the type of analyses employed, poor item/scale construction, restricted sampling, varying interpretations of what constitutes charismatic leadership (a component of transformational) and to the frequent practice of modifying the MLQ survey (e.g.,

some researchers have dropped whole scales, while others have not included all of the items contained in the original scales)” (Avolio *et al.*, 1999, p. 442). Despite this, even critics of some aspects of full range leadership have had to admit that the MLQ is generally accepted as a key tool for the investigation of transformational and transactional leadership styles (see, for example, Den Hartog *et al.*, 1997). It seems to the present author that many of the criticisms leveled at the full range leadership model and the associated MLQ actually misconstrue the essence of the model particularly its ‘full range’ character. The authors of the model have consistently stated that effective leaders display varying amounts of transformational and transactional leadership (Avolio and Bass, 1995; Avolio *et al.*, 1999; Bass and Avolio, 1993, 1994). Thus, transformational and transactional leadership are not mutually exclusive styles. It is therefore perfectly feasible to have conceptually distinct dimensions of leadership that are also highly correlated. For example, effective Contingent Reward behaviour (a transactional dimension) where the leader consistently honours agreements, can provide the atmosphere of trust, dependability and perceptions of leader consistency that is a precursor to the leader-follower trust bond and high level of respect for the leader characteristic of transformational leadership (Shamir, 1995).

Additionally, insofar as effective leaders are those that display more of the active and fewer of the passive behaviours subsumed within the full range leadership construct, it is not altogether surprising that certain studies have found positive correlations between Active Management by Exception and the transformational dimensions. The available evidence seems to support the full range leadership model as a formulation that does

describe the conceptually distinct but related approaches to leadership described by the terms transformational, transactional and laissez faire (Bass and Avolio, 1993, Bycio et al., 1995). The model and its associated measuring instrument, namely, the MLQ, continue to be employed in leadership studies (the present study being no exception) with the results of such research constantly informing refinements of the full range leadership conceptualization and the MLQ instrument. Furthermore, the extent of employment of the full range leadership model in research as a means of examining transformational-transactional leadership indicates that debates about construct validity are more marginal than central and that there is wide acceptance that the model is capable of the valid measurement of the transformational-transactional leadership styles.

5.1.2.2.4 Full Range Leadership and Reliability

Generally, studies employing versions of the MLQ have reported acceptable levels of scale reliability (Anastasia, 1990; Nunnally, 1978; Peter, 1979) measured by Cronbach's Alpha (Cronbach, 1951). For example, Bass and Avolio (1990) reported internal consistency-reliabilities for each scale in a version of the MLQ ranging from 0.77 to 0.95. In a more recent analysis involving 14 separate samples ranging in size from 45 to 549 conducted by Avolio and colleagues (Avolio *et al.*, 1999) and using MLQ Form 5x (Bass and Avolio, 1995; 2000), internal consistency-reliability estimates ranged from 0.63 to 0.92. Similarly, Parry and Proctor-Thomson's (2002) study undertaken in New Zealand involving a sample of 1354 managers of both public and private organizations produced internal consistency-reliability estimates ranging from 0.65 to 0.93 using all nine scales

contained in MLQ Form 5x-Short (Bass and Avolio, 2000). Therefore, empirical research generally confirms the internal consistency-reliability of the scales comprising the MLQ.

5.1.2.3 Full Range Leadership and the Classroom Leadership Model: A Comparison

The particular conceptualization of leadership grounding the classroom leadership instrument developed in this study is full range leadership (Bass and Avolio, 1994). The value of grounding classroom leadership on this particular leadership construct derives from the fact that there is a large body of evidence indicating its psychometric soundness albeit with some debate surrounding the discriminant validity of some of the leadership dimensions contained within the model. Nonetheless, full range leadership has become the definitive measure of transformational-transactional leadership by virtue of its wide usage and acceptance in leadership studies. In the present study, confirmatory factor analysis indicated that the classroom leadership model retained the essence of full range leadership and thus, the benefits of full range leadership are also likely to be realized by the classroom leadership version. In addition to a generally effective and productive classroom experience, there are certain benefits such as extra effort, enhanced learning, improved creativity and increased commitment to ethical conduct that are very desirable from an educational standpoint. These benefits are also particularly relevant to the setting of this study i.e., a liberal arts university which emphasizes the development of such generic qualities as a desire for life long learning, creativity and an ethical awareness.

In addition to confirmation via the factor analysis referred to earlier, the closeness of the classroom leadership model to the full range leadership conceptualization is evident from the pattern of intercorrelations found in Table 4.8 in Chapter 4 that can now be viewed in the light of the various empirical findings in the literature that have been presented above. Thus, consistent with the pattern observed in empirical studies of full range leadership, Table 4.8 indicates that the transformational dimensions in the classroom leadership model are all significantly and positively intercorrelated and all but two of these intercorrelations are strong as defined in this study (i.e., ≥ 0.3). Furthermore, again consistent with a number of empirical studies of full range leadership, Table 4.8 shows the Contingent Reward dimension to be significantly and positively correlated with each of the transformational dimensions.

It is also noteworthy that Contingent Reward is correlated with Management by Exception (Active) and that this correlation is significant, positive and strong. Equally, Contingent Reward is significantly and positively correlated with Management by Exception (Passive) although this correlation is less strong than the correlations with the transformational dimensions and Management by Exception (Active). This pattern of correlations of Contingent Reward with the transformational and transactional dimensions reflects fully the findings of the literature on full range leadership indicating that Contingent Reward is strongly associated with both the transformational and active transactional dimensions. Reference to Table 4.8 also indicates that the Management by Exception (Active) dimension is correlated with each of the transformational dimensions and that the correlations are all positive and strong. Significant positive correlations

between Active Management by Exception and the transformational dimensions have been reported in the research on full range leadership that has been presented above. Similarly, a strong association between Active Management by Exception and the transformational has been observed in research using the full range leadership model and the MLQ (see, for example, Yammarino and Bass, 1988). However, this phenomenon (i.e., the strong correlations observed between Active Management by Exception and the transformational dimensions) may also reflect the particular context of the present study.

The idea that context may influence the association between the transformational dimensions and Active Management by Exception has already been mooted in the literature (Spangler and Braiotta, 1990). In this connection, an examination of the four Management by Exception (Active) items in the classroom leadership instrument (see Appendix A) is informative. The relevant items are as follows:

- He/she is quick to point out where my performance deviates from what is required by the course.
- He/she is aware of any inadequacies in the course, and takes complaints seriously.
- He/she seems to be aware of any or all the inadequacies of the course.
- He/she points out to me when I have failed to meet the course objectives.

It seems to this author that the above statements, that have been developed and refined from the original for a Hong Kong classroom and cultural setting, are primarily concerned with the giving and receiving of feedback. On the one hand, the teacher is

concerned to give students feedback on their performance and on the other hand, the teacher is looking to improve the course and is willing to accept feedback as the basis for such improvements. It would be difficult to argue that this process of giving and receiving feedback is not vitally important in a classroom-teaching situation. For example, in an educational situation, feedback to students has proven to be a powerful determinant of enhanced achievement (Black and Wiliam, 1998; Hattie, 1987, 1990; Hattie and Jaeger, 1998) and student feedback to teachers can be a particularly useful mechanism in improving course design (Gilleard, 1998). It is therefore not surprising that the items comprising the Active Management by Exception dimension of this study's classroom leadership instrument are viewed positively and thus strongly associated with the other positive dimensions of the instrument, namely, the transformational dimensions. Equally, it seems that feedback has become a rather more tangible entity in the instrument developed in this study to measure classroom leadership than in the original MLQ Form 5x-Short instrument (Bass and Avolio, 2000). It will be recalled that the classroom leadership version of the instrument went through a number of iterations to take account of the university classroom and Hong Kong cultural contexts. These iterations are detailed in Chapter 3 which deals with the Methodology. Comparing the following Management by Exception (Active) items from MLQ Form 5x with their classroom leadership derivatives illustrated above, indicates that the original items appear rather less precise than the above items that have been tailored to the particular setting of this study. This is not surprising given that the original MLQ has been designed to suite a variety of, primarily, commercial settings.

- Focuses attention on irregularities, mistakes, exceptions, and deviations from standard.
- Concentrates his/her full attention on dealing with mistakes, complaints, and failures.
- Keeps track of all mistakes.
- Directs my attention towards failures to meet standards.

Thus, it seems that refining the MLQ into an instrument appropriate to a classroom and Hong Kong context has added precision to the Management by Exception (Active) leadership dimension and reinforced the value of this particular transactional leadership dimension in a classroom setting. This may account for the strong association of Management by Exception (Active) with the transformational dimensions in the present study. Furthermore, this phenomenon is consistent with the notion of full range leadership underlying the MLQ which conveys the idea that effective leaders display a variety of active leadership characteristics ranging from the transformational dimensions through to the active transactional dimensions.

5.1.3 Consistency of Results Across Teachers and Classes

In Chapter 4, it was noted that there was a high degree of consistency in findings across the various teachers and their respective classes of students. Minor inconsistencies only were observed within a general pattern of consistency of findings across teachers and their student groups. Thus, there was little evidence of an individual teacher-student dynamics effect on the results. Given the context of the present study, such a finding adds

to the argument that the classroom leadership questionnaire is a robust instrument. The teachers delivering Strategic Management that was the focal course for this research are selected for their maturity and teaching experience due to the fact that Strategic Management is considered to be the capstone course of the undergraduate degree programme. Despite the fact that three of the teachers delivering the course were from the West i.e., one from the US and two from the UK, and the two other teachers were ethnic Chinese born in Hong Kong, similarities in teaching experience and the collegial approach to teaching Strategic Management indicated a degree of homogeneity in teaching delivery and performance across teachers. This indication was supported by further analysis of the SET data which SPSS Descriptives procedure available on SPSS version 11.5 (SPSS, 2002) showed had a mean of 4.81 out of a possible maximum SET score of 6, a standard deviation of 0.41 and kurtosis value of – 0.870. Thus, the data supported the supposed relative homogeneity in performance of the staff delivering the Strategic Management course by virtue of a small standard deviation and the high peaked distribution indicated by the negative kurtosis value. Accordingly, the Hong Kong study involving a relatively homogeneous cohort of teachers and employing the classroom leadership instrument with such a cohort produced the kind of results one would expect. This lends support to the general findings of this study that the classroom leadership instrument is psychometrically sound.

5.1.4 The Issue of Gender

One of the hypotheses of this study specifically addressed the extent to which perceptions

of classroom transformational leadership were affected by gender. The hypothesis was as follows: *female students will give significantly higher scores on transformational dimensions than will male students*. This hypothesis stems from on-going debate in the literature on the link between leadership style and gender. Specific to the present study is the argument in the literature that females tend to have a more transformational approach to leadership than men who tend to exhibit, primarily, the transaction style. Both Chapters 1 and 2 have introduced the issue of gender and transformation-transactional leadership and this section will continue and complete the review of the on-going gender-leadership debate in order to place the relevant findings of this study in context.

There is a longstanding debate in the literature regarding the enactment of, and preferences for, the transformational and transactional leadership styles as between the sexes. Central to the argument is the idea of ‘socialization’. Specifically, the thesis is that because of the socialization process, women have developed values and characteristics that result in transformational leadership behaviours that are different from the traditional transactional behaviours of men characterized as competitive, controlling and aggressive (Helgesin, 1990; Loden, 1985; Rosner, 1990; Schwartz, 1989; Shakeshaft, 1989). Helgesin (1990) for example, has argued that women’s central involvement in managing households, raising children and juggling careers gives them a capacity for leadership roles that men typically do not possess. Similarly, Grant (1988) has argued that the dominant male culture has projected onto the subordinate female culture all aspects of life that are psychologically unpleasant with the result that women have developed a foundation of extremely valuable psychological qualities that are particularly relevant to

leadership based on relationships, encouragement and support, qualities which, arguably, are at the core of transformational leadership. Implicit in this argument is that men, through lack of exposure to the situations that women commonly face, do not possess these psychological qualities. Eagly (1987) has argued that expectation is a central aspect of the socialization process. Thus, people behave according to societal expectations about their gender role and the expectation that women will be more caring and relationships oriented than men largely accounts for different approaches to leadership based on gender.

The socialization argument provides adherents of the 'female leader equals transformational leader' thesis with the rationale for women's natural transformational behaviour. A number of studies have also sought to demonstrate that, in practice, significant differences in leadership styles can actually be observed between men and women. Rosener (1990) for example, in a survey of male and female executives with similar jobs and education and of a similar age, found that women tended to be more transformational in their leadership than men. Rigg and Sparrow (1994) concluded that female leaders emphasized the team approach more than men and were regarded as more people oriented than their male counterparts while male leaders were considered more paternalistic and authoritarian than female leaders. Kousez and Posner (1990), using their version of the transformational leadership model, found that female leaders were more likely than male leaders to practice "modeling the way" (walking the talk) and "encouraging the heart" (giving positive feedback to individuals and teams). Similarly, Comer and others (1995) have noted that female business managers tend to be rated

higher than male managers on the Individual Consideration dimension of transformational leadership. Yammarino and colleagues (1997) have noted that female leaders rather than male leaders tend to develop the individualized, unique relationships with subordinates necessary to effect the transformational leadership style. In one study, Bass, the originator of the modern transformational-transactional or full range leadership notion, found that in a sample of respondents from US 'high tech' Fortune 500 firms, subordinates rated female leaders higher on all transformational leader dimensions compared to male leaders (Bass *et al.*, 1996). This result was consistent with the results of an earlier study that took place in a single sex religious order setting (Druskat, 1994). Daley and Naff (1998) have argued that women tend to use democratic and transformational leadership practices more often than men do.

In a cross cultural study involving Norway, Sweden, Australia and the USA, Gibson (1995) found that male leaders were more likely to emphasize goal setting than female leaders and female leaders more likely to focus on facilitation of interaction than male leaders. In the context of the chairing of US state legislatures, Jewell and Whicker (1994) found that female leaders were more likely to be consensual leaders and less likely to be command leaders than men. A follow up study by Rosenthal (1997) confirmed these results. Results such as those presented here have given rise to arguments that strongly favour women over men as leaders in general. For instance, Helgesin (1990) and Cantor and Bernay (1992) have contended that women bring to the leadership situation communication, intermediary and interpersonal skills, the quality of which is beyond the capacity of men. Equally, Johnson (1976) has argued for the superiority of female

leaders in nurturing and empathizing with subordinates and Fierman (1990) for the superior ability of women in building the 'esprit de corps' vital to the modern team based organization.

In an educational management setting, Hall (1996) in the UK and Hope-Arlene (1999) in Canada have argued that female school principals are more likely to employ the "power through" and "power within" approaches to leadership (i.e., qualities resembling the transformational style) associated with empowerment and participation than the "power over" approach associated with control and dominance (i.e., qualities associated with the transactional style) that is a masculine image of power. Similarly, Coleman's (2000) survey of all female headteachers in England and Wales indicated a preference for a collaborative, people oriented (i.e., transformational) style of leadership. Coleman has noted that her results are consistent with other studies of female headteachers and principals carried out in the USA, UK, Australia, New Zealand and Canada. Similarly, an earlier study of UK heads (Jirasinghe and Lyons 1996), despite indicating that male and female heads both involved their staff in decision making, suggested subtle differences in leadership style in the fact that the women were more collaborative (transformational) and the men simply delegatory (transactional).

The idea that females are more transformational in their leadership style is by no means a unanimous view in the literature. In the study of sex differences in leadership style, Maccoby and Jacklin (1974) for example, have noted that a major problem is the failure to report no differences. The studies of Butterfield and Powell (1981), Campbell

and co-authors (1993) and Ronk (1993) have all concluded that leadership style is independent of gender. Powell (1990), in his analysis of a number of research studies, found that male and female leaders exhibit similar amounts of task oriented and people oriented leadership behaviour. Kolb (1999) has asserted that two decades of research indicates few, if any, differences in the leadership behaviours of males and females. Similarly, Davidson and Burke (1994) have contended that almost all the evidence shows little or no difference in the traits and abilities of managerial and professional women and men. Furthermore, Ferrario (1994), citing Brenner's (1982) study, has stated that examination of the personality traits of women managers have found no evidence of any dissimilarity to men when education and level in the organization are controlled.

Referring specifically to the employment of transformational leadership, Carless (1998) has stated that there is a notable lack of evidence on gender differences. Komives (1991), for example, found no significant differences in the ratings of residence hall director across seven university campuses in respect of the exercise of transformational or transactional leadership. Similarly, in a study that surveyed undergraduate evening students employed by a variety of organizations in the US, Maher (1997) found no significant differences in the evaluation of male and female supervisors on their use of transformational and transactional leadership. In an educational management context, Evetts' (1994) study of secondary headteachers in the UK revealed no difference in the leadership styles of men and women. Further, a comparison of the leadership style self-perceptions of male and female secondary headteachers in the UK (Coleman, in press) showed little difference.

Just as there are proponents of the view generally that females make better leaders than men, there is also a body of opinion contending just the opposite, i.e., that men are more effective leaders than women in general. Thus, McGlashan and colleagues (1995) found that men tend to receive more favourable evaluations from subordinates than do women. Valentine and Godkin (2000) also refer to more than one study showing that subordinates tend to view female managers as overly emotional, sensitive, and indecisive when confronted with difficult work situations. Similarly, the study of German students by Kruse and Wintermantel (1986) revealed that ratings of males of the concept of man correlated highly with the concept of leadership while the concept of woman correlated negatively with the ratings for the concept of manager and the concept of leadership. Interestingly, it appears that the negative perception of women managers is not solely a male phenomenon. Osland and others (1998) have noted US research indicating that both men and women equate successful management with male characteristics. Also, Jeanquart-Barone and Sekaran (1994) found in their study that female subordinates trusted female supervisors less than they trusted male supervisors.

To the extent that a classroom may be conceived of as akin to a small organization with students as subordinates and teacher as leader (Cheng, 1994; Luechauer and Shulman, 2002) it is interesting and very pertinent to the present study to revisit briefly some of the findings discussed in detail in Chapter 2 regarding student perceptions of, and preferences for, male or female teachers. Bennett (1982), for example, found that female instructors were consistently rated as friendlier, having a more positive interpersonal style and possessing greater charisma than their male counterparts.

Similarly, Crawford and Macleod (1990) found that female teachers were rated higher than male teachers on the ability to create a classroom environment that invites participation and Sears and Hennessey (1996) found female teachers to be better at fostering of a feeling of closeness and warmth for both male and female students. In terms of this study, the above studies suggest that female teachers are viewed as displaying more broadly transformational qualities than male teachers. However, research indicates that student ratings are strongly influenced by gender role expectations and teacher behaviour perceived by ratees to be inconsistent with traditional gender roles is penalized in student evaluations (Kierstead *et al.*, (1988); Langbein, 1994; Rubin, 1981)

In general, it appears that a number of transformational leadership-like traits such as warmth, charisma, accessibility, self-assurance and professionalism are valued across faculty gender (Bennett, 1982; Downs and Downs, 1993) but their influence on SET results tends to reflect gender stereotyping. Thus, female teachers perceived of as warm, charismatic and accessible are likely to be more positively evaluated on these traits than their male counterparts (Bennett, 1982; Cooper *et al.*, 1982, Kierstead *et al.*, 1988). On the other hand, research also indicates that female teachers are often perceived to be less professional (professionalism being perceived of as a male quality) than their male colleagues and, thus, they tend to receive negative student ratings that are more extreme than would have been the case had not gender stereotyping labeled female teachers as less professional than male teachers (Bennett, 1982; Winocur *et al.*, 1989). In summary, the gender-student relationship in the classroom is a complex one where male teachers

may be penalized for being perceived as displaying less transformational qualities than their female counterparts and female teachers penalized for being perceived as rather less professional than their male colleagues. It seems that the gender-teacher debate is no more conclusive than the overall gender-leadership debate.

In summary, the gender-leadership debate continues unabated with, arguably, little chance of reaching a conclusion. However, recently, a relatively unexplored area has been introduced that focuses specifically on gender sensitivity to and, by implication, preferences for, the transformational or transactional leadership style rather than gender competence in the two styles. Thus, for example, the study of Alimo-Metcalf (1995) indicated a female preference for transformational leadership and Baugh and Scandura (1998) found that female subordinates tend to have a preference for a transformational style on the part of their leaders. However, in contrast, the research of Moss and Jensrud (1995) suggested that men and women in a vocational education setting have common conceptions of what leaders should try to accomplish and of the ideal qualities of leaders.

Pertinent to the present research and discussed earlier in Chapter 2, is the study of Walumbwa and Ojode (2000) conducted in a US university context that examined the effect of student gender on perceptions of transformational-transactional leadership. The study found that females were more sensitive to perceived transformational behaviours in that they consistently rated their classroom teachers higher on transformational leadership dimensions than did their male counterparts attending the same classes. It is this area of gender based sensitivity to, and perceptions of, leadership styles that has also be explored in the present study and the results reported in Chapter 4 have indicated an absence of

such a phenomenon in the specific context of the present analysis. This finding has implications for the gender-leadership literature in that it tends to confirm the findings of Moss and Jenrud (1995) by indicating no gender based differences in preferences for a particular leadership approach. Thus, these findings may be an indication that in the transformational-transactional leadership literature, exploration of gender based differences in preferences for a particular leadership style may prove as inconclusive as investigations of gender based differences in actual leadership styles.

5.1.5 Classroom Leadership and Student Evaluation of Teaching

The present study specifically investigated the relationship between classroom leadership and SET scores. The argument for so doing is presented in detail in Chapter 2 of this thesis and suffice it to say here that the research that has been done confirms that the behaviour traits of university teachers have a substantial impact on student evaluations (Abrami *et al.*, 1982; Cardy and Dobbins, 1986; Clayson, 1999; Feldman, 1986; Jackson *et al.*, 1999; Naflulin *et al.*, 1973; Williams and Ceci, 1997). An associated argument in this study is that some of these behaviour traits can be of a fatuous nature akin to ‘playing to the audience’ (Naflulin *et al.*, 1973) but this is not the case with classroom leadership based on the transformational-transactional leadership or full range leadership notion. This is because classroom leadership behaviour based on the active dimensions of the transformational-transactional leadership notion, not only has a positive impact on SET scores but also produces results that are desirable from an educational standpoint (see the discussion earlier in this chapter on the integrity of the classroom transformational-

transactional leadership construct). The findings reported in Table 4.14 of Chapter 4 suggest a potentially strong association between effective classroom leadership based on the transformational-transactional leadership conceptualization and SET ratings, although, in this particular study, none of the results were significant at the 0.05 significance level. This lack of significance is probably a function of the small sample size (Frieman *et al.*, 1978; Kirby *et al.*, 2002) given that the study was confined to the 10 classes involved in the Strategic Management course of Lingnan University's Bachelor of Business Administration programme and the data used to ascertain the association of effective classroom leadership with SET scores were the leadership outcome scores and SET scores for these 10 classes only (see Table 4.15). A detailed rationale for the setting of this study is presented in Chapter 3. However, notwithstanding the probable positive influence of effective classroom leadership on SET scores, the argument in this study is in favour of effective classroom leadership for its own sake on the basis of the potential educational benefits discussed earlier in this chapter.

5.1.6 Cross Cultural Issues

Chapter 2 introduced the debate on the applicability (or not) of theories such as full range leadership developed in the West, to other cultural contexts and, given the setting of the present study, specifically to an Eastern context. It was noted that Hofstede's (1980) seminal work on differences in national culture supports objections to the relevance of a theory such as transformational-transactional leadership that emanates from the individualistic national culture of the USA, to Asian cultures such as Hong Kong that are

characterized as collectivist. Thus, writers such as Adler (1983a, 1983b, 1991), Ayman (1993), Erez (1994), Shamir and Howell (1999), Smith and Bond (1993) and Triandis (1990, 1993) and writers on educational leadership such as Hallinger and Leithwood (1996) and Walker and Dimmock (1999) have questioned the generalisability of Western findings on constructs such as leadership, to non-Western cultures.

On the other hand, Bass (1997) has continued to argue in favour of the universality of his full range leadership conceptualization. Reference to Chapter 2 of this thesis details the studies of Pillai and others (1999) and Sarros and Santora (2001) conducted in a commercial context, and Popper and Sleman's (2001) and Yu and colleagues (2002) conducted in an educational context, that lend support to Bass's assertion. Chapter 2 also made reference to the work of Jung and co-authors (1995) that challenged the idea that transformational leadership may only be valid for Western cultures by arguing that the transformation style is particularly effective in collectivist cultures. Their view is based on the high level of value congruence between followers and leaders and the emphasis on group goals that is commonly found in Asian cultures, all of which, they argue, is particularly conducive to the exercise of transformational leadership.

The debate on the universality (or not) of constructs such as full range leadership reflects the differing epistemological positions that were discussed in Chapter 3 of this thesis. In social anthropological terms, arguments against the applicability of notions such as transformational-transactional leadership across cultures tend to reflect an emic

orientation that emphasizes the need to understand and explain cultural differences. By contrast, arguments for the generalisability of constructs and theories reflect an etic orientation that is concerned with the development and discovery of laws and principles that cross cultures.

As discussed in Chapter 3, a positivist approach has been adopted in the present study based on the premise that the more studies that are carried out that test the applicability of a model such as transformational-transactional leadership to a variety of organizational settings and cultural contexts, the more the transformational-transactional leadership notion is refined and begins to approximate a general theory of leadership. Thus, as far as possible, the integrity of the transformational-transactional or full range leadership model has been maintained in the development of the classroom leadership instrument for the present study. Nonetheless, this positivist approach has been tempered with a concern for the cultural context of the study as evidenced in the modifications made to the classroom leadership instrument as a result of the forward and back-translation procedure.

For cross cultural comparison purposes, the results of the present study may be usefully compared to those of Ojode and colleagues (1999) and Walumbwa and Ojode (2000) carried out in the USA and described in Chapter 2. The latter studies were not identical to the Hong Kong study in terms of the sample and modified instrument used but the US studies have in common with the Hong Kong study an investigation of teacher transformational-transactional leadership style in a university classroom setting and an

instrument based on the MLQ Form 5x (Bass and Avolio, 1995; 2000). The following is a synopsis of the US results:

- Cronbach's Alpha scores (Cronbach, 1951) for each of the leadership scales in the first US study (Ojode et al., 1999) ranged from 0.60 to 0.81 and in the second US study (Walumbwa and Ojode, 2000) ranged from 0.51 to 0.91.
- In both US studies, scores on each of the transformational leadership dimensions were positively and significantly correlated with scores on each of the other transformational leadership dimensions.
- In both US studies, scores on the Contingent Reward transactional leadership dimension were positively and significantly correlated with scores on each of the transformational leadership dimensions and with scores on each of the leadership outcomes.
- With the exception of Charisma (i.e., the two Idealized Influence Dimensions Combined)-Satisfaction and Intellectual Stimulation-Satisfaction, scores on each of the transformational leadership dimensions were positively and significantly correlated with scores on each of the leadership outcomes in the first US study (Ojode et al., 1999). In the second study (Walumbwa and Ojode, 2000), scores on all the transformational leadership dimensions were positively and significantly correlated with scores on all of the leadership outcomes.

- Taken together, the US studies provided qualified support for the thesis that there are student gender-based differences in perceptions of teacher transformational-transactional behaviours. The US data indicated that females might rate teachers higher on transformational dimensions and lower on transactional dimensions than their male counterparts. These findings need to be treated with caution because significant gender differences in ratings were evident for only some of the transformational and transactional dimensions and significance levels for gender differences in ratings for the combined transformational and transactional styles were at the 0.10 level which is higher than the conventional 0.05 significance level (see Walumbwa and Ojode, 2000).

Comparing the Hong Kong and US results indicates a high degree of consistency across the two cultures. Thus, reference to the Hong Kong findings reported in Chapter 4 of this dissertation reveals a pattern of internal consistency-reliability i.e., Cronbach's Alpha scores (Cronbach, 1951) for the classroom leadership scales that is broadly similar to the pattern reported in the US studies (HK scores ranging from 0.60 to 0.85). Equally, in the Hong Kong and US studies, a consistent pattern can be observed with scores on the transformational dimensions being positively and significantly intercorrelated with each other and with the scores on the leadership outcome dimensions. Further, all three studies indicated that scores on the Contingent Reward transactional leadership dimension were positively and significantly correlated with scores on each of the transformational leadership dimensions and with scores on each of the leadership outcomes.

However, the Hong Kong findings differ from those in the US studies in respect of the extent to which student gender has a significant bearing on ratings of teacher transformational-transactional leadership style. In the Hong Kong study, the Mann Whitney test (ordinal data) and the t-test for independent samples (interval data) available on SPSS version 11.5 (SPSS, 2002) did not indicate a gender effect, a finding which contrasts with the qualified indication in the US studies that female students tend to rate teachers higher on the transformational style and lower on the transactional style than their fellow male students. However, scrutiny of the US studies, in particular the study of Walumbwa and Ojode (2000) which focuses specifically on the gender issue, reveals that the findings on gender are rather tenuous. Gender differences in ratings apply to isolated leadership dimensions only, are far less prevalent amongst graduate and opposed to undergraduate students and, when transformational and transactional leadership dimensions are combined, are significant only at a level exceeding the conventional 0.05 level of significance. Thus, the US findings are far from conclusive.

In summary, the pattern of results across the Hong Kong and US studies displays a level of consistency that provides support for Bass's (1997) argument for the generalisability of the transformational-transactional leadership paradigm across cultures. Further, the results of the Hong Kong study indicate that the transformational-transactional construct remains robust when applied to a university classroom setting. These results support Bass's second contention, namely, that the transformational-transactional construct not only has general applicability across a wide range of cultures but also across a wide range of organizational settings.

Whilst acknowledging that the findings of the present study are limited in scope and sample, and that the comparison with the US findings have revealed possible differences in the extent to which gender influences rating of transformational-transactional leadership styles, at the very least, the findings do tend to support those of Den Hartog and colleagues (1999) who, in a study encompassing 62 cultures, found that despite some differences in conceptions of ideal leadership across cultures, certain attributes associated with transformational leadership were universally endorsed as contributing to outstanding leadership and some other attributes were universally seen as impediments to outstanding leadership.

5.2 Recommendations

5.2.1 Summary of Recommendations

The study has given rise to the following recommendations that are summarized below and detailed later in this chapter.

- i. On the grounds that classroom leadership based on transformational transactional leadership can be taught and there is evidence that it is teachable, this should be explored by the Teaching and Learning Centre of Lingnan University i.e., the focal institution.
- ii. There is scope for obtaining a teaching development grant in Hong Kong for an

extension of the study to the other Hong Kong universities. There is also scope for further extending the study beyond the confines of Hong Kong.

- iii. Further research should examine the impact of variations in course content, teaching approach and ethnicity of teachers, on student perceptions of classroom leadership as conceptualized in this study.
- iv. Future studies should focus on establishing empirical support for the benefits of effective classroom leadership implied but not proven in the present research. These benefits include the stimulation of commitment to learning, the development of creativity and the fostering of ethical conduct.

5.2.2 A Teaching Development Opportunity

The present study has indicated that scores on the transformational and active transactional dimensions of the classroom leadership instrument developed for this research, are significantly associated with scores on the classroom leadership outcomes of Satisfaction, Extra Effort and Effectiveness. The study has also indicated the potential association of high leadership outcome scores with high SET scores for classroom teachers. This indication is potential rather than actual according to the finding of this study because correlations between classroom leadership outcome and SET scores, although strong and positive, were not significant (see Table 4.15 in Chapter 4). However, it has already been noted that significance levels are affected by sample size

(Frieman *et al.*, 1978; Kirby *et al.*, 2002). Thus, the lack of significance between classroom leadership outcome and SET scores in the present study is probably due to the fact that, although over 200 students participated in the research, for the purpose of ascertaining the relationship, if any, between classroom leadership outcome scores and SET scores, the sample size was small comprising the ten classes involved in delivering the Strategic Management course to these students.

Irrespective of any effect that the transformational leadership and active transactional leadership styles may have on perceptions of classroom leadership outcomes and SET scores, there is a strong argument in favour of adopting the transformational approach to classroom leadership based on the benefits accruing to subordinates claimed, and, in general, empirically supported, for transformational leadership *per se* including enhanced commitment, interpersonal relations, learning, creativity and ethical awareness, all of which are desirable in a university classroom context. The present analysis has confirmed that the classroom leadership instrument and model developed specifically for the Hong Kong study reflects and retains the integrity of the transformational-transactional or full range leadership conceptualization (Bass and Avolio, 1994). Accordingly, it is very likely that the benefits associated with the transformational dimensions of full range leadership will also result from the exercise of the transformational dimensions of classroom leadership. As previously stated, these benefits are highly desirable from an educational standpoint.

All the above would be of limited value if it were not possible to teach desirable leadership behaviours, an assertion that has been made by Barker (1997). However, contrary to Barker's view, there is evidence that transformational leadership is teachable (Bass, 1990; Barling *et al.*, 1996; Kelloway and Barling, 2000, Kelloway *et al.*, 2000). Bass (1990) has described two approaches to transformational leadership training. The first is personal feedback and goal setting where leaders self rate their performance using, for instance, a self rating version of the MLQ and the same leaders are also rated by their subordinates using the standard MLQ. Leaders are then counseled on discrepancies between self-ratings and subordinate ratings. The outcome of counseling sessions is a specific action plan for each participant designed to enhance transformational leadership behaviours (Barling *et al.*, 1996). The second approach involves group based workshops in which a variety of exercises take place such as brainstorming on effective or ineffective leadership and watching videos illustrating various leadership styles and all linked to the theory of transformational-transactional leadership. As with the counseling approach, the outcome of the group workshops is specific action plans designed to enhance the transformational leadership style of participants. It seems that, regardless of which of the two training approaches are adopted, the critical factor in enhancing transformational leadership performance is the specific, actionable plan for improvement (Kelloway *et al.*, 2000). It also seems that effective action plans will focus on those changes that are realistic and achievable and, as a result, possibly small scale rather than large scale 'sea changes' that may be unsustainable (Kelloway and Barling, 2000).

Reference to the classroom leadership instrument in Appendix A indicates that the 45 items are, in fact, behaviourally based statements that model the type of behaviour expected in the various dimensions of classroom leadership. It would be feasible also to develop a self-assessment version of the instrument along the lines of that contained in Appendix D. Comparison of self assessment ratings with student ratings of classroom leadership could then be the basis for the type of counseling sessions described above in which dialogue could focus on differences between the student ratings and teachers' own self evaluation. Given the tangible nature of the items in the classroom leadership instrument, differences identified and discussed in the counseling sessions could then provide the basis for an actionable plan for improvement not only in the obvious transformational dimensions of classroom leadership but also in the areas of Contingent Reward and Active Management by Exception that, according to the results of this study, are importance aspects of perceived classroom leadership effectiveness. For those teachers volunteering for the counseling sessions, after a suitable time has elapsed, it would be necessary to repeat the process of administering both versions of the instrument and comparing the results of subsequent administrations with the initial results in order to gauge the usefulness of the counseling approach for enhancing classroom leadership performance.

Such an initiative would seem to be an appropriate activity for Lingnan University, where the present study took place, given that the university has recently been ranked as the premier Hong Kong university in undergraduate teaching (Hong Kong Economic Journal Monthly, October 2003). The counseling could be administered by the

university's Teaching and Learning Centre that is responsible for university wide teaching enhancement and is one of a number of centres established in each of the Hong Kong universities to promote teaching effectiveness. These centres represent the major response to the increased emphasis placed on quality teaching by the Hong Kong Government's funding agency, the University Grants Committee (UGC), via its quality assurance agency, the Hong Kong Council for Academic Accreditation (HKCAA) since the mid 1990's (Pounder, 2002). In addition to assessing the effect of training on classroom leadership behaviours through comparison of initial classroom leadership scores with follow up scores for the teachers who have participated in the counseling sessions, the data from these initial and follow up surveys could be used, along with relevant SET ratings, to further explore the relationship between classroom leadership behaviours and SET ratings.

5.2.3 Further Study

The present study has been confined to the teachers and students of the required capstone Strategic Management course in the Bachelor of Business Administration programme of Lingnan University, one of the eight fully accredited, UGC funded universities in Hong Kong. From the standpoint of what has essentially been an exploratory study, confining the scope of the research has had its advantages particularly in ensuring that extraneous variables, such as variations in course content and in year of study, have largely been eliminated yet at the same time enabling a sample of over 200 students to be surveyed. Confining the scope of the study has also had its drawbacks in, for example, qualifying

the conclusions regarding the effect of classroom leadership style on SET scores due to the sample of classes involved being limited to the 10 taking the course in the academic year in which the research was undertaken. Additionally, all the findings of this study are necessarily qualified given that they are limited to the one higher educational institution and the mode of delivery peculiar to this institution, namely, courses delivered via a sectional approach which involves relatively small class sizes with teachers each delivering a total course from beginning to end to the sections (i.e., classes) for which they are responsible.

Nonetheless, this study has produced some results that may be of interest to scholars in the fields of leadership, education or both. For instance, the present study indicates the potential for developing a classroom leadership instrument that facilitates valid and reliable measurement and retains the essence of the transformational-transactional or full range leadership model. Furthermore, there is a strong indication from the present findings that perceived effectiveness in classroom leadership has a positive impact on teachers' SET scores. Examining both the psychometric properties of the classroom leadership instrument developed in this study and the impact of classroom leadership on SET scores would benefit from investigation, initially, in disciplines other than business in order to investigate the effect of variations in subject matter on research results and particularly to examine the influence, if any, that possible prior knowledge of concepts such as transformational leadership could have had on the present results. Investigations should then be extended to the other universities in Hong Kong and later in other national contexts in order to examine the effects of alternative modes of delivery

(e.g., lecture-tutorial) on research results and to gauge the generalisability of the present findings. This latter investigation would also serve to inform the debate on the applicability of models developed in one cultural context, to other cultures. The classroom leadership instrument developed in this study took the Western conceptualization of full range leadership as its basis with modifications made to accommodate the educational and Hong Kong cultural context. Thus, an interesting twist to the cross-cultural debate could result from experiments in the universities of Western nations employing the present instrument in its currently modified form.

The present study did not indicate any significant cross cultural differences when comparing the Hong Kong findings to the findings of the two broadly similar studies conducted by Ojode and colleagues in the USA (Ojode *et al.*, 1999; Walumbwa and Ojode, 2000). However, the fact that the Hong Kong and US studies were not identical in their objectives and research instruments (although the Hong Kong and US studies were all based on MLQ Form 5x that measures full range leadership) and the fact that the Hong Kong study has been limited in scope for the reasons adduced above, mean that the cross cultural findings are merely indicative rather than conclusive. Thus, as stated above, employing the present instrument in other cultural contexts would serve to inform the continuing dialogue over the cross-cultural relevance of models purporting to have general applicability. Further, the question of gender based differences in sensitivity to, and ratings of, transformational leadership in a classroom setting remains somewhat open given differences in the findings of the Hong Kong and US studies, albeit the US findings need to be qualified as has been argued above. As with the issues already mentioned, the

student gender effect vis-à-vis perceptions of classroom leadership behaviours would benefit from further investigation, initially in the other Hong Kong universities and later in other national cultures, the latter examining the interaction of culture with gender perceptions of transformational-transactional leadership in the classroom.

Finally, aside from the classroom leadership outcomes measured in the instrument developed for this study, a number of the benefits of a transformational approach to classroom leadership such as the enhancement of student learning, the facilitation of creativity, and the engendering of ethical behaviour have been implied rather than demonstrated in the present research. These implication have been made on the basis that the classroom leadership instrument developed in this study reflects a leadership conceptualization that has retained the integrity of the original transformational leadership construct and therefore the benefits claimed, and in most cases empirically demonstrated, for the latter construct should also apply to the former conceptualization. Accordingly, there is scope for further investigation of the beneficial effects of classroom transformational leadership on student performance in order to produce some empirical support for the benefits implied but not proven by the present research.

5.2.4 A Tangible Way Forward

The current interest of the Hong Kong UGC in enhancing teaching quality has already been mentioned and, since the late 1990's, research funds in the form of teaching

development grants have been set aside for projects specifically designed to enhance teaching performance. Given the content and findings of the present study which is certainly unique in Hong Kong, it is likely that substantial research funds could be made available to the present author, initially to replicate this study in the other Hong Kong universities and, possibly, widening the range of courses involved to examine any course content effect. This would enable the findings of the present study to be verified or otherwise for Hong Kong. Should the present findings be confirmed in other Hong Kong universities, it would be possible to widen the research to other countries, hopefully, again with the funding support from one or more subsequent teaching development grants.

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APPENDIX A

Classroom Leadership Instrument¹

Strategic Management
Section Number: _____

Are You
Male or Female: _____
(Please specify)

BBA Stream:
(Optional) _____

This questionnaire is used to describe the classroom leadership style of your teacher as you perceive it. Answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank. Please answer this questionnaire anonymously.

Forty-five descriptive statements are listed on the following pages. For ease of understanding, the statements are in English and Chinese. Judge how frequently each statement fits the person you are describing. Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

RATING (Please circle the relevant number based on the above scale)	English Statement	Chinese Version of English Statement
0 1 2 3 4	1. If I study hard, he/she will offer help.	如果我用功學習，他/她會給予我幫助。
0 1 2 3 4	2. He/She critically thinks and comments on the fundamental assumptions of a school of thought or theory.	他/她批判地思考及評論學說或理論的基本假設。

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Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently, if not always 4
0 1 2 3 4	3. He/She will offer help only when I have encountered difficulties in my study.	他/她待我在學習上面臨困境，方才施以援手。		
0 1 2 3 4	4. He/She is quick to point out where my performance deviates from what is required by the course.	他/她能迅速指出我的表現未能符合課程要求之處。		
0 1 2 3 4	5. He/she does not want to get involved when important learning problems occur in this course.	當本課程出現重大學習問題時，他/她並不願意介入。		
0 1 2 3 4	6. He/She will talk about his/her personal beliefs and value systems while teaching.	上課時他/她有論述他個人的信念及價值觀。		
0 1 2 3 4	7. He/She cannot be found whenever I need him/her.	每當我需要他/她時，卻找不到他/她。		
0 1 2 3 4	8. He/She listens to different opinions for solving problems arising from the course.	他/她聽取多方面的意見去解決課程上出現的問題。		
0 1 2 3 4	9. He/She talks optimistically about the future.	他/她樂觀地談及將來。		
0 1 2 3 4	10. He/She makes me feel proud to be associated with him/her.	與他/她交往，使我感到自豪。		
0 1 2 3 4	11. He/She specifically discusses the respective roles of the teacher and student in contributing to the success of teaching and learning in this course.	他/她具體地討論教師與學生各自要擔當的角色方可令到課程的授受成功。		
0 1 2 3 4	12. He/She will not take action until something has gone wrong.	他/她等到事情出錯，才採取行動。		
0 1 2 3 4	13. He/She enthusiastically talks about what to do to make the course a success.	他/她熱烈地講述要做些什麼才可令課程成功。		
0 1 2 3 4	14. He/She explains that a commitment to learning is important for a student to succeed in this course.	他/她解述了若一個學生要於本課程學習成功，對學習的投入是多麼重要。		
0 1 2 3 4	15. He/She is willing to provide help outside of class.	他/她願意在課餘時提供輔導。		

Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently, if not always 4
0 1 2 3 4	16. He/She makes it clear at the outset how students with good learning performance will be rewarded.	他/她一早說明學習表現好的學生可得到甚麼回報。		
0 1 2 3 4	17. He/She insists that the teaching methodology for this course should be the same for every year, because there is no need to change something that seems to be working satisfactorily.	他/她堅信這課程的教學法應該年年相同；因為這教學法似乎已收到理想效果就無需更改。		
0 1 2 3 4	18. He/She is not only concerned about his/her own interests, but is genuinely concerned about the progress made by students.	他/她不是只顧及自己的利益，而確是關注學生的進步。		
0 1 2 3 4	19. He/She treats me as a person — an individual entity, not just one among many students.	他/她把我看作一個人 — 一個獨立個體，而不單是芸芸眾學生其中的一個。		
0 1 2 3 4	20. He/She demonstrates a reluctance to take action to put things right unless there are constant problems with the course.	除非問題於這課程持續出現，否則他/她不願意採取行動，將錯誤糾正。		
0 1 2 3 4	21. His/Her behaviour has earned my respect.	他/她的言行贏得我的尊重。		
0 1 2 3 4	22. He/She is aware of any inadequacies in the course, and takes complaints seriously.	他/她很重視課程的不足之處，及認真接受投訴。		
0 1 2 3 4	23. He/She contemplates the moral consequences caused by decisions made about the course.	他/她考慮到課程的決策所帶來的道德上的影響。		
0 1 2 3 4	24. He/She seems to be aware of any or all the inadequacies of the course.	他/她對本課程不足之處，似乎都能察覺得到。		
0 1 2 3 4	25. He/She is filled with authority and confidence.	他/她充滿權威和信心。		
0 1 2 3 4	26. He/She makes me look forward to the future after completing the course.	他/她使我憧憬到完成這課程後的前途。		

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

0 1 2 3 4	27. He/She points out to me when I have failed to meet the course objectives.	當我未能達至課程目標時，他/她會向我提出指正。
0 1 2 3 4	28. He/She avoids playing an active part in making decisions about the course.	有關課程上的決定，他/她避免作主。
0 1 2 3 4	29. He/She cares about my personal needs, ability and aspirations in learning and understands that I may have needs that are different from my classmates.	他/她顧及到我在學習上有自己個人的需要、能力和志向，亦明白我的需要或許與其他同學不同。
0 1 2 3 4	30. He/She makes me see a problem from different angles.	他/她使我會從多個角度去看問題。
0 1 2 3 4	31. He/She assists me in actualising my strengths.	他/她協助我發揮我的強項。
0 1 2 3 4	32. He/She suggests various approaches to successfully completing assignments.	他/她提出能成功完成習作的不同方法。
0 1 2 3 4	33. He/She is belated about answering pressing questions.	他/她遲遲答覆急切的問題。
0 1 2 3 4	34. He/She emphasises the importance for students to cultivate a sense of shared commitment to achieving success on this course.	他/她強調要成功學習這個課程，學生們需培養出共同承擔感的重要性。
0 1 2 3 4	35. He/She will let me know that he/she is happy when I have met the course requirements.	當我達到課程的要求時，他/她會讓我 知道他/她為此而感到欣慰。
0 1 2 3 4	36. He/She displays confidence that course objectives can be accomplished.	對達到課程的目標，他/她顯露出信心。
0 1 2 3 4	37. He/She is very capable of meeting my course needs.	他/她很有能力滿足我在課程上的需要。
0 1 2 3 4	38. I am satisfied with his/her leadership in the classroom.	我對他/她在課室裏的領導感到滿意。
0 1 2 3 4	39. He/She motivates me to do more than what is required.	他/她善於誘導，令我超額完成。
0 1 2 3 4	40. He/She is someone capable of conveying students' needs to the University.	他/她是一個有能力將學生的需要傳達至校方的人。

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

0 1 2 3 4	41. We cooperate well with each other as teacher and student.	我們於師生關係上，合作愉快。
0 1 2 3 4	42. He/She has strengthened my commitment to success.	他/她增強了我要爭取成功的意志。
0 1 2 3 4	43. He/She teaches this course to the level required by the programme.	他/她的授課水平，能達至課程的整體要求。
0 1 2 3 4	44. He/She has strengthened my determination to work harder.	他/她增強了我倍加努力的鬥志。
0 1 2 3 4	45. He/She leads a successful class.	他/她帶領的班是成功的。

APPENDIX B

Classroom Leadership Instrument

Scoring Key

Item Number	Leadership Dimension
1	Contingent Reward
2	Intellectual Stimulation
3	Management by Exception (P)
4	Management by Exception (A)
5	Laissez-faire Leadership
6	Idealized Influence (Behaviour)
7	Laissez-faire Leadership
8	Intellectual Stimulation
9	Inspirational Motivation
10	Idealized Influence (Attributed)
11	Contingent Reward
12	Management by Exception (P)
13	Inspirational Motivation
14	Idealized Influence (Behaviour)
15	Individual Consideration
16	Contingent Reward
17	Management by Exception (P)
18	Idealized Influence (Attributed)
19	Individual Consideration
20	Management by Exception (P)
21	Idealized Influence (Attributed)
22	Management by Exception (A)
23	Idealized Influence (Behaviour)
24	Management by Exception (A)
25	Idealized Influence (Attributed)
26	Inspirational Motivation
27	Management by Exception (A)
28	Laissez-faire Leadership

Classroom Leadership Instrument

Scoring Key (Continued)

Item Number	Leadership Dimension
29	Individual Consideration
30	Intellectual Stimulation
31	Individual Consideration
32	Intellectual Stimulation
33	Laissez-faire Leadership
34	Idealized Influence (Behaviour)
35	Contingent Reward
36	Inspirational Motivation
37	Effectiveness
38	Satisfaction
39	Extra Effort
40	Effectiveness
41	Satisfaction
42	Extra Effort
43	Effectiveness
44	Extra Effort
45	Effectiveness

APPENDIX C

Course and Teaching Evaluation (2 nd Semester / Term 2002-2003)

Courses Evaluated :

Score	Courses Code (Section) / Title	
5.38	BUS301(1) - Strategic Management	P 2 - 5
	Part II : Open-end Comments	P 6 - 6

Course and Teaching Evaluation Summary of Statistical Results

CONFIDENTIAL

(2 nd Semester / Term, 2002-2003)

Subject/module characteristics (Lecture)

Subject/module name : BUS301 - Strategic Management

Section :

No. of students enrolled :

No. of returns :

Response rate :

Department : Department of Management Studies

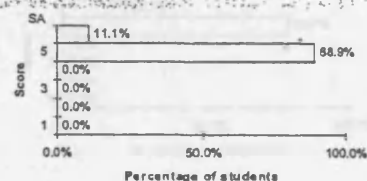
Staff name : Mr. Andrew James Stuart

Summary of results

1 The course was well organized.

此學科的組織完善。

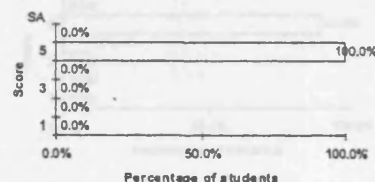
Mean = 5.11 Valid N =
Standard Deviation = 0.31 Median = 5.00



2 The workload was reasonable.

此學科的工作量合宜。

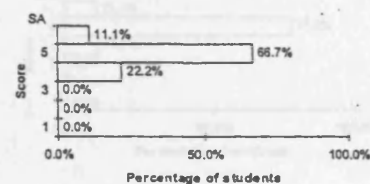
Mean = 5.00 Valid N =
Standard Deviation = 0.00 Median = 5.00



3 The course was useful.

此學科有用。

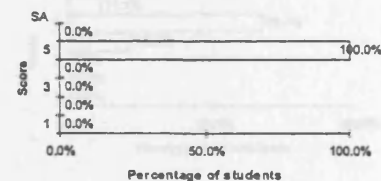
Mean = 4.89 Valid N =
Standard Deviation = 0.57 Median = 5.00



4 The various course components (e.g. lectures, tutorials, seminars, projects, etc.) were well integrated.

此學科的各個部份(如講課、導修課、研討課、研究計劃等)互相配合適宜。

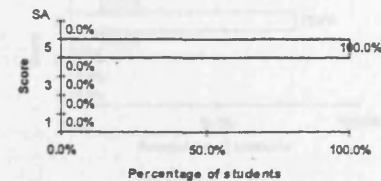
Mean = 5.00 Valid N =
Standard Deviation = 0.00 Median = 5.00



5 The relative weightings of course requirements (e.g. assignments, projects, tests, exams, etc.) were appropriate.

此學科的要求比重(如功課、研究計劃、測驗、考試等)皆恰當。

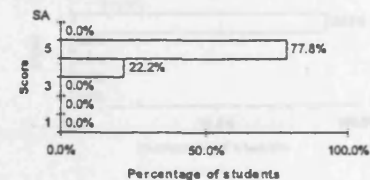
Mean = 5.00 Valid N =
Standard Deviation = 0.00 Median = 5.00



6 Assignments, exams and tests for this course were clearly explained.

此學科就功課、考試及測驗的要求均講解清楚。

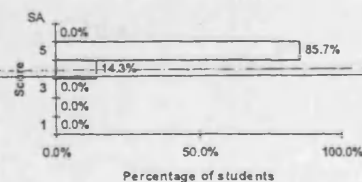
Mean = 4.78 Valid N =
Standard Deviation = 0.42 Median = 5.00



7 The assignments/tests were graded fairly.

功課/測驗的評分合理。

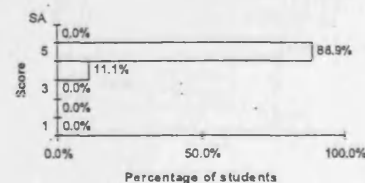
Mean = 4.86 Valid N =
Standard Deviation = 0.35 Median = 5.00



8 The feedback on student presentations/projects/assignments/papers, etc. was useful.

對學生的課堂簡報/研究計劃/功課/文章等的意見有用。

Mean = 4.89 Valid N =
Standard Deviation = 0.31 Median = 5.00

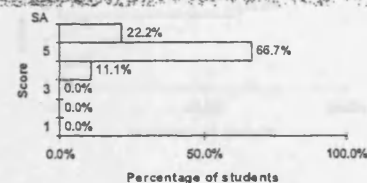


Part 1: The teacher seemed knowledgeable in her/his field.

1 The teacher seemed knowledgeable in her/his field.

老師的學科知識豐富。

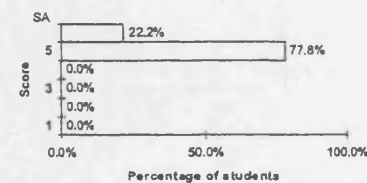
Mean = 5.11 Valid N =
Standard Deviation = 0.57 Median = 5.00



2 The teacher was enthusiastic.

老師有教學熱誠。

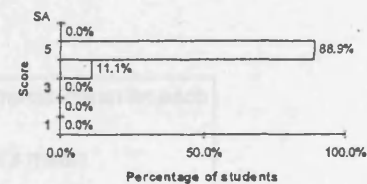
Mean = 5.22 Valid N =
Standard Deviation = 0.42 Median = 5.00



3 The teacher made the subject matter interesting.

老師能使課題變得具趣味性。

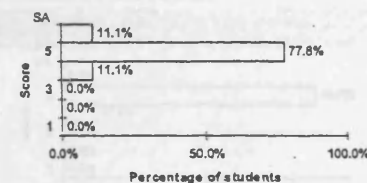
Mean = 4.89 Valid N =
Standard Deviation = 0.31 Median = 5.00



4 The teacher encouraged students to think critically.

老師鼓勵同學作批判性的思考。

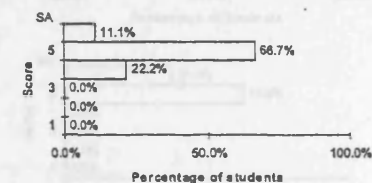
Mean = 5.00 Valid N =
Standard Deviation = 0.47 Median = 5.00



5 The teacher encouraged students to participate in discussions.

老師鼓勵同學參與討論。

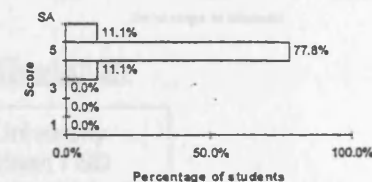
Mean = 4.89 Valid N =
Standard Deviation = 0.57 Median = 5.00



6 The teacher was responsive to students' views and feedback.

老師樂於回應同學的觀點及意見。

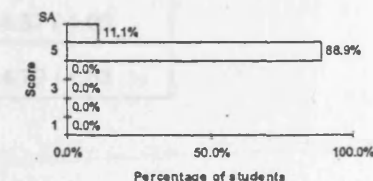
Mean = 5.00 Valid N =
Standard Deviation = 0.47 Median = 5.00



7 The teacher explained concepts clearly.

老師對概念解說清楚。

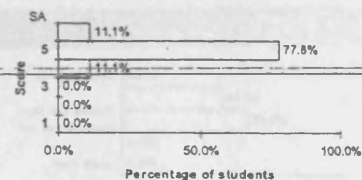
Mean = 5.11 Valid N =
Standard Deviation = 0.31 Median = 5.00



8 The teacher structured the presentation well.

老師授課時顯得有組織、有條理。

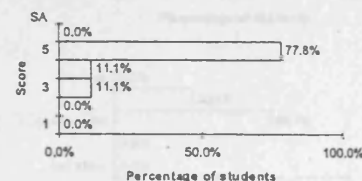
Mean = 5.00 Valid N =
Standard Deviation = 0.47 Median = 5.00



9 The teacher gave clear instructions for student tasks/presentations.

老師對同學的作業、課堂簡報，能提供清晰的指引。

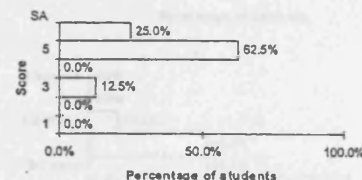
Mean = 4.67 Valid N =
Standard Deviation = 0.67 Median = 5.00



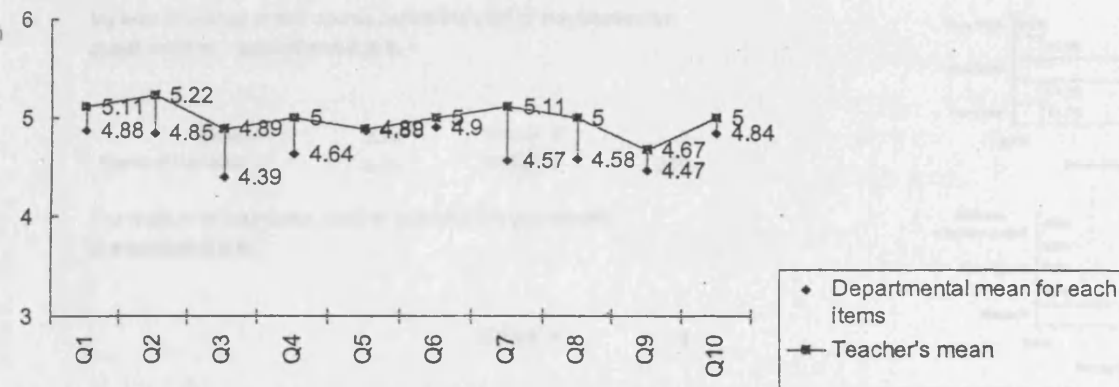
10 The teacher was helpful outside of class.

老師樂意在課堂以外幫助學生。

Mean = 5.00 Valid N =
Standard Deviation = 0.87 Median = 5.00



Teaching Profile (Combined Q1 to Q10)

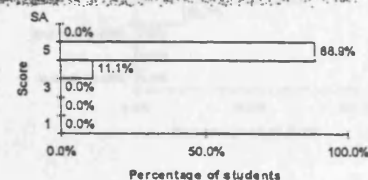


Part I 第一部份: 整體課程評語 (Overall Comments)

1 Overall, I have learned a lot from the course.

總體而言，我從此學科學到了很多知識。

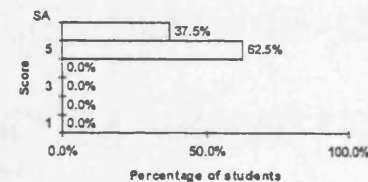
Mean = 4.89 Valid N = 9
Standard Deviation = 0.31 Median = 5.00



2 Overall, I am satisfied with the teacher's performance.

總體而言，我滿意這老師的表現。

Mean = 5.38 Valid N = 8
Standard Deviation = 0.48 Median = 5.00



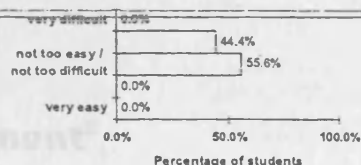
Comparison to the Departmental and University Means / Standard Deviation

Item	Mean / SD	Departmental Mean / SD	University Mean / SD
1. Overall Course Evaluation	4.89 / 0.31	4.46 / 1.04	4.57 / 1.00
2. Overall Teaching Evaluation	5.38 / 0.48	4.68 / 1.03	4.79 / 1.03

1 The course was:

此學科的難度是:

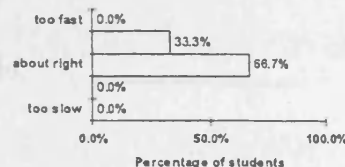
Mean = 3.44 Valid N = 9
Standard Deviation = 0.50 Median = 3.00



2 The course pace was:

此學科的進度是:

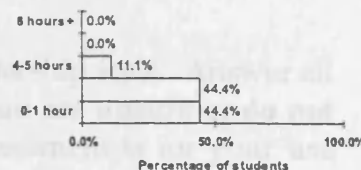
Mean = 3.33 Valid N = 9
Standard Deviation = 0.47 Median = 3.00



3 Average number of hours per week I spent on this course outside of class was:

在課堂以外，每星期我用於本學科的平均時間為:

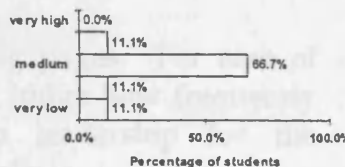
Mean = 1.67 Valid N = 9
Standard Deviation = 0.67 Median = 2.00



4 My level of interest in this course before the start of the course was:

在選修本科目前，我對此學科的興趣是:

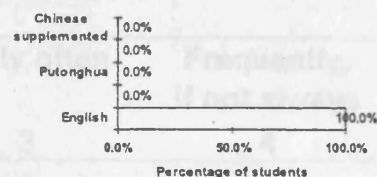
Mean = 2.78 Valid N = 9
Standard Deviation = 0.79 Median = 3.00



5 The medium of instruction used in teaching this course was:

此學科的教學語言是:

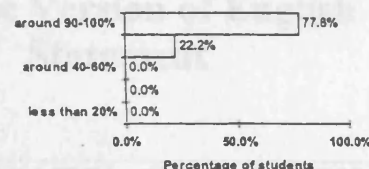
Valid N = 9



6 My class attendance in this course was:

我於此學科的上課出席率是:

Mean = 4.78 Valid N = 9
Standard Deviation = 0.42 Median = 5.00



*** End of Report ***

1	I usually think and compare on the fundamental assumptions of a school of thought or theory.	我通常會思考及比較某一學派或理論的基本假設。
2	I will offer help only when students have experienced difficulties in their studies.	我只有在學生學習上遇到困難時，才會提供幫助。
3	I am quick to point out where students' performance deviates from what is required by the course.	我能夠迅速指出學生表現與課程要求之間的差距。

APPENDIX D

Classroom Leadership Instrument² (Self Assessment Version)

Course(s) you are teaching:

Are You

Male or Female:

(Please specify)

This questionnaire is used to self assess your classroom leadership style. Answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.** This self assessment is for your use only, so please be honest with yourself.

Forty-five descriptive statements are listed on the following pages. For ease of understanding, the statements are in English and Chinese. Judge how frequently each statement fits your own approach to classroom leadership for the course/courses you are teaching. Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

RATING (Please circle the relevant number based on the above scale)	English Statement	Chinese Version of English Statement
0 1 2 3 4	1. If students study hard, I will offer help.	如果學生用功學習，我會給予他們幫助。
0 1 2 3 4	2. I critically think and comment on the fundamental assumptions of a school of thought or theory.	我批判地思考及評論學說或理論的基本假設。
0 1 2 3 4	3. I will offer help only when students have encountered difficulties in their studies.	我只會在學生學習上面臨困境時，方才施以援手。
0 1 2 3 4	4. I am quick to point out where students' performance deviates from what is required by the course.	我能迅速指出學生的表現未能符合課程要求之處。

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Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently, if not always 4
0 1 2 3 4	5. I do not want to get involved when important learning problems occur in this course.	當本課程出現重大學習問題時，我並不願意介入。		
0 1 2 3 4	6. I will talk about my personal beliefs and value systems while teaching.	上課時我有論述個人的信念及價值觀。		
0 1 2 3 4	7. I cannot be found whenever I am needed.	每當學生需要我時，他們卻找不到我。		
0 1 2 3 4	8. I listen to different opinions for solving problems arising from the course.	我聽取多方面的意見去解決課程上出現的問題。		
0 1 2 3 4	9. I talk optimistically about the future.	我樂觀地談及將來。		
0 1 2 3 4	10. I make students feel proud to be associated with me.	我能令學生與我交往時感到自豪。		
0 1 2 3 4	11. I specifically discuss the respective roles of the teacher and student in contributing to the success of teaching and learning in this course.	我具體地討論教師與學生各自要擔當的角色方可令到課程的授受成功。		
0 1 2 3 4	12. I will not take action until something has gone wrong.	我等到事情出錯，才採取行動。		
0 1 2 3 4	13. I enthusiastically talk about what to do to make the course a success.	我熱烈地講述要做些什麼才可令課程成功。		
0 1 2 3 4	14. I explain that a commitment to learning is important for a student to succeed in this course.	我解述了若一個學生要於本課程學習成功，對學習的投入是多麼重要。		
0 1 2 3 4	15. I am willing to provide help outside of class.	我願意在課餘時提供輔導。		
0 1 2 3 4	16. I make it clear at the outset how students with good learning performance will be rewarded.	我一早說明學習表現好的學生可得到甚麼回報。		
0 1 2 3 4	17. I insist that the teaching methodology for this course should be the same for every year, because there is no need to change something that seems to be working satisfactorily.	我堅信這課程的教學法應該年年相同；因為這教學法似乎已收到理想效果就無需更改。		

Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently, if not always 4
0 1 2 3 4	18. I am not only concerned about my own interests, but am genuinely concerned about the progress made by students.	我不是只顧及自己的利益，而確是關注學生的進步。		
0 1 2 3 4	19. I treat students as people i.e. as individual entities.	我把學生看作一群人，就是一個個獨立個體。		
0 1 2 3 4	20. I demonstrate a reluctance to take action to put things right unless there are constant problems with the course.	除非問題於這課程持續出現，否則我不願意採取行動，將錯誤糾正。		
0 1 2 3 4	21. My behaviour has earned my students' respect.	我的言行贏得學生的尊重。		
0 1 2 3 4	22. I am aware of any inadequacies in the course, and takes complaints seriously.	我很重視課程的不足之處，及認真接受投訴。		
0 1 2 3 4	23. I contemplate the moral consequences caused by decisions made about the course.	我考慮到課程的決策所帶來的道德上的影響。		
0 1 2 3 4	24. I try to be aware of any or all the inadequacies of the course.	我對本課程不足之處，似乎都能察覺得到。		
0 1 2 3 4	25. I have authority and confidence.	我充滿權威和信心。		
0 1 2 3 4	26. I make students look forward to the future after completing the course.	我使學生憧憬到完成這課程後的前途。		
0 1 2 3 4	27. I point it out to students when they have failed to meet the course objectives.	當學生未能達至課程目標時，我會向他們提出指正。		
0 1 2 3 4	28. I avoid playing an active part in making decisions about the course.	有關課程上的決定，我避免作主。		
0 1 2 3 4	29. I care about my students' personal needs, ability and aspirations in learning and I understand that individual students may have needs that are different from their classmates.	我顧及到學生在學習上有自己個人的需要、能力和志向，亦明白學生的需要或許與其他同學不同。		
0 1 2 3 4	30. I make students see a problem from different angles.	我使學生會從多個角度去看問題。		

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

0 1 2 3 4	31. I assist students in actualising their strengths.	我協助學生發揮他們的強項。
0 1 2 3 4	32. I suggest various approaches to successfully completing assignments.	我提出能成功完成習作的不同方法。
0 1 2 3 4	33. I am belated about answering pressing questions.	我遲遲答覆急切的問題。
0 1 2 3 4	34. I emphasise the importance for students to cultivate a sense of shared commitment to achieving success on this course.	我強調要成功學習這個課程，學生們需培養出共同承擔感的重要性。
0 1 2 3 4	35. I let students know that I am happy when they have met the course requirements.	當學生達到課程的要求時，我會讓他們知道我為此而感到欣慰。
0 1 2 3 4	36. I display confidence that course objectives can be accomplished.	對達到課程的目標，我顯露出信心。
0 1 2 3 4	37. I am very capable of meeting students' course needs.	我很有能力滿足學生在課程上的需要。
0 1 2 3 4	38. Students are satisfied with my leadership in the classroom.	學生對我在課室裏的領導感到滿意。
0 1 2 3 4	39. I motivate students to do more than what is required.	我善於誘導，令學生超額完成。
0 1 2 3 4	40. I am someone capable of conveying students' needs to the University.	我是一個有能力將學生的需要傳達至校方的人。
0 1 2 3 4	41. I cooperate well with students.	我與學生合作愉快。
0 1 2 3 4	42. I have strengthened students' commitment to success.	我增強了學生要爭取成功的意志。
0 1 2 3 4	43. I teach this course to the level required by the programme.	我的授課水平，能達至課程的整體要求。
0 1 2 3 4	44. I have strengthened students' determination to work harder.	我增強了學生倍加努力的鬥志。
0 1 2 3 4	45. I lead a successful class.	我帶領的班是成功的。