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their teaching performance

Ahmad R. Nasr
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**The Relationship Between Lecturers' Attitudes Toward Teaching,
their Teaching Qualifications and Student Perceptions of their
Teaching Performance**

A thesis submitted in fulfilment of the requirements for the award of the
degree of

Doctor of Philosophy

from

University of Wollongong

by

Ahmad R. Nasr, M.A. (Hons)

Graduate School of Education

1997

Certificate

I certify that to the best of my knowledge the substance of this thesis has not already been submitted for any degree and is not being currently submitted for any other degree.

I certify that help received in preparing this thesis, and all sources used, have been acknowledged.

Ahmad R. Nasr

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Publications

Several academic papers were derived from the present study and submitted for publication. Three were presented at international conferences and a fourth was resubmitted to an American journal '*Research in Higher Education*' after responding to the comments received from the two referees on the first and the second drafts.

- 1) Nasr, A. R., Gillett, M., Booth, E. (1996a). The relationship between university lecturers' qualifications in teaching and student ratings of their teaching performance. *International Consortium for Educational Development in Higher Education*. Finland: The University of Vasa.
- 2) Nasr, A. R. , Booth, E., Gillett, M. (1996b). Relationship between lecturers' attitude toward effective teaching and their teaching performance. *Australian Association for Research in Education*. Singapore Polytechnic.
- 3) Nasr, A. R., Booth, E., Gillett, M. (1996c). Relationship between lecturers' language background and their teaching performance. *Australian Association for Research in Education*. Singapore: Singapore Polytechnic.
- 4) Nasr, A. R., de Lacey, P., Booth, E., Gillett, M. (1997). The relationship between lecturers' attributes and their teaching performance. Manuscript was resubmitted to *Research in Higher Education*.

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LIST OF ABBREVIATIONS

The following abbreviations were used in this study. Some were determined by the researcher, others are of organisations or from the literature:

AARE	Australian Association for Research in Education
ADS	Academic-Development Services
CSD	Centre for Staff Development
ESB	English-Speaking Background
ET	Effective Teaching
ICED	International Consortium for Educational Development
ITT	Introduction to Tertiary Teaching
ITS	Information Technology Services
HERDSA	Higher Education Research and Development Society of Australasia
LDS	Learning-Development Service
NESB	Non-English-Speaking-Background
PLSD	Fisher's Protected Least Significant Difference
SEDA	Staff and Educational Development Association
TP	Teaching Performance
TQ	Teaching Qualifications

ABSTRACT

The present study, based on the Dunkin and Biddle (1974) and Biggs (1988; 1989) models of teaching, was designed to investigate the relationships between eight attributes of lecturers and the quality of lecturers' teaching performance, expressed as a function of student evaluations of teaching. The eight attributes were teaching qualifications, attitudes toward effective teaching, language background, gender, academic rank, level of academic degree, tertiary teaching experience and academic discipline. Among these, teaching qualifications and attitudes toward teaching were of principal interest.

The target group for the study comprised three fourths ($N = 294$) of the full-time academic staff of the University of Wollongong in 1994, of whom 176 (60%) participated in the first phase of the study. In this phase, two surveys completed by academic staff and extant data from more than 20,000 student ratings, covering 548 subjects, were used to examine the essential relationships. Subsequently, in the second phase of the study in early 1997, a semi-structured interview was undertaken with 25 lecturers who had participated in the first phase to provide more insights into the influence of the eight lecturers' attributes on teaching performance.

Analysis of Variance (ANOVA) was employed to determine whether the lecturers' teaching performance differed significantly on the eight attributes. Then Multiple Linear Regression Analysis was employed to examine the combined and separate effects of the lecturers' attributes on teaching performance.

The inferential analyses in the first phase of the study indicated a significant correlation between the eight attributes and lecturers' teaching performance, accounting for 34 per cent of the variance. Of the eight attributes, language background, attitudes toward teaching, being at the rank of associate professor and being a member of Faculties of Arts and Creative Arts were the significant predictors for lecturers' teaching performance. Teaching qualifications was just short of statistical significance, ($p < .06$).

In the second phase of the study the interviewees indicated that the following four attributes were the most influential on the teaching performance: having a positive attitude toward teaching, teaching experience, holding teaching qualifications and academic degree.

This study demonstrated a significant relationship between lecturers' attitudes toward effective teaching and their teaching performance. Lecturers who rated higher on the attitude scale, tended to rate highly on student ratings of their teaching. Having a positive attitude toward teaching was also nominated as the most influential attribute by academic staff. These findings suggest that, if lecturers' attitudes toward teaching are stimulated, there might be an enhancement of their teaching performance.

Another significant finding was that, where the first languages of the lecturers and students are different, lecturers may be able to enhance their teaching performance by improving their language and communication abilities. Universities may need to facilitate these developments through special pre-service and in-service interventions, and also perhaps a reconsideration of their staff selection criteria.

CHAPTER ONE: INTRODUCTION

1.1 Background

Teaching in higher education is a complex process which can be affected by many factors. These include teacher and student characteristics, institutional culture and approaches to teaching and learning demonstrated by teachers and students (Dunkin & Biddle, 1974; Biggs, 1988, 1989; Smith & Cranton, 1992). Caillods (1989) is just one among many who have shown that the teacher is a most important factor in teaching and learning processes, and Sergiovanni and Starratt (1993) describe the teacher as the key factor in the process of teaching. Therefore, if the teacher's methods are not effective, the impact of the other educational resources might be diminished.

One of the significant models for investigating teaching was developed by Dunkin and Biddle (1974). The model included four classes of variables: presage, context, process and product, of which the presage variables are the primary focus in this study. Presage variables "concern the characteristics of teachers that may be examined for their effects on the teaching process" (Dunkin & Biddle, 1974, p. 39). Biggs (1989) presented a similar model of teaching, which in his analysis included three classes of variables: presage, process and product. These two models of teaching are considered to provide a suitable conceptual framework for the present study in a tertiary context where attention is centred upon presage variables, especially lecturer characteristics. Among these, lecturers' conceptions of effective teaching and their acquired teaching skills are central to this study.

Orientation toward teaching is the "patterns of ideas and feelings possessed by individuals concerning teaching ... [which] provide the framework of cognitive and affective attributes that presumably underlie an individual's planning, decision making and implementation in relation to teaching" (Dunkin, 1990a, p. 280). As Ramsden (1992) states "changing lecturers' understanding of teaching is a necessary condition for improving teaching in higher education" (p. 117).

Many writers argue that the acquisition of teaching qualifications by tertiary teachers will improve both teaching effectiveness and student learning (Biggs, 1988, 1989; Weimer, 1990; Elton & Partington, 1991; Elton 1993; Dallat & Rae, 1993; Sparks & Bradley, 1991; Griffiths, 1993). While some lecturers can become competent through experience, and others may have personalities compatible with teaching, it is argued that good teachers are not always born with that natural capacity. On the contrary, as teaching may be conceptualised as both an art and a science, it is considered 'learnable' and the learned capabilities affect the teaching process (McKeachie, 1986; Centra, 1993; Gow, 1992). Elton and Partington (1991) suggest that for teaching excellence all academic staff "should receive some pedagogic training, ... development in teaching and assessment methods, course design and related areas [and that] without such training there can be no real improvement in teaching" (p. 12). This emphasis on the need for academics to acquire teaching qualifications does not imply a devaluation of the importance of other capabilities. In fact, Brown and Atkins (1988) argue that, to teach effectively, academic staff have to know their subject, know how students learn and know how to teach.

Most tertiary teachers in Australia and other parts of the world are employed without the requirement that they have acquired formal or informal teaching qualifications (Matheson, 1981; Weimer, 1990; Dallat, 1993; Griffiths, 1993; Moses, 1993). The literature reports that some academics do not believe in taking steps to acquire new or improved teaching qualifications, even in a climate where such actions are valued. Whereas some argue that they can find appropriate methods of teaching through models encountered in their previous experience, others teach according to the methods of their own teachers (Biggs, 1989; Dallat & Rae, 1993; Moses, 1993).

Teaching performance can be assessed through several methods including peer evaluation, supervisor evaluation, student evaluation, classroom observation, review of course planning documents and self evaluation. Among these measures, research findings suggest that student ratings represent a valid, reliable, simple and suitable method of assessing some components of teaching effectiveness (Howard & Conway 1985; McKeachie, 1986; Marsh, 1987, 1992; Feldman, 1989a; Ramsden, 1992; Stringer & Finlay, 1993; Cashin, 1995). Marsh (1987) for example, pointed out that "there is good evidence to support the use of students' evaluations as one indicator of effective teaching" (p. 369). In comparison with the other methods of evaluating teaching "the general consensus is that there is no other single measure of teaching performance which is as potentially valid" (Ramsden, 1992, p. 132). However, it should be acknowledged that student evaluation is only one indicator of teaching performance.

1.2 Purpose of the Study

In the light of the models of teaching presented by Dunkin and Biddle, Biggs and the related literature, the present study is designed within a university setting to investigate the relationships between the lecturers' teaching performance (TP) expressed as a function of student evaluations of teaching and two important previously mentioned variables: lecturers' teaching qualifications (TQ) and their attitudes toward teaching. Along with these two important variables, the effects of six other demographic, educational and professional-background variables are examined. These are lecturers' gender, language background, academic rank, level of academic degree, academic discipline and teaching experience. These eight attributes are also evaluated for their ability to predict the quality of lecturers' teaching performance. It is acknowledged that there are some other attributes of lecturers which could be considered in future research.

These eight variables were selected because they are of interest in professional-development policies at the university level of teaching. There are also theoretical reasons for selecting them. For example, teacher characteristics were cited as important variables in the teaching process described in Biggs' (1988; 1989) model of teaching. Among their characteristics, teachers' conceptions of teaching and their acquired teaching skills, were particularly emphasised in this model. Except for language background and academic discipline, all the variables were included in Dunkin and Biddle's (1974) model of teaching. An examination of the roles of other variables such as institutional context and student characteristics is beyond the scope of this study.

Generally, this study is designed to explore which lecturer attributes have a significant relationships to the quality of teaching performance and some of the reasons for the identified relationships. The term 'lecturer' is used throughout this research to represent all academic staff of the university, regardless of their academic rank or level of appointment (except in some Tables which deal with academic rank). Teaching performance is examined by student ratings and through interviews with 25 lecturers. Specifically, the present study investigates whether lecturers with higher (positive) attitude scores toward teaching have a higher TP rating than those with lower attitude scores. The study also aims to reveal whether there is a difference between the teaching performance of those who have acquired teaching qualifications and those who have not.

1.3 Rationale and Significance of the Study

Knowing which lecturer attributes are most closely associated with the quality of lecturers' teaching performance is valuable for the university community in making decisions about investment in faculty development. Dunkin and Barnes (1986), in their review of teaching in higher education, suggested that there had been a neglect of research into the relationship between lecturer characteristics and teacher attitudes reflected in classroom behaviour. This lack of research has been emphasised recently by several researchers (Martin & Ramsden 1994; Prosser & Trigwell 1994; Trigwell & Prosser 1994a; Dunkin, 1995), who are interested in particular lecturer characteristics, including their attitudes towards effective teaching and their teaching qualifications, matters which are of interest in the present study. More recently Lewis (1996) suggested that staff-development programs are

"a growing, developing and exciting area with much potential to transform teaching and learning in higher education, ... though much research still needs to be done in this field" (p. 13). Similarly, Gibbs (1996) pointed out that "the preparation of university teachers is currently a lively and rapidly expanding and developing field of work" (p. 8).

After the second world war, some countries such as the United States of America, the United Kingdom, Australia and New Zealand set up commissions of prominent people to report what universities should be doing in the changing world. All of them argued that the most important roles of universities are research and teaching, and the maintenance of academic standards (Harvard Report, U.S., 1946; Robbins report, U. K., 1963; Murray Report, Australia, 1957; Parry Report, New Zealand, 1959). It was also mentioned by Centra (1993) that the performance of academic staff falls into three primary areas: teaching, research and administration and that "the relative importance of each varies greatly from institution to institution" (p. 1). The emphasis in universities in the past was on scholarship. People were appointed to the university because they were scholars, and not so much because they were effective lecturers. Nowadays a parallel emphasis is increasingly on improving teaching, which on the whole is a recent phenomenon. The rationale of this study is to respond to this recent emphasis on teaching in universities by examining the lecturer attributes that seem to enhance the quality of teaching.

Pedagogy has been formally taught to students preparing to be primary teachers for over a hundred years, since the first teachers' training colleges were opened. While more recently secondary-school teachers have been expected to learn pedagogy in their professional preparation, the

requirement for pedagogical training among university lecturers is still not universal. In the past, this training has not been widely considered because only the most able students were able to enrol in universities, and they were expected to be largely independent learners. Initially, even high schools were designed for a select group - people who intended to proceed to university. In addition, there is an argument that, as students progress through the university, they should increasingly be more able to learn independently and teach themselves. However, there are now more students in university, reflecting a much wider range of academic and personal life experiences so that learning problems are more common (Meyer, 1993). Professor David Meyer, convenor of the meeting of Deans of Faculties of Arts in Australia in 1993, reported that students who are now getting access to universities, would have never gained entry 10 years earlier. This is a persuasive basis for arguing that lecturers should be acquainted with the principles of teaching and learning more than they have been in the past. In addition, as a result of more recent policies which require more formal training for many professions - a relatively new phenomenon - academic staff are encouraged to learn more pedagogical principles.

Furthermore, the emphasis on teaching is often related nowadays more to economic implications than to scholarship, a tendency supported by many university administrations in a climate of economic rationalism. Nevertheless, because of the increasing emphasis on teaching, and because teaching as well as research has always been a responsibility of universities, it is all the more important to examine the nature of university teaching, and whether the teaching can be improved. This is especially relevant in

light of the situation that some students of lower literacy and academic levels are now being admitted to university.

When Feldman (1983) reviewed the research inquiring into academic rank, teaching experience and student ratings, he recommended more in-depth research. He suggested that the focus should not just be restricted to these variables. Other considerations, such as lecturers' thoughts and feelings about teaching, their personal characteristics, their instructional policy and their observable behaviour in the classroom, have also to come into play.

According to Barnes and Ellner (1983), one of the problems which persists in the research on college teaching is that studies that have emphasised effective teacher characteristics have resulted more in assemblages of virtues rather than in descriptive data on what teachers actually do. Considering such previous research weaknesses, the present study attempts, through the examination of lecturers' performance in classes as reported by students, to explore some of the important factors which significantly affect lecturers' teaching. More recently, the necessity for this kind of research was also identified by Barry and King (1995) who stated that "for decades now, educators and researchers have been working to identify what constitutes good teaching and to describe a good teacher. . . . However, even in the 1990s, the study of teaching is still in a state of evolution" (p. 600).

Considering the recent literature, the present study also hypothesises that the extent of lecturers' teaching qualifications will be positively correlated with the quality of their teaching. If this association can be established, it is argued that university communities might pay more attention to the development of the teaching qualifications of their staff than has

traditionally been the case. Policy implications could include a more stringent requirement for appropriate teaching qualifications at or soon after appointment, and a greater encouragement of existing academic staff to attend training programs as a requirement for tenure or promotion. If the quality of the teaching performance of academic staff with teaching qualifications is shown to be superior, even though such a finding would be correlational, these results can be used as an indicator of the usefulness of acquiring teaching qualifications.

Like the University of Wollongong, many other institutions in Australia "have established programs to assist staff, but so far, there are fewer published research studies discussing and evaluating them" (Martin & Ramsden, 1994, p. 5). Dunkin and Barnes (1986) indicated this need when they pointed out that "there has been little research on teaching skills in higher education, and so the efforts of faculty-development agents are much in need of support from that quarter" (p. 774). The relationship between teaching qualifications and teaching performance is still a matter for considerable concern in higher education. As an example, Ramsden et al. (1995), after reviewing recent research, concluded that the lack of teaching improvement among academic staff has not yet been seriously addressed by many universities in Australia.

In relation to the necessity of researching tertiary teachers' attitudes toward teaching, Dunkin (1995, p. 24) reports that "there seems little or no need to argue that the study of teachers' cognition regarding teaching effectiveness is an important thing to be doing". Furthermore, Conners, et al. (1990) and Wyatt and Pickle (1993) argue that having a positive attitude toward the various components of effective teaching can affect a lecturer's teaching

performance. This relationship was previously suggested by Dunkin and Barnes (1986) who pointed out that "the roles played by teachers' beliefs, values and attitudes toward teaching and learning need to be explored in the context of teaching improvement efforts" (p. 774). If a relationship between attitudes and quality of teaching can be demonstrated in the present study, the tertiary communities should try to improve lecturers' attitudes towards teaching in order to improve the quality of teaching in universities.

Considering the recommendations identified in previous research, the present study was designed to examine the association between lecturers' teaching qualifications, their attitudes toward teaching and six other attributes, on one hand; and student ratings of the teaching performance, on the other. First, each of the components of the lecturers' attributes is examined separately in relation to students' ratings. Next, each of these associations is examined again with the other ones controlled.

The examination of the role of lecturers' attributes on the quality of their teaching performance has been the subject of many studies over a long period of time. The reason is that the development of this topic is important for improving the quality of teaching at tertiary level, for providing clarification for university policy makers and for academic staff themselves. Although improving teaching quality is dependent on many variables, lecturers' attributes are some of the important ones. In spite of the world-wide attention on lecturers' attributes, the following points are raised regarding the necessity of conducting the present study. The study might therefore claim to be somewhat unusual with regard to the following four characteristics:

- 1) Most of the previous studies have concentrated on examining the role of variables such as academic rank, gender and the extent of teaching experience on the lecturers' teaching performance. However, studying the effects of other attributes such as language background, attitude toward teaching, holding a teaching qualification and the academic disciplines of lecturers has received little or no attention from previous researcher.
- 2) In previous studies one or two attributes have been studied. However, in the present study, eight attributes are examined.
- 3) Previous research mostly sought to determine separately the relationship between lecturers' attributes and their teaching performance. The nature of most previous studies was correlational and little attention was paid to the exact mechanisms that might mediate such relationships. The criticism might be offered that the previous research did not control for the influence of other perceived lecturers' attributes. To avoid this criticism, in addition to employing correlation and ANOVA in the statistical analysis, the present study by employing regression analysis tries to determine the contribution of each of the attributes in predicting lecturers' teaching performance, as perceived by students. While the relationship of the lecturers' attributes is examined separately with TP, as in the reported research, here the combined effects of all independent variables (lecturers' attributes) and the separate effects of them are examined while controlling for the effects of other independent variables.
- 4) In spite of the existence of substantial research related to some lecturer attributes, the previous research did not examine the causes of the existence or lack of influence of specific attributes on the lecturers' teaching performance. Braxton and Hargens (1996) who, for example, made an

extensive review of variation between disciplines, acknowledged that “researchers have only recently begun to examine questions related to the causes of fields’ [disciplines] positions on these dimensions [research, teaching...]” (p. 38). The previous studies focused on the descriptive method by analysing the student ratings of lecturers’ TP. In addition to this method, in which more than 20,000 students’ responses are examined, the perceptions of 25 lecturers are provided through a semi-structured interview, to reveal more information and discuss the influence of lecturers’ attributes on their teaching performance. This was done on the assumption that such responses would provide additional insights into the present research.

1.4 Context of the Study

The University of Wollongong, is located in Wollongong, a city of 350,000 population on the south coast of New South Wales, Australia. In 1994 it had 513 tenured or contracted academic staff. It described itself as “moderate in size, new and maturing, having a good reputation, innovative, cooperative, ambitious and of above average quality” (University of Wollongong, 1994a, p. 22). It has been ranked by the Federal Government as the only regional university among the top nine universities in Australia. This evaluation was completed by the Committee for Quality Assurance using institutional outcomes in research, teaching and learning, and community service as criteria (University of Wollongong, 1994c). According to the responses to the annual survey of Graduate Careers Council of Australia, (GCCA) the immediate graduate employment rate of the University in 1994 including employment and study was 68.8 per cent

(University of Wollongong, 1994b). There is a basis for some concern, however, in that 31.4% do not get jobs immediately.

The University has 31 academic departments which are combined into nine faculties: Arts, Commerce, Creative Arts, Education, Engineering, Health and Behavioural Sciences, Informatics, Law and Science. Other academic units and research centres which support academic staff and students include Information Technology Services (ITS), the Centre for Staff Development (CSD) and the Learning Development Service (LDS).

Of the 11,056 students studying at the University in 1994, 8,654 (78%) were enrolled in undergraduate studies and 2,405 (22%) in postgraduate work. Overseas students numbered 1,113 (11% of the population), of whom 678 (61%) were undergraduates and 435 (39%) postgraduates (University of Wollongong, 1994a).

To provide more relevant information about the context of this study, the following three policy areas of the university are discussed: tertiary teaching, teaching evaluation and staff-development policy.

1.4.1 Tertiary Teaching Policy:

The University of Wollongong places considerable importance on teaching and seeks to improve the teaching capabilities of its academic staff (University of Wollongong, 1992). The mission of the university indicates a determination to:

be established in the top ten Australian Universities, known for the excellence of its teaching, research and international programs by the year 2000;

invest in new technologies, ideas and methods of teaching and research so as to remain at the forefront of developments in university education; and

implement a career development program which will attract and retain staff of the highest calibre (p. 2).

Strong evidence to support this commitment to teaching in the University includes (a) the expectation that all new staff, who do not hold a teaching qualification, will undertake the Introduction to Tertiary Teaching (ITT) course, (b) the establishment of annual cash awards for excellence in teaching, (c) the inclusion of teaching as one of the four promotion criteria, (d) the administration of compulsory student evaluation of teaching, and (e) the support of voluntary videotaping of classes by CSD (University of Wollongong, 1993a).

At the end of 1993, ITT was recognised by the University Council as a compulsory subject "for all newly appointed members of academic staff who do not already possess qualifications in tertiary or adult education" (University of Wollongong, 1993b, p. 50). Academics joining the university before 1994, especially those without TQ, are also encouraged to participate in this course. ITT is a one-session subject which is offered by the Faculty of Education in conjunction with CSD. The subject has a strong practical component and aims to improve the teaching capabilities of academic staff. It introduces staff to a range of basic skills including lecturing, small-group teaching, subject design and student assessment. According to Gillett (1995) these topics "were underpinned by a number of themes considered relevant to the Australian context: equity, adult learning principles, multicultural issues, social issues, reflective practice and maximising student learning (p. 506).

This subject was articulated into a set of courses in adult education offered by the Graduate School of Education. Although other Australian universities offer similar courses for teaching improvement, the University of Wollongong was the first in Australia to make this a requirement (Gillett, 1995). According to the latest report, 102 staff had completed the subject by the end of 1995 (University of Wollongong, 1996).

The awarding of up to four (\$2,000) Vice-Chancellor's awards for excellence in teaching each year is another tradition which has encouraged and rewarded high-quality performance in teaching. In this program, interest and enthusiasm in teaching, the ability to organise subject matter, the provision of constructive feedback for students and the ability to stimulate curiosity and independent learning in all students, are some of the criteria which are considered as a guide to judge excellence in teaching (University of Wollongong, 1994d).

1.4.2 Teaching Evaluation Policy

In 1981 the University established a voluntary diagnostic evaluation system. The specific objectives of each diagnostic evaluation are identified by the staff members, and appropriate questions are selected from a bank of questions, or specifically designed on a five-point Likert scale. Open-ended-format questions can also be used in the evaluation. Results are confidential and delivered only to the requesting lecturers. They are not used for decision making in the existing promotion or tenure appraisal processes. Academic staff are encouraged to consult the survey results with CSD advisers or in their annual reviews (Huntley-Moore & Panter, 1993).

A compulsory evaluation program was designed in 1988 and based on the diagnostic system. Since that time, "all candidates for tenure or promotion have been required to submit teaching surveys for three of the four sessions prior to their application" (University of Wollongong, 1994b, p. 9). Wollongong was the first university in Australia to require such compulsory surveys and claims to have "the most systematic and comprehensive program of teaching evaluation in Australia" (Huntley-Moore & Panter, 1993, p. 19). As a result, some Australian and overseas tertiary institutions have sought assistance from the university in developing their own systems (University of Wollongong, 1993a).

Although this compulsory evaluation "continues to be a cornerstone of the University's quality monitoring and improvement programs" (University of Wollongong, 1993b, p. 50), teaching is also evaluated by other agencies including Heads of Departments, Promotions Committees, and Departmental Review Panels. Survey results along with other sources of evidence are used as the basis for informed judgments and "the process as a whole should cover the dimensions of good teaching. Each element in the process cannot be isolated from the others" (Panter, 1994a, p. 1). While the results of student evaluations are key data in promotion decisions, they and the diagnostic results are also used as an important component of the staff-development program to assist staff to improve teaching (Huntley-Moore & Panter, 1993; University of Wollongong, 1994a).

1.4.3 Staff-Development Policy

The CSD has a central responsibility for improving teaching and staff development within the University. The Centre provides "opportunities

for all members of the academic staff to reach their full potential as teachers and researchers and for all supervisors and managers to be both efficient and effective" (University of Wollongong, 1992, p. 51). To fulfil these objectives, the following have been carried out by the Centre:

- development and implementation of formative evaluation, and the first compulsory teaching evaluation program in Australia,

- development of detailed plans for upgrading educational technology facilities,

- publication of an academic-development journal and career development bulletin on a regular basis,

- development and conduct of necessary courses such as ITT for inexperienced teachers,

- running campus-wide workshops in teaching, research, administration and career development (Panter, 1996).

1.5 Design of the Study

An integrated methodology in two phases including an ex-post-facto design, and semi-structured interviews was used in the study. In phase one three survey instruments were used to collect data. Teaching-performance data were derived from a 23 Likert-item student evaluation questionnaire, responded to by more than 20,000 respondents covering 548 subjects. Lecturers' attitudes were surveyed through a purposefully designed questionnaire. Biographical and professional attributes of participants were collected simultaneously. In the target group of 294 academics, 176 (60%) participated.

In the first phase descriptive statistics and inferential techniques were applied to analyse the data. Analysis of Variance (ANOVA) was used to

determine whether the lecturers differed significantly in their teaching performance with regard to the eight characteristics. Then Multiple Linear-Regression Analysis was employed to examine the combined effects of the eight lecturer attributes, and the separate effects of each when the other independent variables were controlled.

In phase two which was completed in early 1997, lecturers' views about the influence of the eight attributes on the teaching performance were investigated. The frequencies of comment about the importance of various attributes were ranked and the comments of interviewees about the quality of the effects of these eight attributes on teaching performance were categorised and analysed using 'grounded' theory (see data analysis, 4c.5).

1.6 Outline of the Chapters

This chapter has provided an introduction to the study by examining the background issues, the purpose of the study, the significance and rationale, the context and methods of the study.

Chapter Two presents the theoretical background to the study. Relevant literature and previous research are discussed in Chapter Three. Chapter Four describes the research procedures and methodology of the study, while Chapter Five focuses on the results and analyses of the data. Finally, Chapter Six offers a discussion of the results and the drawing of conclusions, implications of the findings and recommendations for future studies.

CHAPTER TWO: THEORETICAL BACKGROUND

The theoretical background of the study is discussed in this chapter in order to provide a basis for considering teaching models and the research questions. This chapter examines the role of teaching models in the research literature on teaching, with particular reference to the Dunkin and Biddle (1974) and Biggs (1988; 1989) models of teaching, upon which this study is based. It also discusses the theoretical and practical link between teaching and learning. Subsequently, the role of some variables likely to be associated, especially lecturers' characteristics, in the process of teaching and learning, is discussed. Finally, some methods of evaluation of teaching are examined.

2.1 Theories and Models of Teaching

Within the higher-education sector (which includes universities and various post-secondary colleges), teaching has been defined as providing opportunity for students to learn (Brown, 1993). It was also defined by Ramsden and Dodds (1989) as "several processes through which the curriculum is transmitted to students; more generally, any intervention intended to help students to develop their understanding of subject matter" (p. 59). Teaching is a complex process which can be affected by many factors. These include teacher and student characteristics, the process of learning, institutional culture, discipline, instructional settings and approaches to teaching and learning demonstrated by teachers and students (Dunkin & Biddle, 1974; Biggs, 1988, 1989; Smith & Cranton 1992).

Dunkin and Biddle suggested in 1974 that the greatest problem facing the field of teaching is the lack of adequate theories of teaching to guide

research and integrate research outcomes. They recommended that any new theoretical development should take into account ideas and concepts already tested as effective in describing and analysing classroom events. The lack of appropriate theoretical underpinning for teaching was also pointed out by Armento (1986), who stated that "there is a noticeable absence of any well articulated theoretical framework for studying teaching and learning" (p. 945). Fuhrmann and Grasha (1983) had even argued that the validity of an educational practice does not solely depend on its having a theoretical basis. In explanation of this point, they added that "certain practices seem to work without theory to support them" (p. 43) and that a particular learning theory does not, and cannot, specify all aspects of the practice of teaching. They also pointed out that as "there is no single theory of learning that will account for the complexity of the classroom learning environment, an eclectic approach is desirable to work through the complexity of human learning" (p. 64).

The lack of consensus in the field of teaching is not due to lack of concern about this field. Rather, according to McKeachie and Kulik (1975) "progress has been slow not just because of our lack as theorists and researchers, but because education really is complicated" (p. 199). Obviously, in the last and recent decades, more research has been conducted into teaching and related concepts such as motivation and personality, which can be used in the fields of teaching and learning.

Notwithstanding these difficulties, conceptions of teaching were divided by Biggs (1989) into three hierarchical categories as follows in Figure 2.1.

Teaching as the transmission of knowledge: Many teachers, especially beginning teachers, see their task as one of transmitting knowledge... A good teacher here needs only to know his or her subject, and to communicate that knowledge fluently.

Teaching as the efficient orchestration of teaching skills: Here teachers are prepared to adapt their techniques to different students, and are sensitive to different needs. They see good teaching as effective management, both of teaching resources and of the students themselves.

Teaching as the facilitation of learning: Here the teacher interacts with the learner in line with the qualitative conception that learning involves the active construction of meaning by the student, and is not something that is imparted by the teacher.

Figure 2.1: Conceptions of teaching (Biggs, 1989, p. 9)

Similarly in another study, carried out by Fox (1983) to explore the process of teaching through the responses of polytechnic teachers, teaching was subsumed under the following four theories:

- 1) A transfer theory which treats knowledge as a commodity to be transferred from one vessel to another.
- 2) A shaping theory which treats teaching as a process of shaping or moulding [formatting] students to a predetermined pattern.
- 3) The travelling theory which treats a subject as a terrain to be explored with hills to be climbed for better viewpoints with the teacher as the travelling companion or expert guide.
- 4) The growing theory which focuses more attention on the intellectual and emotional development of the learner (p. 151).

Fox pointed out that in the theories of teaching he had developed, students have a very significant part to play in their own learning, and the teacher is assumed to have a less directive role in the process of teaching and learning. He further explained that

it is not suggested that developed theories of teaching are always better than simple theories. There are many contexts where it is appropriate to prescribe clear-cut objectives and where there are straightforward, generally applicable techniques for achieving them. It is suggested, however, that a person who has reflected deeply on the teaching-learning process and whose thinking has advanced from the constraints of simple theories to the broader perspective of the developed theories will be in a better position to choose the most appropriate approaches. (p. 162).

Dall'Alba (1991) in his study, based on interviews with academic staff, examined and classified several conceptions of teaching in higher education. He pointed out that the categories "are ordered from less to more complete understanding[s] of teaching. At the lowest level, teaching is seen in terms of what the teacher does. From there, the focus shifts to incorporate the content and, at higher levels, students' understanding of the content becomes prominent" (p. 296). Dall'Alba's conceptions were:

- A. Teaching as presenting information,
- B. Teaching as transmitting information (from teacher to student),
- C. Teaching as illustrating the application of theory to practice,
- D. Teaching as developing concepts/principles and their interrelations,
- E. Teaching as developing the capacity to be expert,
- F. Teaching as exploring ways of understanding from particular perspective,
- G. Teaching as bringing about conceptual change.

At the university level, it would be necessary to add: teaching to develop critical analyses.

As an outcome of their research into conceptions of teaching held by academic staff, Samuelowicz and Bain (1992) are "in broad agreement in that these conceptions can be arranged on a continuum from information

presentation to facilitation of student learning; [however] the intermediate conceptions are in some dispute" (p. 93). This study was carried out based on semi-structured interviews with academic staff in Queensland and the Open University (UK), and the five following conceptions of teaching were identified:

1. Teaching as supporting student learning. This was only expressed in the context of postgraduate teaching.
2. Teaching as an activity aimed at changing students' conceptions or understanding of the world.
3. Teaching as facilitating understanding. The emphasis is on getting students to understand the subject matter.
4. Teaching as transmission of knowledge, and attitudes to knowledge, within the framework of an academic discipline.
5. Teaching as imparting information (p. 98).

By bringing together the research which asked the lecturers to describe teaching and learning in their disciplines and also other research in the area of students' approaches to learning, Ramsden (1992) described the three following general ways of understanding the role of lecturers in tertiary settings which he describes as theories:

- Theory 1: Teaching as telling or transmission,
- Theory 2: Teaching as organising student activity,
- Theory 3: Teaching as making learning possible.

While Theory 1 is based on the teacher, Theory 2 moves toward the student. In Theory 2, instead of delivery of content, lecturers are supervisors in the process of teaching. In Theory 3, teaching is "comprehended as a process of working co-operatively with learners to help them change their understanding. It is making student learning possible" (Ramsden, 1992, p.

114). He further explained that these three theories of teaching have a progressive structure. That is

Theory One assumes that content knowledge and fluent presentation are enough for good teaching. Theory Two complements this picture with additional skills focused principally on student activity and the acquisition of extra teaching techniques. Theory Three presupposes all these abilities and extends the understanding of teaching so that it becomes embedded in the nature of subject knowledge and the nature of how it is learned" (p. 116).

We now refer to models of teaching, which are derived from theories. Cole and Chan (1994), in their review of models of teaching, introduced the following seven models that have had a substantial effect on teaching practice. They pointed out that each of these models, developed in the past by various researchers, presents a different perspective on teaching and has had a substantial effect on teaching practice. These models were:

- 1) Personality-characteristics model
- 2) Behavioural model
- 3) Subject method model
- 4) Teaching skills model
- 5) Process-product model
- 6) Reflective teacher model
- 7) Teaching-principles model

While Cole and Chan (1994) discussed the weaknesses and strengths of the seven models, they preferred the teaching-principles model. They stated that this model "is the most flexible and effective of all the approaches that can be applied in the classroom context [and] . . . has great validity for professional teacher development" (p. 13 and 11).

According to Cole and Chan (1994) some of the advantages of this model are that it is based on research evidence and practical experience, and is comprehensive and flexible. Since in the present study, most lecturers have extensive experience both as students and teachers, it seems this model can usually guide university teachers to select the appropriate principles to teach in different disciplines with different atmospheres and demands. Of course after acquiring a deep understanding of the principles and their utility, academic staff can decide which one of the principles are useful for each specific situation.

The relationship between instructional theoretical models, principles, methods and strategies is illustrated in Figure 2.2. At the highest level, according to Cole and Chan (1994) a ‘theoretical’ model “is a set of ideas or propositions of an abstract kind used to guide methods, select principles and guide practical decision making” (p.4).

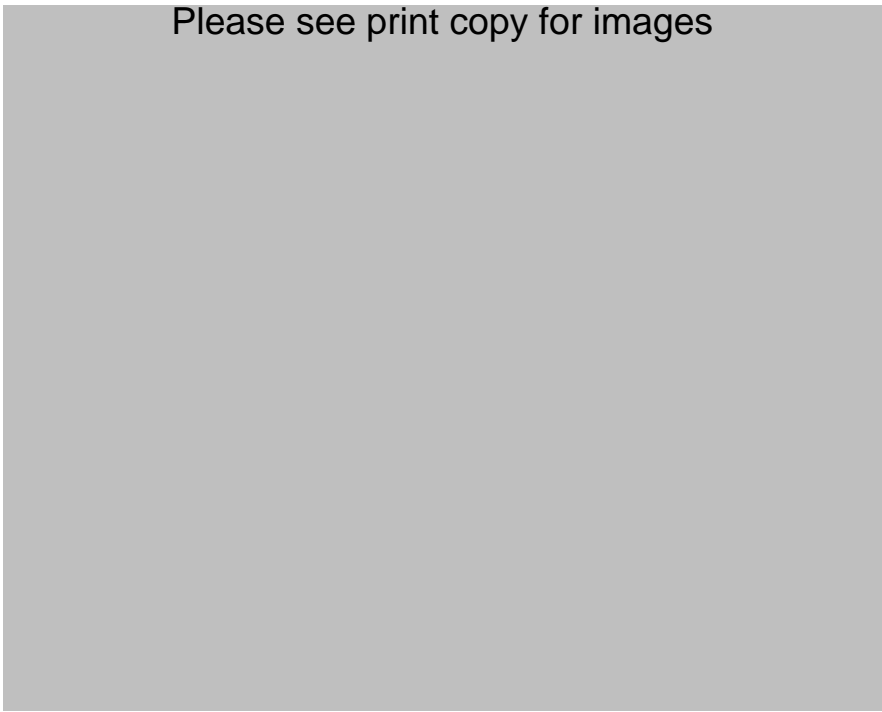


Figure 2.2: A diagrammatic representation of the relationship between theory and practice (Cole & Chan, 1994, p. 3).

At the second level, principles, which are derived from theories, are generalisations that guide the educational actions. Methods, at the third level of the schema, are “sets of teaching plans, strategies and techniques used to organise classroom practice [while being] concerned with the step-by-step procedures used in instruction” (p. 4). The lowest level of the schema is specific teaching operations that guide the activities of the classroom teacher. As shown in Figure 2.2, each level of the schema affects all others. The theoretical elements affect the practical elements and also applied elements affect changes in the theoretical elements at the top.

2.2 Theories of Learning Relating to Teaching

Teaching and learning are closely related. Joyce and Well (1996) believe that “models of teaching are really models of learning” (p. 7). When teachers help their students to acquire knowledge, skills and values, they are also teaching students how to learn. Joyce and Well (1996) stated that “models of teaching are not only intended to accomplish a range of curriculum goals, ... but are also designed to help the students increase their power as learners” (p. 10). This approach had been previously argued by Dewey (1916) who pointed out that the core of the teaching process is providing conditions within which the students can interact and study how to learn.

In regard to criteria of good teaching, Biggs (1989) pointed out that good teaching should minimise those factors that lead to ‘surface’ learning, and maximise those factors that lead to ‘deep’ learning. He further explained that the following are features of teaching which evidence deep learning: an appropriate motivational context; a high degree of learner activity; interaction with others, both peers and teachers; and a well structured

knowledge base. To clarify the last matter, he pointed out that a curriculum with a well structured knowledge base considered the prior knowledge and experience of students, which are “vital for deriving good learning and problem-solving strategies. Content that is taught piecemeal, isolated from other related content, does not lead easily to deep learning” (p. 17).

According to theorists such as Piaget (1952), Bruner (1966) and Sweller (1993), there are two prerequisites to effective learning, in terms of learning theory. One is the possession of an adequate cognitive structure, and the other is the accessibility of this structure to allow the subsumption of new learning in a meaningful way.

Centra (1993) pointed out that definitions of teaching effectiveness depend on a teacher’s “explicit or implicit theory of how students learn. Appropriate teaching behaviours are those that facilitate student learning in accordance with the theory” (p. 43). In explanation of this theory, he then referred to the Fuhrmann and Grasha (1983) study where three teaching approaches were identified, based on three different learning theories. Centra then argued that, although some other theories have been developed to explain how students learn and how teachers should teach, these three probably encompass most viewpoints.

According to Fuhrmann and Grasha (1983) “theories of learning often suggest classroom procedures and teacher behaviours that presumably facilitate students’ learning along certain lines” (p. 306). The three approaches of learning they defined provided the basis for effective learning based on three learning theories: the behaviourist, the cognitive and the humanistic. The behaviourist approach to learning suggests that

effective teaching is demonstrated when the instructor can write objectives relevant to the course content, specify classroom procedures and student behaviours needed to teach and learn such objectives, and demonstrate that students have achieved the objectives after exposure to the instruction p. 287).

A behaviourist approach encompasses the notion of suitable reinforcement schedules.

A second approach, based on the cognitive view, emphasises ways in which teachers can make students more effective problem solvers and critical thinkers. Based on this theory,

effective teaching is demonstrated when teachers use classroom procedures that are compatible with a student's cognitive characteristics, can organise and present information to promote problem solving and original thinking on issues, and demonstrate that students are able to become more productive thinkers and problem solvers (p. 287).

The third approach is based on the humanistic theory of learning. According to this theory, humanistic teaching is effective

when teachers show that students have acquired content that is relevant to their goals and needs, can appreciate and understand the thoughts and feelings of others better, and are able to recognise their feelings about the content. The instructor should also be able to demonstrate that he or she has the personal qualities described to facilitate or otherwise act as a catalyst for students' learning (p. 288).

Notwithstanding the development of the above theories, Centra (1993) pointed out that "most teachers are not aware that they subscribe to a specific theory, and in fact many may apply different theories at different times or even within the same course or class period" (p. 45). Furthermore,

he said teachers have different assumptions based on their own understanding about how students learn best and how teachers should teach. It is, nevertheless, also important that teachers understand learning theories in order to maximise teaching potential. Fuhrmann and Grasha, (1983) after explaining the advantages and disadvantages of defining effective teaching based on their three theories of learning, pointed out that there are many forms of effective teaching. They recommended that, to define effective teaching, each of us

must perform a personal analysis of what we want to accomplish in the classroom and the methods we believe are the best to use. This analysis must include a look at ourselves, our institutions, our students, and other unique aspects of our educational environments. ...The outcome of this personal analysis is a definition of effective teaching that applies to your unique circumstances (p. 292).

Fuhrmann and Grasha (1983) argued that helping teachers clarify their assumptions and definitions of good teaching and deciding which one or which combination of them is appropriate for particular teaching situations, is the first step in teaching improvement. Improving teaching based on the personal viewpoints to find out the best methods of teaching is helpful, but inadequate without an understanding of teaching and learning theories. It seems that teachers should study ideas that scholars in the field of teaching and learning have about effective teaching.

Moses and Trigwell (1993) investigated the quality of teaching and learning in professional courses in four engineering faculties. They found that lecturers who were successful in promoting deep learning and achieving the stated learning outcomes, demonstrated some or all of the following characteristics:

- were committed , enthusiastic, well prepared and knowledgeable teachers;
- used a variety of teaching strategies in each class session;
- actively involved students in the classroom or the field - e.g. by case studies, projects, discussions, simulations, workshops, presentations;
- had high expectations of students and challenged students' intellectually;
- varied the degree of guidance and autonomy depending on the context, the level of preparedness and stage in the degree course;
- used a variety of assessment methods which demanded students' integration of knowledge, application of high order skills, initiative; and
- gave feedback to students (p. vii).

Although it is inferred from the above study that effective teachers produce better learning, this will not happened automatically. Both teachers and students should be capable and the necessary facilities and equipment for teaching and learning should be provided. Although our understanding of learning is much more developed than in the past, still "there is no single all-encompassing theory of learning accepted by educational psychologists and teachers" (Barry & King, 1995, p. 27). The aim of teaching is to make student learning possible (Ramsden, 1992). Therefore, teachers who teach effectively should be successful in effecting more learning. However, although there is a direct relationship between the quality of teaching and amount of learning, other student variables such as motivation and prior knowledge also influence students' learning.

There appear to be two contrasting points of view among university lecturers about student learning. Some believe that learning is the student's responsibility. Consequently, the role of the lecturer is to design the subject

outline, introduce text books and other necessary resources, explain the assignments and evaluation procedures and ask the students to direct their questions to the lecturer. Within this context, it is then up to the student to take responsibility for his or her learning, by seeking solutions to problems set by the lecturer as opposed to being given possible answers. This group of lecturers believe that providing everything for students does not lead to good scholarship, implying superficial and mechanical study. On the other side, some lecturers provide everything for their students, such as handouts, resources, and presentation notes. The former approach focuses highly on independent learning, so that the students of this group of lecturers, after their graduation, say ‘I read my degree’. However, the latter group of lecturers focuses on detailed lecturing and seminars. A question arises whether this strategy will lead as effectively to producing students who are autonomous learners. Probably elements of both approaches are desirable. In an analysis of these contrasting points of view, Candy (1991) provided the continuum illustrated in Figure 2.3.

Please see print copy for images

Figure 2.3: A hypothetical learner-control continuum (Candy, 1991, p. 9).

It divides the learning into ‘self-directed’ in one side and ‘teacher-directed’ in the other side of the diagram. The domain of control of learner on the process of learning is expanded as the learner assumes more and more responsibility for his or her learning. Although Candy has not specified the

precise meaning of the vertical lines, presumably they imply successively different emphases between the two extremes.

According to Candy, Crebert and O'Leary (1994) the student who acquires the skills of being self-directed in learning "not only ends up with the knowledge, but also with the confidence to be able to 'do it again,' to be able to apply the skills acquired in one learning context to another" (p. 129). However, there are some reservations about totally self-directed learning. Some academics believe that self-directed learning is neither practically possible nor desirable. It is believed that more control by students means losing control over students, which leads to losing academic authority (Candy, 1991). But 'academic authority' in a university is a dubious matter.

Since nowadays a large number of people want access to tertiary study, it is difficult to utilise a completely independent approach for learning. In the past, only the most capable students could gain access to university, while today more average-ability students are also able to study at university (Meyer, 1993). As a result of the existence of the large number of students and more average-ability students in universities, the two extremes to teaching defined by Candy (1991), by themselves seem open to question. In this situation, although students still have the main responsibility for their learning, perhaps lecturers also have to be more concerned about student learning. Lecturers should not assume their learners are self-directed, rather they should try to encourage them to become self-directed.

It is interesting to note that the responsibility of students for their learning was acknowledged by lecturers who had been nominated by students in the University of Queensland (Australia) as excellent lecturers (Heath, 1989).

The lecturers pointed out that one criterion of quality in university teaching is that students should be responsible for their own learning. The lecturers' responsibility is to guide the students through class contact and to determine appropriate assignments. However, the responsibility of lecturers was also mentioned by Centra (1993) who stated that 'appropriate student learning outcomes' is one of the important criteria of effective teaching. Added to this, it seems some lecturers think that there is less trouble from students, and also better student ratings, if they focus on lecturing rather than encouraging students' independent study. Additionally some university administrations are emphasising teaching more and research less.

It should be noted that if lecturers make the learning experience too easy, students might find it hard to become autonomous learners and this would conflict with one of the important aims of a university. Learning to learn is as important as learning a subject. Therefore, students should be encouraged to learn how to learn.

From the foregoing, it is reasonable to conclude that both learning theories and teaching models should be understood by university teachers, in order to provide the basis for maximising student learning and potential.

2.3 Teaching Models of Dunkin and Biggs

Research into teaching effectiveness can be based on models of teaching. A model of teaching has been described as a theoretically based "plan or pattern that we can use to design face-to-face teaching in classrooms or

tutorial settings and to shape instructional materials-including books, films, tapes, and computer-mediated programs" (Joyce & Weil, 1986, p. 2). According to Gage (1963) these models are not themselves theories, but rather represent the formative stages of thinking and researching, which can lead to theory development. The usefulness of teaching models for research in teaching was supported by Shulman (1986a) who thought that Dunkin and Biddle's model of teaching had an important status in the field. According to Barry and King (1995) this model "has served as a theoretical framework for numerous subsequent studies" (p. 603). However, Shulman (1986a) warned that "it is unfair to characterise such a sophisticated and prescient work [as teaching] too simply" (p. 6).

The Dunkin and Biddle (1974) model (Figure 2.4) included four classes of variables: presage, context, process and product, of which the presage variables are of primary focus in this study. Presage variables are defined here as those measurable teacher characteristics which may impact upon the teaching process, and this definition is in line with that used by Dunkin and Biddle (1974). They suggest that a teachers' classroom behaviour may be influenced by variables such as sex, race, intelligence, socio-economic status and personality, and that these factors are important in the formation of the individual teacher's approach to teaching.

The presage variables have been categorised into three subclasses: teacher formative experiences, teacher training and teacher properties. 'Teacher formative experiences' include "every experience encountered prior to teacher training, and for older teachers subsequent experiences as well" (p. 39). 'Teacher-training experiences' include "the college or university attended by the teacher, courses taken, the attitudes of instructors,

experiences during practice teaching, and in-service and postgraduate education, if any” (p. 39). ‘Teacher properties’ consist of “the measurable personality characteristics the teacher takes with him or her into the teaching situation. A legion of psychological traits, motives, abilities and attitudes” (p. 40).

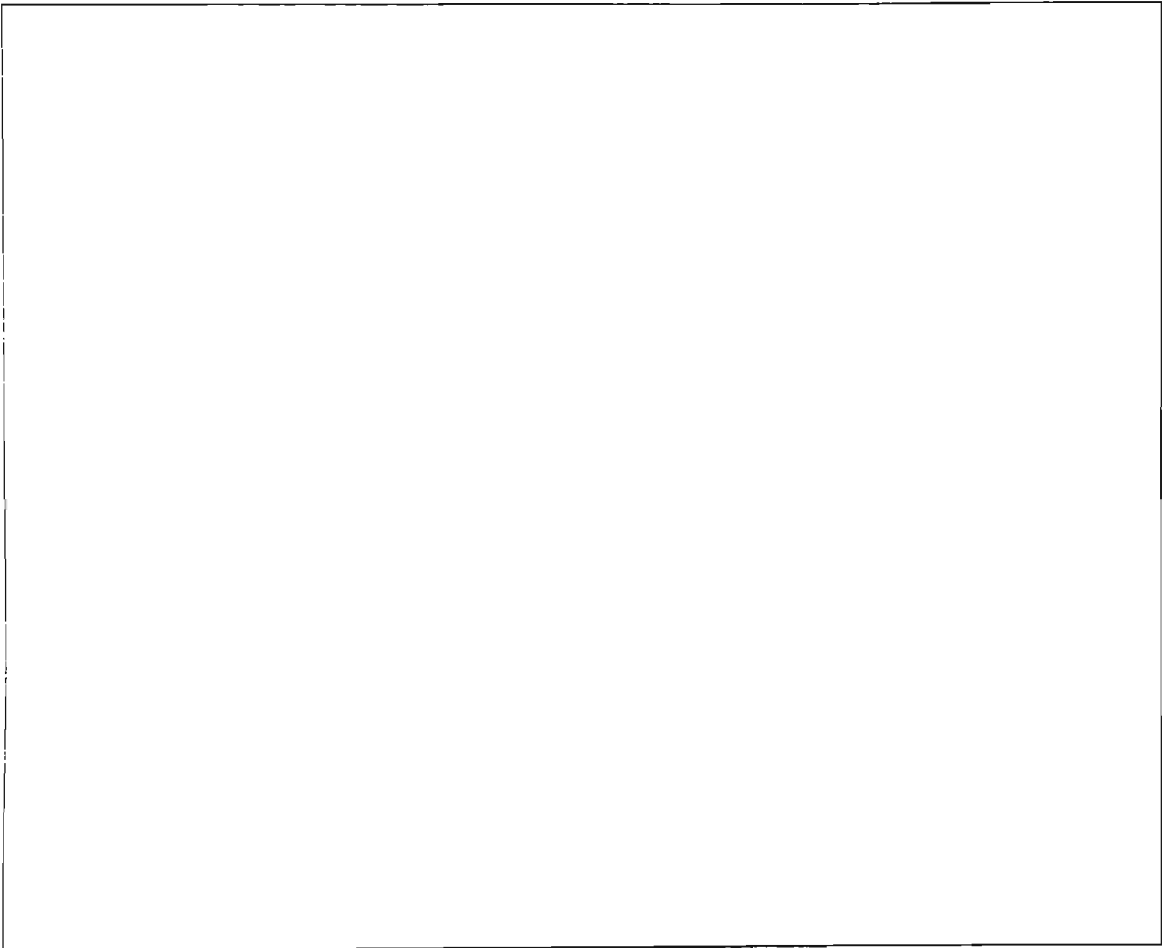


Figure 2.4: A model for the study of classroom teaching
(Dunkin & Biddle, 1974, p. 38).

In a recent study, Dunkin (1990a) named the subclasses of presage variables as three classes of phenomena pertaining to academic staff. He described them as

- 1) Orientation to teaching: patterns of ideas and feelings possessed by individuals concerning teaching;

- 2) Induction experiences: those experiences lecturers have early in their employment in that position; and
- 3) Background characteristics: those attributes lecturers bring with them into the lecturing positions such as their age, sex, academic qualifications and discipline specialisations (p. 280).

Biggs (1988; 1989) presented a similar model of teaching (Figure 2.5) which included three classes of variables: presage, process and product. He explained that “presage factors include the teacher’s characteristics, and in particular beliefs and knowledge about good teaching practices, and the institutional context” (1989, p. 20). Biggs argued that teaching skills acquired by teachers and conceptions of teaching held by teachers, have a direct effect on their teaching.

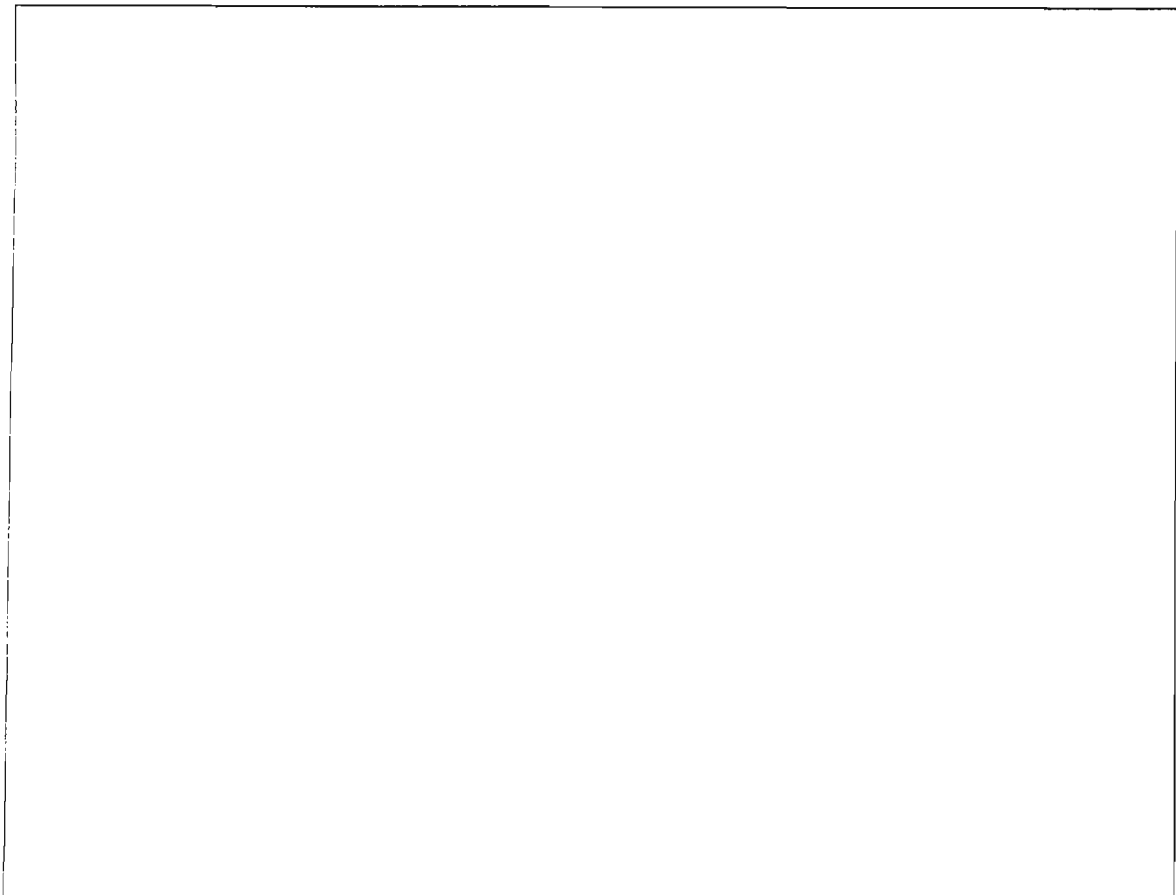


Figure 2.5: Presage, process and product applied to teaching
(Biggs, 1989, p. 21).

Both models of teaching are considered to provide a suitable conceptual framework for the present study where attention is focused upon presage variables, especially lecturer characteristics. The nature of the teacher has been identified by many writers as a key factor in the process of teaching (O'Banion, 1977; Caillods, 1989; Sergiovanni & Starratt, 1993). O'Banion (1977), for instance, indicated that the quality of education in the community junior college primarily depends upon the academic staff. Among teacher characteristics, Biggs (1988; 1989) emphasised two specific attributes of quality: teachers' conception of effective teaching and their acquired teaching skills. These two characteristics are of central interest in this study.

Theories of teaching and learning focus on all aspects of teaching and learning. However, the focus of the present study is upon the teacher characteristics which affect this process. The effect of lecturers' characteristics was acknowledged in previous research as one of the main factors in the process of teaching. The two key characteristics of lecturers, their conception of teaching and their acquired teaching qualifications, identified in the Biggs model of teaching, together with other characteristics of lecturers, are explained as follows. These are discussed further in the next chapter, Review of Literature.

Conception of teaching: In relation to teachers' conceptions of and attitudes toward teaching, Dunkin and Biddle (1974) pointed out that "training and formative experiences cannot affect the teacher's classroom performance unless she retains traces of these experiences in her attitude or behaviour" (p. 40). Dunkin (1990a) explained that teachers' orientation toward teaching "provides the framework of cognitive and affective attributes that

presumably underlie an individual's planning, decision making and implementation in relation to teaching" (p. 280). It is argued in the university context that identifying lecturers' attitudes and orientation toward teaching is important and necessary for improving teaching.

Research on teaching at the tertiary level "reflects a diversity of conclusions rather than consensus. Thus, no one definition of excellence in teaching emerges" (Lally & Myhill, 1994, p. 9). Braskamp, Brandenburg and Ory (1984) also confirmed that there is no set of easy answers to questions about teaching such as what is good teaching or whether teaching excellence can be measured. Fuhrmann and Grasha (1983) also argued that the system of education and students all "suffer from a lack of clarity and consensus on the characteristics of good teaching. Although it is not desirable to hold to a single model of good teaching, it is desirable to have a systematic approach to defining and assessing individual methods of teaching" (p. 280).

Any instrument which is developed to evaluate teaching should be consistent with the principles of teaching and learning, generalised in research and the literature. For example, Mackie (1981) derived the following ten principles for examining teaching effectiveness from the writing of behaviourists, cognitivists and personality theorists:

- 1) the learner must be motivated to learn,
- 2) the learning situation should take account of individual differences in learning capacities and learning style,
- 3) new learning should take into account the learner's present knowledge and attitudes,
- 4) what is to be learned should be reinforced,
- 5) the learning situation should give opportunities for practice,

- 6) the learner should be an active participant trying out new responses rather than just listening,
- 7) the material to be learned should be divided into learnable units and given in an appropriately paced sequence,
- 8) coaching or guidance should be given in the development of new responses,
- 9) what is learned should be capable of being successfully generalised from the learning situation, and
- 10) the material to be learned should be presented in a way that will emphasise the characteristics to be learned and do so in a way which is as meaningful as possible to the learner (p. 8).

The above principles were subsequently endorsed by Stephens (1985) and Brookfield (1989). Fincher (1985) also presented a similar list of principles of teaching and learning. Marsh and Dunkin (1992) and Marsh and Roche (1994) acknowledged that Mackie's ten principles guided them toward the development of a student-evaluation instrument to examine the quality of teaching.

Although extensive research has been carried out on criteria for effective teaching, this topic remains at the forefront of educational debates (Cole & Chan, 1994). This is because "teaching is a complex phenomenon that takes into account a wide range of personal characteristics, professional skills and specialised bases of knowledge" (p. 2). They also argued that the lack of consensus about criteria for effective teaching can be associated with disagreements about the goals of education.

Teaching Qualifications: In regard to the other important characteristic of a teacher, 'acquired teaching skill', Biggs (1988; 1989), and Dunkin and Biddle (1974) hypothesised in their models that teaching skills acquired by teachers

have direct effects on the quality of their teaching performance. McKeachie (1986) and Centra (1993) argued that teaching skills are learnable and that learned capabilities affect the teaching process. This is to say that university teachers should acknowledge that their teaching abilities can be improved, and that their curriculum can be modified in a way that can subsequently improve student learning (Gow, 1992). Both Elton and Partington (1991) and Griffiths (1993) recommended that all academic staff need some pedagogic training, and suggested a lack of such training could mitigate against the improvement of teaching at the tertiary level. The above argument suggests that universities should provide staff with opportunities for teaching development. In the current climate these 'opportunities' might well be articulated into award programs so that staff gain qualifications in a result of their involvement.

Other influential factors on teaching and learning: Biggs (1989) justified the notion that teaching is done within "an institution with its own resources, rules and routines, administrative structures, and the expectations and norms of fellow teachers and students" (p. 20). These structures, norms and expectations provide a context which strongly affects teaching and learning (Biggs, 1988). Stevens (1988) suggested that lecturers' "beliefs, values and expectations for appropriate behaviour within that institution" (p. 74) are components of the institutional context, a presage variable common to both the Dunkin and Biddle, as well as the Biggs models. According to Dunkin and Barnes (1986), the institutional context also included factors "from type of teaching space and size of class to type of discipline taught, to the society and culture in which the particular institution is located" (p. 755). Biggs (1989) further explained and emphasised that, although teacher characteristics are important in teaching improvement, "they cannot

usefully be enhanced in isolation from student learning on the one hand, and institutional reality on the other" (p. 18). Although examining the interaction between the role of institutional context and other variables such as students' characteristics and teaching process are of interest, such analyses are beyond the scope of this study.

Considering the importance of teacher and student characteristics and institutional context in the improvement of teaching, Biggs (1988; 1989) explained that this improvement needs to take all of the presage, process and product variables into account. He argued that "taking only one factor at a time makes only additive use of an interactive system" (1988, p. 10). Education is a set of interacting ecosystems which include several components: teachers, teaching contexts, student learning processes, learning outcomes, institutions, staff developers, administrators, politicians and any identifiable component that affects learning (Biggs, 1993). Effective teaching also is not solely dependent upon the teachers, as students too have responsibilities to learn. Students have an important status in the fulfilment of effective teaching. Brown and Atkins (1988) stated that "often an indirect but powerful way of improving your teaching is to improve the ways in which students learn" (p. 1).

It should be acknowledged that good teaching depends on other factors such as students' approaches to learning and their motivation for learning the specific subjects. It is clear that "it is the interaction of good instructional practices with students' strategic learning strategies and skills that results in learning outcomes" (Weinstein & Meyer, 1994, p. 359). Therefore, in order to enhance the learning outcomes it is important that lecturers help their students to know what to do to learn more effectively. However,

Weinstein and Meyer (1994) stated that “knowing what to do is not enough; knowing how to do it is still not enough; students must want to learn ... It is the interaction of skill and will that gives direction to their actions and helps them to persist at tasks, even in the face of obstacles” (p. 365).

2.4 Evaluation of Teaching and Learning

Teaching performance, as a process component in teaching, was called ‘teacher classroom behaviour’ by Dunkin and Biddle (1974) and ‘teacher’s meta-teaching activity’ by Biggs (1988; 1989). Centra (1989) stated that “theory has not played a major role in deliberations about good teaching and how it should be evaluated” (p. 157). Instead, the views of key groups, for instance the results of a survey of academic staff, students and administrators about good teaching, have been critical in these deliberations. Centra (1989) pointed out that the extracted qualities from the above groups, frequently reflected in student-ratings questionnaires, formed the basis for evaluation systems. A premise for any substantial scholarly enquiry is, however, that a theoretical basis be identified from which the enquiry proceeds. Lally and Myhill (1994) pointed out that, in order to determine the important course and instructor characteristics, two methods are used in the research. One method is “to conduct a survey of students and teachers to determine what constitutes good teaching. ... [The other is] to examine the research literature to identify those principles common to various teaching models and student learning” (pp. 11-12).

As a practical guide to evaluating teaching, Braskamp, Brandenburg and Ory (1984) suggested that “a good strategy for defining excellence in teaching initially is to consider three major areas that can be emphasised in defining

teaching” (p. 16). These three areas, input, process and product together with some prominent factors (subsumed under ‘Input’), are shown in Figure 2.6. Input was defined as what the students and teachers bring into class. This area is named ‘presage’ in the Dunkin and Biddle (1974), and Biggs (1988; 1989) models. ‘Process’ was defined as what teachers and students do in a course, and ‘product’ was defined as what students learn or accomplish in the course (Braskamp, et al. 1984).

Input

- Student characteristics (e.g. class level, major field)
- Teacher characteristics (e.g. rank, sex, academic discipline)
- Course characteristics (e.g. size)

Process

- Classroom atmosphere
- Teacher behaviour
- Student learning activities
- Course organisation
- Evaluation procedures

Product

- End-of-course learning, attitude change, skills acquisition
 - Long-term learning, attitude change, skills acquisition
-

Figure 2.6 : Three major emphases for defining good teaching
(Braskamp, et al. 1984, p. 17).

They added that a closer examination of each of the three components reveals that effective teaching is defined according to the emphasis which is placed by the lecturers on input, process, or product. If *input* is emphasised, the basis for evaluating excellence is much of what has occurred before the course begins, such as educational backgrounds, and experiences of both the students and the instructors. If *process* is emphasised, then the focus is on what the teacher does both in the

classroom and in organising and managing the courses. So the basis for evaluating effective teaching centres around teacher rather than student behaviours. If *product* orientation is emphasised, then the basis for evaluating effective teaching is the amount and quality of student learning. Selection of each of the three areas or a combination of them for evaluating teaching usually depends on the values of the discipline and the institution's view of effective teaching (Lally & Myhill, 1994).

According to Lally and Myhill (1994) the primary issue in the field of evaluation of teaching is whether teaching should be evaluated directly by measuring student learning, or indirectly by measuring course and instructor characteristics. There are, however, some concerns about the direct approach. For example, the extent of prior abilities, student differences, student motivation and many other variables which affect student learning, is difficult and are nearly impossible to measure or control. In addition, it is sometimes difficult to assess whether the tests developed by lecturers adequately tap what students have learned in class. Therefore, evaluating student learning, using the direct method, could be flawed if it leads to a comparison of the abilities of lecturers within the tertiary institution.

Using an indirect method for the evaluation of teaching, a series of demonstrable criteria and behaviours of teachers are considered by students. The criticism, however, is that there is no consensus about which characteristics and behaviours should be measured. Research still "has been unable to provide a widely accepted, empirically supported theory or operational definition of good teaching" (Lally & Myhill, 1994, p. 9). Considering the above criticism and difficulties, research on evaluating

effective teaching at tertiary level has primarily been in two areas: teacher characteristics and method of teaching. Lally & Myhill comment.

[o]ne focus has attempted to identify which teacher characteristics are associated with good teaching. The net result of this line of inquiry has been a list of teacher characteristics (attributes, traits and personality factors) which are used to define the ideal teacher. The second line of inquiry has focused on the relative effectiveness of the lecture method and alternative modes of instruction (p. 9).

In spite of the criticisms, the extent of student learning has been widely accepted in the literature as a criterion for measuring effective teaching (Lally & Myhill, 1994). According to both Cohen (1981) and Feldman (1989b), using both methods of evaluating (student learning and student ratings of teaching), provided support for the validity of student ratings of teaching. In studies of instructional effectiveness “the vast majority of studies rely upon student ratings of instruction as the dependent measure” (Volkwein & Carbone, 1994, p. 148). As an example, Feldman (1987), in a meta-analytic study, examined many studies using student ratings as a reflection of lecturers’ teaching performance. Reasoning based on the above evidence, and other factors such as easy implementation of student ratings, may be sufficient explanation of the wide use of student ratings at the tertiary level.

However, student ratings as the one indicator or measure of teaching effectiveness is difficult to validate. This is because “there is no single criterion of effective teaching. Researchers who use a construct-validation approach have attempted to demonstrate that student ratings are logically related to various other indicators of effective teaching” (Marsh, 1987, p. 285). Marsh commented that student learning is probably the most widely

accepted criterion of effective teaching, if inferred from reliable and valid tests.

In spite of all of the criticism about student ratings, Hall and Fitzgerald (1995) acknowledged that "students are in the best place to judge clarity of communication (in the classroom)" (p. 307). However, for summative decision making it is recommended that a comprehensive evaluation by providing input from students, colleagues, head of department, practising professionals and lecturers themselves can provide a fair judgement. This is because each of the sources "has (its) particular strength and should be used in combination to cover the different aspects of teaching ... (because, for example) colleagues are better placed to assess the relevance of content" (p. 308). Hall and Fitzgerald (1995) recommended that student evaluations "should be soundly based in teaching and learning theory, that is the items in a questionnaire should sample teaching behaviours that are appropriate for fostering student learning" (p. 308). In other words, items in student ratings can be dependable criteria of good teaching.

Although there are several approaches to evaluating teaching performance, research findings suggest that student ratings represent a simple and suitable method of assessing some components of teaching effectiveness (McKeachie, 1986; Marsh, 1987, 1992; Feldman, 1989; Ramsden, 1992; Stringer & Finlay, 1993; Cashin, 1995). In comparison with other methods of teaching evaluation such as self, peer and institutional evaluation, Ramsden (1992) indicates that there is general agreement within the field that student ratings, as a single measure of teaching performance, is the best.

Summary: In an explanation of potential theories on which to have this enquiry, this chapter has argued that existing theoretically based models of teaching can be used as a basis for research in teacher effectiveness. Among them, the Dunkin and Biddle (1974), and the Biggs (1988; 1989) models were selected to guide this study. Based on these models, it was argued that, in order to achieve teaching improvement, lecturers and students characteristics, institutional contexts and many other factors should be considered. Brown and Atkins (1991), however, clarified this by pointing to the need to deconstruct the teaching endeavour in order to effectively analyse its components.

Traditionally, three major approaches have been used to research teaching effectiveness (Doyle, 1987). These are examining the teachers' characteristics, their methods of teaching and their behaviour. Teacher characteristics, the particular focus of this study, rely upon personal qualities such as experience and attitude. The underlying assumption of Doyle's research is that teacher characteristics account for teachers' differential effectiveness. Doyle (1987) further explained that "the products of such investigations are useful primarily for devising criteria to select teachers who are likely to be successful... (and) useful for teacher education" (p. 114).

Accordingly, this study has focused on the examination of one component of the several models of teaching, namely teachers' characteristics. The focus was especially on two of the prominent characteristics: lecturers' attitudes toward teaching and the impact of lecturers' acquired teaching skills. In addition, the effects of six other characteristics of lecturers on the teaching process within the university were examined: language

background, sex, academic rank, academic degrees, academic discipline and years of tertiary-teaching experience. Further discussion of these attributes and their influences on teaching performance are presented in the following chapter.

Examinations of all of other lecturers' attributes were beyond the scope of this study. In order to maximise the number of participants, they were asked only to fill out one attitude questionnaire, of 37 items, and one bibliographic and professional questionnaire comprising eight items. They were also asked to fill out a consent form to give permission to the researcher to access their student evaluations. Therefore, it was not reasonable to ask participants to fill out another, for example personality, instrument. As a result, it was necessary to select some of the lecturers' attributes to be examined. Considering the above argument, the two key variables, presented in the Biggs (1988; 1989) and the Dunkin and Biddle (1974) model of teaching, and six other important variables from Dunkin and Biddle (1974), Braskamp et al. (1984) and Dunkin (1990a) and some other opinions discussed in the next Chapter, were selected. Although the contribution of the present study is important, other studies should be carried out to expand the findings of this study by including some of the other variables identified. It is acknowledged that other variables such as lecturers' personality, empathy, motivation, self confidence and self efficacy, affect the lecturers' teaching performance. These variables were not included in the present study.

Considering the theoretical background of this study, described in this chapter, the researcher now turns to examine some of the literature arising from the theories and models mentioned in this chapter. The next chapter

reviews the related literature to explain more of the theoretical background of the study, in order to illuminate the research questions of this investigation.

CHAPTER THREE: REVIEW OF LITERATURE

In this chapter, first, the relationship between lecturers' attitudes towards effective teaching and an estimate of their teaching performance is reviewed. In order to examine this relationship, effective teaching is defined and explained. Secondly, a review of arguments for academic staff to acquire teaching qualifications is outlined. Thirdly, the impact of the six determined professional and biographical variables on teaching performance are reviewed. Finally, in section four, the methods of evaluating teaching performance, focusing on student ratings, is reviewed. Although many studies were identified with primary and secondary teachers as populations, the emphasis of this review is on the literature relevant to university and college education. This chapter thus examines (a) lecturers' attitudes toward effective teaching; (b) lecturers' teaching qualifications, (c) the impact of six other lecturers' attributes on their teaching performance and (d) teaching performance.

3a) Lecturers' Attitudes Toward Effective Teaching

It was argued in the theoretical background of this study (Chapter Two), that there is a relationship between lecturers' attitudes and their actions. It was also explained that lecturers' attitudes toward teaching comprise one of the important factors influencing teaching performance (Dunkin & Biddle, 1974; Biggs, 1988; 1989). This relationship is further discussed in this section. Subsequently, definitions, criteria, and dimensions of effective teaching, and also best methods of teaching in higher education, are reviewed in this section.

3a.1 Lecturers' Attitudes and their Actions

The professional literature indicates some differences in meaning between the terms 'attitude', 'orientation', 'conception' and 'beliefs'. Some researchers even appear to use them interchangeably in an educational context. These terms are perceived to be associated concepts. For example, when Biggs (1988) introduced the characteristics of a teacher in his model of teaching, he referred to 'beliefs about effective teaching' and 'current teaching skills' as two important characteristics. One year later, Biggs (1989) changed the term 'beliefs' to 'conception'. Sergiovanni and Starratt (1993), two other educational researchers, also used the term 'educational platform' with similar meaning to 'orientation' and 'attitude'. They described educational platform as the educator's basic values, assumptions and attitudes, that tend to shape the educator's everyday behaviour and practice.

After combining several definitions of attitude, Aiken (1980) states that "attitudes may be conceptualised as learned predispositions to respond positively or negatively to certain objects, situations, concepts, or persons" (p. 2). According to Aiken people thus manifest cognitive (beliefs or knowledge), affective (emotional, motivational), and performance (behaviour or action tendencies) components of their personalities. Attitude has been also defined by Bramley (1991) as a "tendency or a predisposition to behave in certain ways in particular situations" (p. 52). Bramley notes that attitude can be measured directly, but is usually inferred from people's speech and actions. This is because people are likely to behave in ways which they believe to be appropriate to a given situation. Similarly, orientation to teaching has been described as "patterns of ideas and feelings possessed by individuals concerning teaching" (Dunkin, 1990a,

p. 280). According to Dunkin (1990a), this orientation provides individuals with the necessary cognitive and affective attributes to underpin the planning, decision making and implementation of their teaching.

According to McKeachie (1996) one of the influential factors on lecturers' style of teaching is their "conception of what teaching and learning involve. Most teachers teach as they were taught. Most have not really thought much beyond communicating the content" (p. 15). As an example, he explained that often there is a collusive fit between lecturers, who feel that their role is presenting the content of the discipline, and their students who believe that their job is to memorise what the lecturer presents and repeat it back for the examination purposes. Similarly, Wyatt and Pickle (1993) pointed out that teachers who believe their role is transmission of knowledge, "want their students to accept the knowledge that is given to them . . . Such teachers often believe that lecturing is the most efficient method of teaching" (p. 340). On the other side, are those teachers who believe that their role is to facilitate their students' cognitive development. They ask students to develop their own interpretations of knowledge and "try to relate new information to the students' past experiences, so that students can interpret it in their own ways. Instead of memorising facts, students in an interpretation classroom would be more likely to work on projects in which they actively seek their own knowledge" (p. 341).

In another study of lecturers' conception of teaching, Gow and Kember (1993) used data from semi-structured interviews to develop a 46-Likert-item questionnaire. They pointed out that the lecturers' orientation to teaching affects the curriculum design, the teaching method employed and the learning tasks specified. In turn these factors influence the approach to

learning of the students. They argued that "if it is considered desirable that students adopt meaningful approaches to learning, it seems to be important to direct initial attention towards the lecturers' conception of teaching" (p. 31). In a later study, Kember and Gow (1994), using a Likert-format questionnaire, found that meaningful approaches to learning were discouraged when academic staff think that they only had to transfer their discipline knowledge and expertise to the students' minds. On the contrary, Gow and Kember (1993) previously argued that lecturers who teach in departments with a greater commitment toward learning facilitation are "more likely to design courses and effect a learning environment which encourages meaningful learning" (p. 31).

Furthermore, research on teacher thinking reported a close relationship between teacher thought and teacher action (Clark & Peterson, 1986). It was also mentioned that teachers develop and hold implicit theories about their students, about the subject matter they teach, and about their roles and responsibilities (Clark, 1988). These implicit theories "play an important part in the judgements and interpretations that teachers make every day" (p. 9). These theories are so strong that they resist changes even when practical circumstances would seem to dictate change. As an example, in researching a curriculum-change process where specific objectives were mandated in the classroom, Olson (1981) reported that teachers eventually modified both curriculum and methodology to fall in line with their perceptions. Fox (1983) also reported that the theory a teacher uses to help him or her think about the process of teaching, influences the strategies used and will colour his/her attitudes towards the students.

As teachers' attitudes impact on their motives and intentions, a consideration of research into these two areas might be useful for understanding the relationship between university lecturers' attitudes and actions. For example, in studies conducted by Trigwell and Prosser (1994b; 1996) a relationship was reported between lecturers' intentions and their strategies of teaching. The researchers found that "the strategy adopted by teachers matches the intention they have for their teaching" (1996, p. 83). Trigwell and Prosser (1996) further emphasised that "the identification of the intentions underlying various teaching strategies should be a vital part of activities aimed at improving university teaching" (p. 3). Earlier, Prosser and Trigwell (1993) had suggested that a professional-development program that simply makes staff aware of particular teaching strategies is not sufficient to ensure changes in teaching practice. Such a program needs also to focus on teachers' underlying intentions or motives. Deal (1986) also suggests that the lecturers' intentions and motives are the catalysts in any teacher-change process and must therefore be emphasised in teaching-improvement programs.

It could be argued that by examining lecturers' attitudes toward teaching, as a diagnostic process, researchers may make inferences about their intentions and strategies of teaching. According to Ramsden and Moses (1992) examining lecturers' attitudes toward teaching can be used not only to explore the lecturers' commitment to effective teaching, but "there is reason to believe that it is a valid indicator of quality" (p. 281). It may be a reasonable expectation that if lecturers have a positive attitude toward teaching, they may strive and succeed in improving the quality of teaching. However, positive attitudes by themselves do not necessarily mean better-quality teaching (Bramley, 1991). Improving teaching quality requires a

systematic approach involving many factors, of which positive attitude toward teaching is one.

Considering the importance of the relationship between attitude and action, it should be noted that attitude is not equivalent to performance. "Changing someone's attitude to something may well change what they say or do, but this [result] will not necessarily follow" (Bramley, 1991, p. 52). It should be emphasised that, although lecturers' attitudes have a very important role in determining their performance, the problem is much broader than either attitude or performance. It centres on the relationships between the two and their impact on learners in the university setting. Furthermore, it should be considered that positive changes in attitude and performance require both the teacher and the organisation to adapt to new knowledge and skills (Whitaker, 1993).

Weimer (1990) argued that if lecturers are not motivated to participate in teaching-improvement programs, such programs are doomed to failure. Any teaching-improvement programs must begin with the issue of participation of academic staff. If programs are to succeed, lecturers need to be positively motivated to participate. If staff participate voluntarily in teaching-improvement programs the attitudes they bring to the programs should promote success. Therefore, encouraging attitudinal change should be considered as well as offering teaching strategies to academic staff in teaching-development programs in tertiary settings. It could be argued that identifying teachers' attitude toward teaching is important and a prerequisite for planning these programs.

According to Kember and Gow (1994), attitudinal changes are difficult to bring about and few attempts have been made to do this. Action research is one of the suggested methods for change in lecturers' orientation to teaching through teaching-development activities (Kember, & Gow, 1992; 1994). According to Kember and Gow (1992) action research "involves practitioners in attempting to improve their own teaching through cycles of planning, acting, observing and reflecting" (p. 297). Since educational practices are regarded as social practices to be changed through collaborative work, action research seems to be an appropriate method.

Two other approaches were suggested by Sergiovanni and Starratt (1993) to construct teachers' platforms or orientations to education. One approach is to work with all teachers in a staff-development program, e.g. running group workshops and seminars. The other is individual supervision, which may work with teachers in specific situations.

3a.2 Definitions of Effective Teaching

Effective teaching has been defined by Cole and Chan (1994) as the "actions of professionally trained persons that enhance the cognitive, personal, social and physical development of students" (p. 3). It might be inferred from this definition that only trained teachers can be effective teachers. Although it is expected that trained teachers might be more competent than untrained teachers, competent and incompetent teachers are found in both groups. Murray (1991) described effective teaching as the pedagogical behaviours that have an effect on students' scholastic performance or produce scholastic gains. According to Ramsden (1992) good teaching "energetically encourages active engagement with subject content" (p. 86). University

teaching was also described by Australian Vice-Chancellors Committee (1993) as:

a creative activity designed to foster students' learning, their ability and desire to undertake scholarly work, and their developments as whole persons. Teaching draws on professional and disciplinary expertise of staff and its continually revitalised by research, scholarship, consultancy, or professional practice (p. 2).

Brown & Atkins (1988) believe that effective teaching is a "complex, intellectually demanding, and socially challenging task. ... [It] consists of a set of skills that can be required, improved, and extended" (p. 1). 'Socially challenging' in their definition refers to the conflicting goals and values which exist in the context of teaching. They further explained that effective teaching requires the lecturer to know deeply the subject being taught. To teach effectively, lecturers need to be able to think and to analyse a topic. Most importantly, Brown and Atkins (1988) stated that effective teaching in university "requires the teacher to consider what the students know, to communicate clearly to them and stimulate them to learn, think and communicate" (p. 1). According to Brown (1993) the core skills of teaching are: preparing and structuring teaching materials; the interactive skills of explaining, listening, questioning, responding to students' comments and answers; providing and giving guidance; assessing and providing feedback; and, finally, monitoring one's own teaching. Other skills such as encouraging or helping students to make better enquiries and study better themselves, which are important components of university teaching, were not mentioned by Brown. In spite of the above definitions, Cashin (1995) reports that there is no agreed-upon definition of effective teaching. However he does suggest that there are some all-embracing criteria of effective teaching.

3a.3 Criteria of Effective Teaching

Defining effective teaching and establishing its criteria are necessary in order to examine lecturers' attitudes toward effective teaching. However, it is not clear in the literature whether or not there are differences between apparently synonymous terms such as good teaching, quality teaching and effective teaching. Criteria of effective teaching and effective teachers have been confounded in the literature. For example, in some of the studies reviewed by Feldman (1988), respondents were asked to specify criteria for good teaching or effective instruction. In other cases they were asked to characterise ideal teachers. This synthesis of studies indicated that lecturers and students held very similar views of what constitutes good teaching and good teachers. Therefore, it can be inferred that these two concepts, effective teaching and effective teacher, are closely related. The criteria of good teachers can be used to investigate good teaching and vice versa.

While a range of criteria for effective teaching was identified by researchers, there is no consensus about these criteria. Sergiovanni and Starratt (1993), for instance, argued that it would be difficult to describe the criteria of good teaching if "one had in mind a technical list of discrete teaching behaviours" (p. 31). But if good teaching is viewed as "somewhat analogous to surfing and worked from a professional conception of teaching practice" (p. 31), then a list of criteria might be developed.

The argument about lack or existence of criteria for effective teaching is further explained below, and then some of the commonly agreed criteria of effective teaching are reviewed.

Ellis (1993a) argued that "it is doubtful if any university could claim to have an explicit, let alone total, management system dedicated to ensuring quality in its teaching" (p. 5). Prosser and Trigwell (1990) also pointed out that it is difficult to define teaching effectiveness and its criteria. According to Ramsden, et al. (1995) there still remains "the task of developing a set of criteria, together with performance standards, that are sufficiently flexible to recognise the variety of forms that good teaching might take" (p. 25). Many difficulties exist in the development of a series of acceptable criteria of teaching effectiveness in the tertiary sector (Ramsden & Moses, 1992). It was also argued by Abrami (1989a) that, while many possible indicators were identified for effective teaching, "most of the direct products of instruction are not articulated in any theory of effective teaching" (p. 225).

Other studies have supported the idea that effective teaching may vary by individual style, by academic discipline, subject, academic level and individual student (Abrami, 1985; Brown & Atkins, 1988; Centra, 1993). For instance, Abrami suggested that "it is time to abandon the notion of a single model of effective instruction or the ideal teacher and begin to think in interaction terms" (p. 223). Abrami (1985) pointed out that instead of raising questions such as 'what is the ideal university teacher?', the following question should be raised: 'what is the ideal university teacher for different contexts, different courses, students, settings and different goals, objectives, or desired outcomes of instruction?'

Conversely, in relation to the existence of a set of criteria for effective teaching, Ramsden (1991a) pointed out that "although good teaching is undoubtedly a complicated matter, there is a substantial measure of agreement among the empirical studies about its essential characteristics"

(p. 131). Ramsden (1992) further explained that, though good teaching may be "more common, and perhaps even easier to achieve, in some subject areas than others, its principles, however, apply to all of them" (p. 118). This idea was also supported by Goodwin and Stevens (1993) who indicated that although there is no clearly definitive answer to the question 'What is good teaching?' there are certain agreed-upon characteristics of successful teachers and teaching situations. This argument was also put by Sherman (1987) who clarified that teaching excellence is "manifested in many ways, perhaps as many ways as there are excellent teachers" (p. 67). However, he added that, regardless of the existence of different views associated with excellent teachers, some criteria have been regularly and consistently attributed to college instructors selected as excellent. This idea was also supported by Robinson's study (1993) which reported that, although academic staff use a variety of teaching methods to fulfil their goals, high levels of agreement are shown on their definitions of good teaching.

There is consensus between lecturers and researchers about some features of effective teaching. Researchers believe that effective teaching is systematic, stimulating and caring (McKeachie & Kulik, 1975; Marsh, 1982; Brown & Atkins, 1991), and that bad teaching reduces motivation, increases negative attitudes to learning and yields lower achievement. Fuhrmann and Grasha (1983) reported that there is some agreement in the literature about 'desirable' teacher attributes. These attributes are "organisation and clarity of presentations, enthusiasm, and abilities to interact with students" (p. 286). Similarly, Goodwin and Stevens (1993) pointed out that there is general agreement across fields of study on what practices constitute good teaching. They are: enthusiasm for teaching, knowledge of subject matter,

concern about student growth and development, fair tests and frequent feedback, and clear statement of course objectives.

Murray (1980b) who conducted a major review about characteristics of effective teachers, claimed that there is a high level of agreement between university students and academic staff on what constitutes a good university teacher. He pointed out that effective academic staff possess the following characteristics: "mastery of subject matter, concern for students, stimulation of students' interest, clarity of explanation, enthusiasm for subject matter, encouragement of students' participation, availability for consultation, fairness in grading, preparation and organisation and public-speaking ability" (p. 8). Miller (1988), considering the more recent developments in higher education, added to the list 'ability to stimulate independent learning', an important attribute, given the purpose of universities.

According to Goodwin and Stevens (1993), the generally accepted characteristics of good teachers and teaching are: enthusiasm, knowledge of the subject area, stimulation of interest in the subject area, organisation, clarity, concern and caring for students, use of higher cognitive levels in discussions and examinations, use of visual aids, encouragement of active learning and student discussion, provision of feedback and avoidance of harsh criticism. Newble and Cannon (1995) refer to the further characteristics of clarity in structuring and presentation, using teaching skills and abilities and being attentive to and helpful with student problems. Similarly, the following criteria are among the key factors which were suggested by Ramsden (1991b) to describe good teaching in higher education:

- 1) wanting to share your love of the subject,

- 2) making the material stimulating,
- 3) working at the student's level,
- 4) using clear explanations,
- 5) making it clear what has to be understood and why,
- 6) showing concern and respect for and availability to students,
- 7) encouraging student independence,
- 8) using teaching methods that require students to learn actively and cooperatively,
- 9) using appropriate assessment,
- 10) giving high-quality feedback,
- 11) learning from students about the effects of teaching (p. 28).

Ramsden (1991b) emphasised 'making the teaching material interesting' as an important criterion of effective teaching. He pointed out that "when our interest is aroused in something, whether it is an academic subject or a hobby, we enjoy working hard at it" (p. 27). In another more recent study, Ramsden (1993a) suggested more or less similar criteria as key principles of effective teaching and learning in higher education.

In research conducted by Cranton and Hillgartner (1981), 28 university classes from different fields were observed to analyse lecturer behaviour. They found that when lecturers spent time structuring the subject, students gave higher ratings on logical organisation items. They also found that when lecture time was spent in discussions, encouraging student participation and silence (waiting for answers), students tended to rate the classroom atmosphere as being one which encourages learning. Lowman (1991), in general, reported that students liked teachers who were "masters of their subject matter, prepared lectures well, related material to practical issues, encouraged questions, and were enthusiastic about their subject matter" (p. 152). Lally and Myhill (1994) reported that the following

characteristics were identified, at a very general level, for a good teacher. He or she:

- makes students think (critically);
- has experience and commitment to the subject matter;
- is able to motivate students through dynamic, enthusiastic matter;
- is able to use an appropriate approach;
- has good interpersonal and communication skills;
- is reflective on his or her teaching; and
- is well organised, especially at the undergraduate levels of teaching with large classes (p. 66).

Another survey was carried out by Broder and Dorfman (1994) to identify which lecturers' teaching skills were important to students. The results indicated that 81 percent of the explained variation was associated with the four instructor attributes: enthusiasm (24 percent), knowledge of subject (23 percent), tying information together (20 percent) and ability to stimulate thinking (14 percent). These findings suggest that lecturers' warmth and enthusiasm are as important to students as the technical skills of knowing and organising information. Moses (1993) found that university students expect and value the following characteristics in their lecturers: competence in the subject areas they teach, effective communication of their knowledge and experience, interest and enthusiasm for their subject, concern and respect for students and a commitment to facilitating learning for each individual student. Moses (1985) also tried to identify the constituents of superior university teaching through analysing student evaluations of teaching. She summarised her finding in the following equation:

Superior teaching = Competence in subject matter + Communication skills + Commitment to facilitating student learning + Concern for individual students (p. 312).

Feldman (1988) reviewed the results of 31 studies which were carried out to find out students' and lecturers' points of view about the instructional characteristics they considered particularly important to good teaching and effective instruction. Across all 31 studies, the average correlation of $+0.71$ (combined $Z = +21.86$; $p < .001$) was reported which "indicated a substantial, though clearly not total, similarity between the criteria students and faculty use in judging effective teaching" (p. 298). Findings of several studies that were reviewed by Centra (1993) indicated that students and faculty members characterised the ideal teacher by the following prioritised criteria:

- 1) sensitivity to and concern with class level and progress,
- 2) preparation and organisation of the course,
- 3) knowledge of the subject,
- 4) enthusiasm (for the subject or for teaching),
- 5) clarity and understandability,
- 6) availability and helpfulness,
- 7) fairness,
- 8) impartiality in evaluation of students,
- 9) quality of examinations (p. 39).

Dunkin (1990c; 1991) asked academic staff to rate the ten items listed below in terms of their perceived competence in relation to tasks associated with teaching in higher education. It is presumed that these self-ratings of teaching tasks are among the criteria of effective teaching which should be considered in higher education. In relation to the importance of the tasks, Dunkin (1990c) emphasised that these were arrived at often "reflecting upon many years of teaching experience in higher education and drawing upon close knowledge of research on teaching in higher education" (p. 60). The ten factors were:

- 1) selecting subject matter for a lecture that most students will be able to follow,

- 2) securing and maintaining students' attention for 50 minutes in the large-lecture situation,
- 3) arousing students' enthusiasm for your subject,
- 4) telling those students with promising futures as researchers from the rest,
- 5) eliciting lively and worthwhile discussions among students in tutorials,
- 6) planning students' assignments that are interesting and educationally rewarding,
- 7) acquainting students with the latest developments in research techniques in your field,
- 8) gathering information that will be helpful in improving your course and/or teaching,
- 9) establishing relationships of warmth and mutual respect with students,
- 10) explaining difficult material clearly to students (Dunkin , 1991, p. 38).

The characteristics of good teaching in higher education can also be elicited from the established goals for higher education. Course documents usually contain a set of goals that include qualities such as "critical thinking, independent learning, developing novel problem-solving skills and becoming more socially and environmentally conscious" (Kember & Gow, 1993, p. 113). When Kember and Gow asked 39 lecturers at a polytechnic in Hong Kong about the goals of higher education, the dominant responses were promoting general problem-solving skills and critical thinking, and being independent. Previously, Gow and Kember (1990) also stated that "tertiary education must challenge students enough to develop their powers of independent reasoning" (p. 320). Furthermore, Weimer (1990) considered that lecturers need to teach students "how to think critically, how to analyse, synthesise, and evaluate information, how to question, and how to articulate ideas clearly and collaborate with others" (p. 8). Therefore, one of the important characteristics of teaching in higher education should be creating the ability of problem-solving and independence in the students'

own fields and personal lives. The lecturer's task is not only to present information and knowledge to the students but also to "guide the students in mastering certain methods and techniques for developing them further" (Raaheim, 1991, p. 34). It is argued that university students must be taught that "to study means something different from going to school" (p. 34).

The preceding discussion suggests that though there is limited consensus between experts on the criteria for effective teaching, some common criteria were stated by many researchers. Considering the extensive research which exists about characteristics of good teaching and teachers, it is not difficult to state which behaviours contribute to good teaching. However, according to Ornstein (1990) "there is little agreement on exactly what behaviours or methods are most important" (p. 87). In order to facilitate a clear understanding of these criteria, it seems reasonable to cluster them into broad dimensions. Such classifications were necessary for the development of instruments which are now widely used for teaching improvement, personnel decision-making and research. Furthermore, these dimensional instruments can be used to examine lecturers' attitudes towards teaching or their teaching performance. In this way, their weaknesses and strengths can be identified and their performance improved. These dimensions are presented in the next section.

3a.4 Dimensions of Effective Teaching

Abrami (1989b) argued that "we simply do not yet have sufficient evidence to establish either what the dimensions of effective teaching are or whether and how they are interrelated" (p. 44). Smith and Cranton (1992) also pointed out that teaching is a multidimensional concept, but there is no

agreement on the dimensions. In regard to the existing inconsistency regarding the number of dimensions and items which describe effective teaching, Abrami (1985) referred to the “general lack of a sophisticated theoretical rationale for describing effective college teaching” (p. 216). Indeed, development of a theoretical rationale is a general requisite for any serious enquiry, as mentioned in Chapter 2. Abrami further explained that “instead of relying on theory to guide item selection, item pools have been generated by faculty and student committees, through student descriptions of ideal professors or good teaching” (p. 216).

Despite the lack of any universally agreed dimensions and criteria of effective teaching, many educational researchers do agree that teaching is a complex activity consisting of multiple dimensions (Marsh & Roche, 1994). The following components were identified by Entwistle and Tait (1991) and Sherman (1987) as measures of teaching quality: the provision of clear goals, preparation and organisation, stimulation and knowledge, appropriate workload and level of difficulty, assignments providing choice, quality of explanations, level of material and the pace at which material is presented, enthusiasm, and empathy with students’ needs. Similarly, in a national study of Australian academics conducted by Ramsden and Moses (1992), nine items in Likert formats were developed to examine academics’ opinions about their own teaching. These may be clustered, for the purpose of this review, into the following six dimensions:

1) organisation, planning, or structure

When I revise a course, I do library research to make the content up to date.

When I revise a course, I always examine teaching and assessment methods to see if they are appropriate.

2) teacher-student interaction or rapport

I go out of my way to help students with their study problems.

I make time to discuss my students' progress with them regularly.

3) work load, course difficulty

I try hard to understand the difficulties students may be experiencing with their work.

4) grading and examinations, assignments

I use the results of examinations and student assignments to amend my subsequent teaching of a topic.

I make use of assessment material to diagnose what my students understand and do not understand.

5) instructor enthusiasm

Teaching undergraduate students is an activity that gives me a great deal of satisfaction.

6) teaching improvement

I regularly consult books and articles on teaching methods.

All of the above dimensions, except the sixth (teaching improvement), were also accepted as dimensions of effective teaching by other researchers as indicated in Table 3.1.

Table 3.1: Dimensions of Effective Teaching

Dimensions	Entwistle 1991	Ramsden 1991c	Marsh 1992	Centra 1993
Organisation, planning or structure	*	*	*	*
Teacher-student interaction or rapport	*		*	*
Clarity, communication skills	*	*		*
Work load, course difficulty	*	*		*
Grading and examinations, assignments	*	*	*	*
Instructor enthusiasm	*		*	

It seems Ramsden and Moses' (1992) questionnaire, developed to examine lecturers' attitudes toward teaching, has similar bases to the students' questionnaire which was developed to examine lecturers' teaching performance. As an example of this similarity, the Linke, et al. (1991) study considered experts' opinions about dimensions of effective teaching, and selected the following five 'distinct but related dimensions' to develop a student questionnaire to examine lecturers' teaching performance:

- 1) general quality of teaching [including clarity of explanation, interest and concern for students' progress],
- 2) clarity of goals,
- 3) appropriateness of student workload,
- 4) appropriateness of student assessment,
- 5) emphasis on student independence [encouraging students to assume responsibility for their own learning] (p. 58).

In another study, Centra (1993) used factor analysis to determine the essential dimensions of student evaluation instruments. The following six dimensions were identified: (1) organisation, planning or structure, (2) teacher-student interaction or rapport, (3) clarity and communication skills, (4) work load or course difficulty, (5) grading and examinations or assignments and (6) student learning. In another teaching-evaluation questionnaire devised by Amin (1994), university students were requested to evaluate their lecturers in terms of their lecturers' ability to prepare material, organise and present the material and assess the students' ability.

Considering the items and dimensions of the two kinds of instruments (examining the lecturers' attitude toward teaching and the students' evaluation instrument), and the reviewed studies, the criteria of effective teaching may be clustered into the following five dimensions, consistent

with those suggested by researchers (Entwistle & Tait, 1991; Linke et al., 1991; Ramsden 1991c; Marsh, 1992; and Centra (1993):

- 1) lecturer-student interaction and rapport,
- 2) organisation, planning or structure,
- 3) grading and assignments,
- 4) work load, course difficulty,
- 5) instructor enthusiasm.

3a.5 Methods of Teaching

As well as the argument which exists in the literature about criteria of effective teaching, a similar argument exists between the experts about the most effective teaching methods. Such questions as, 'can the best method or methods of teaching be nominated in higher education?' and 'what are the criteria for selecting methods?' are discussed in this sub-section.

Combs (1965) argued that methods of teaching are not good or bad, right or wrong, by nature; rather they are vehicles for achieving results. He added that "whether their effects on others are good or bad depends on who is running the vehicle, what he is trying to do, and how it is perceived by those he is doing it to" (p. 98). Research by McQuilton (1993) supports this view that effective teaching, particularly at tertiary level, depends upon the individual characteristics of lecturers: "... what works for one lecturer may not work for another" (p. 4). Weimer (1990) suggested that there is no one correct or best way to teach, but instructional diversity contributes to the improvement of teaching. He further explained that lecturers need to explore "methods and strategies that fit the configurations of the content they must teach, the instructional setting in which the teaching occurs, and the individual dimensions of their own teaching style" (p. 133).

In an empirical study carried out by Liow and Betts (1993) to find out the perceived relationship between educational objectives and teaching methods, it was found that much university teaching is still lecture-based. They pointed out that, although lecturing is suited for some objectives on some courses, is not necessarily the best method of teaching. In other research, McKeachie (1990) suggested that discussion method tends "to be effective because students are actively processing material rather than passively listening and reading" (p. 197). More recently Brown (1993) described the utility of different methods of teaching in university as follows:

Lectures are effective, cheap, efficient methods of presenting information and providing explanations. Practical skills are obviously taught more effectively in laboratories but the underlying methodologies and theories may be taught as effectively and perhaps more efficiently in lectures and small group sessions. Small-group methods are usually better than other methods at promoting intellectual skills, including problem solving, and at changing attitudes (p. 221).

Each of the above methods seems more suitable for the fulfilment of specific purposes. Since delivery of information, discussion and analysing the subject matter and improving the ability of student in problem solving and life-long learning are needed for all of the subjects in universities, these methods should be used in reasonable proportion in teaching different subjects. Fuhrmann and Grasha (1983) also pointed out that probably there is no single way to teach all students. What teachers can do, however, is use the varieties of methods in which students can learn. The use of different models in teaching help to consider the individual differences among the students. Some of these variations which have an impact on classroom

learning are variations in intellectual capacity, emotional level, motivation, personal values, attitudes about learning, and social skills. Kerry (1992) also explained that, in considering the variety, teachers need to look first at the aim of the course. A lecturer should ask how the teaching and learning strategies employed will encourage the fulfilment of the determined aims and objectives. He further explained that a lecturer needs to try to involve the students in independent learning, addressing work-related problems, and real-life experiences.

Joyce and Weil (1986; 1996) also pointed out that there is no single model that is superior for all purposes, or even that there should be a sole methodological avenue to any given objective. They emphasised that teachers who are willing to be good teachers should try to learn teaching through identified methods. To teach effectively, they suggested that

the task of the [institution and] the teachers is to equip themselves with a basic variety of models of teaching that they can bring into play for different purposes, employ and adapt for different learners, and combine artfully to create classrooms and learning centres of variety and depth (1986, p. 402).

The use of variety in teaching was also suggested by McKeachie (1986). He commented that, as a result of existing interactions among student characteristics, teacher characteristics and goals of subject matter, using a variability of approaches in teaching, are more likely to be effective than a single method. Each method is likely to be effective in a specific condition for some students and ineffective for others. In spite of the advantages of using a variety of methods of teaching, McKeachie (1986) pointed out that some methods of teaching under specific conditions are better and more

successful than others. He said one of these conditions is the teachers themselves. This is probably because the capabilities and personalities of teachers are different, and not every teacher can use the same methods of teaching equally successfully. In general, according to McKeachie, et al. (1990) highly structured methods “work best for students with less prior knowledge or lower ability, [while] less structured methods are likely to be preferable for students with more prior knowledge or ability” (p. 9).

Boore (1993) also argued that the effectiveness of any teaching method depends on the commitment of lecturers and students to the activity. Any method of teaching requires different proportions of contribution from lecturers and students. He explained, for example, that in lectures

most of the preparation is undertaken by the lecturer, although the student still has some role. ... [In] seminars, students have a greater role to play in preparation. The lecturer is then responsible for ensuring that the students understand the roles they are expected to undertake and that the resources they need for their preparation are available (p. 204).

Therefore, the methods of teaching can be placed along a continuum, as suggested by Brown and Atkins (1988), in Figure 3.1. At one extreme of this continuum, the student participation is minimal and on the other the lecturer participation is minimal.

In terms of finding effective methods of teaching, a common question is whether lecturing is as effective as other methods of teaching. Brown and Atkins (1988) commented that effectiveness is best estimated in relation to the selected goals for teaching. They stated that, for example “lecturing is at

least as effective as other methods at presenting information and providing explanations" (p. 11).

Please see print copy for images



Figure 3.1: A continuum of teaching methods (Brown & Atkins, 1988, p. 3)

In response to the question 'what is the best method of teaching?', McKeachie et al. (1986) suggested that it depends on the goal, the student, the content and the teacher. Accordingly, a professional faculty member can select appropriate methods according to several factors such as the teacher's philosophy of teaching and his or her capabilities in teaching, students' ability and interest, objectives, material, class conditions, facilities and time available (Abrami, 1985; Brown & Atkins, 1991; Centra, 1993). Ramsden (1991b) made a similar claim when he pointed out that "good teaching usually includes the application of methods that demand student activity, problem solving and cooperative learning, yet it never allows particular methods to dominate" (p. 27).

More recently in an Australian national study, academic staff, students and university graduates nominated the following teaching approaches which

they felt did most to promote learning outcomes that translated into lifelong learning skills (Candy, Crebert & O'Leary, 1994).

self-directed and peer-assisted learning,
experiential and real-world learning,
resource-based and problem-based learning,
reflective practice and critical self-awareness,
open learning and alternative modes of delivery.

Candy, Crebert and O'Leary concluded that if academics put into effect the above approaches, the higher education system "would move a lot closer towards encouraging graduates to become lifelong learners" (p. 157).

It can be concluded from the literature that each method of teaching has its own advantages and disadvantages. For instance, in a certain situation, in which delivery of information is the main objective, the lecture is as good as or better than other methods; while discussion or role playing techniques may be preferable in a different situation, for example when problem solving is important. Although each method has a specific role and advantages and disadvantages in particular situations, their effectiveness seems dependent on the competence and the enthusiasm of the teachers in the study (McKeachie, 1986). For example, teachers who are capable in their field may effectively use discussion methods, because they are capable of responding to the questions which are raised by students. On the other hand less confident lecturers may prefer to use a lecture method. The use of different methods of teaching also depends on the kind of materials that have to be taught, a factor which McKeachie did not mention. However, nowadays, lack of resources in higher education is considered an important problem in universities. Class sizes are increasing, and some student abilities are decreasing and as a result the lecture method inevitably is being

used more than in the past. In this situation, strategies need to be developed, to improve the quality of lecturing to large classes.

The idea that teachers, themselves, by considering all conditions in their classes, must decide what is good practice, was supported by Shulman (1986) and Good and Brophy (1987). Good and Brophy (1987) argued that “there is no single formula specifying good teaching because research has not yielded definite teaching behaviours that are always clearly related to student achievement and because achievement is only one of many student outcomes that must be considered” (p. 529). Considering the advantages of each of the methods of teaching, Joyce and Weil (1986) warned of two mistakes. The first is the assumption that a method of teaching is a fixed formula that should be employed rigidly. The second mistake is the assumption that each student has a fixed style of learning. These authors pointed out that methods of teaching are flexible and students also have great learning capacities and adaptability.

However, among the different models of teaching, the teaching-principles model is based on the belief that “there are identifiable principles that provide valuable guidelines for effective teaching in a wide variety of instructional areas and settings” (Cole & Chan, 1994, p. 11). Cole and Chan also argued that this model has great utility, flexibility and effectiveness. It seems that the identification of principles of effective teaching in different methods of teaching, and trying to use them, could be of practical worth to improve teaching. These principles also can be applied to the development of any instruments related to teaching.

Summary: It is concluded from the literature reviewed in the first sub-sections that there is a relationship between attitudes and actions, or, according to Sergiovanni and Starratt (1993) people's actions usually reveal their assumptions and attitudes quite clearly. Therefore, lecturers' attitudes toward teaching can be considered as an indicator of the quality of their teaching. Additionally, these indicators can be a basis for staff-selection and professional-development programs to improve the teaching performance of academics. However, changing attitudes is only one of the factors in the process of teaching improvement.

Following a presentation of the existing definitions of effective teaching in sub-section two (3a.2), a range of criteria for effective teaching was reviewed in sub-section three. Although there is no consensus amongst researchers on these criteria, research outcomes and a variety of perspectives were presented in the literature reviewed. Some of the criteria mentioned were: well structured material, clarity of explanation, making the teaching more interesting and a high degree of learner activity. This review can be used as a basis for improving teaching and the development of relevant instruments to examine lecturers' attitudes toward teaching in higher education.

The lack of agreement which exists in the development of dimensions for effective teaching was also discussed in sub-section four. For the purpose of this review, the criteria of effective teaching were divided into five dimensions. They were: 1) lecturer-student interaction and rapport; 2) organisation, planning or structure; 3) grading and assignments; 4) work load, course difficulty; and 5) instructor enthusiasm. Finally, the different

viewpoints toward the best method of teaching in higher education were discussed.

The disagreement in opinions about criteria and dimensions of effective teaching may be related to several factors. These include the complexity of teaching, the diverse nature of teachers and learners, and differences in facilities, resources, expectations and situations in each context. The existence of these differences in educational environments requires specific and unique educational decisions for each. It is suggested that, if the criteria for effective teaching and effective teachers are to be examined and applied in teacher selection and training, then the best decisions for effective teaching in individual educational settings may be the professional responsibility of each trained teacher.

3b) Teaching Qualifications and Teaching Performance

Since the issue of acquiring teaching qualifications was introduced in the theoretical background of this study as possibly one of the most important factors influencing lecturers' teaching performance, it is important to discuss the matter from a variety of viewpoints. It is now proposed to discuss each of the three issues: professional approaches, recent institutional policies and evidence reported about teaching qualifications. The three issues are discussed by presenting a case for and against each proposition implied by each of these issues. Although the author has tried to provide evidence for an evenly weighted discussion, literature concerned with any case against requiring lecturers to have a teaching qualification has not been substantial. In addition, the present author in some cases could not readily determine under which of the three headings, the material is most appropriately placed. Subsequently, in sub-section four (3b.4) the objectives and ways of acquiring teaching qualifications at university are considered.

3b.1 Professional Approaches towards Acquiring Teaching Qualifications

Case for : Teaching is a profession, and professions derive validity from theory (Suppes, 1974). According to Ramsden (1993a) teaching improvement "requires the reflective application of theory about education, about teaching and about learning" (p. 42). This supports the opinions of Centra (1993) and Shulman (1986a) who point out that the scientific basis of teaching cannot be neglected. Their arguments suggest that universities should provide staff with opportunities for teaching development. Good teaching requires sophisticated and purposeful

preparation as it is "neither easy to acquire nor easy to practise, [and] should be seen as a highly professional activity" (Ramsden, 1993a, p. 42).

Again, Cannon and Widodo (1994) commented that "teaching is a complex professional activity [which] demands expert knowledge of teaching and learning process as well as knowledge of subject-matter" (p. 103). According to Gage (1976), educational researchers have come more and more to view teaching as a professional activity in which questions of what to do and how to do it hold equal importance. Many outside the walls of higher education are surprised that, unlike school teachers, academic staff are not required to undergo teacher training (Meikle, 1991). Although according to Griffith (1993) necessary attempts have been made to redress the lack of teacher training in higher education, "a system that continues to allow so many of its members to practise without training must surely call into question the very definition of a profession" (p. 250).

Newble and Cannon (1995) pointed out that "whilst not denying the great importance of skill and knowledge in [one's] own field, it is necessary to counter the prevalent attitude among many of our colleagues that it is the only important characteristic of the effective teacher, [and] it is essential to be competent in the other factors as well" (p. 2). Both the development of knowledge of the subject and knowledge of pedagogy are important for improving teaching. The influence of both factors on teaching improvement should not be under- or over-estimated (Shulman, 1987). That the need to acquire a teaching qualification is regarded as essential does not negate the importance of mastering subject matter. Conversely, "the general public and those who set educational policy are in general

agreement that teachers' competence in the subjects they teach is a central criterion of teacher quality" (Shulman, 1986b, p. 25).

Mastery of subject matter is not usually a problem for lecturers in universities (McKeachie, 1996). However, McKeachie argued that the kind of knowledge that they require is not simply knowledge as research scholars but 'teaching-knowledge' of the subject. In an earlier study involving 55 new lecturers in one Australian university, Dunkin (1990c) found that, while they were competent in their subject matter, new lecturers lacked confidence in matters which were most closely associated with pedagogical skills. This result meant that, just as lecturers should learn their subject matter, they should also learn how to teach it. It seems there is a conflict in teacher-training programs in universities between helping academic staff 'learn to teach' and 'learn about teaching' (Shuell, 1996). In response to this matter, McKeachie (1996) argued for "a need to do both, and some combination involving actual teaching along with conceptualisation is optimal" (p. 7).

University teaching is one of the most difficult jobs in higher education. It aims to support students in reaching their highest possible level of learning. In practice, this means that staff are responsible for the management for subjects, of teaching and for student assessment. Often lecturers must deal with a diversity of students who often are unprepared or under-prepared with inadequate facilities and with limited resources (Tsunoda, 1992). There are less-well prepared students entering universities these days (Meyer, 1993), so they should be perhaps helped more by lecturers to become autonomous learners. This is an important responsibility which lecturers themselves should learn how to meet. On

the other hand, the demands upon academic staff are increasing as university budgets are reduced.

The review in 3.b.4 of this chapter indicates that an effective lecturer, in addition to being master in his or her subject matter, must be trained in preparing lectures, be able to encourage questioning and discussions, be enthusiastic about subject matter and teaching and be able to help students learn to be independent. This implies that acquiring teaching qualifications can help teachers to improve their performance in most of the above-mentioned areas. Therefore, it is argued that the acquisition of teaching qualifications is necessary for all or at least most who want to become competent lecturers. It is reasonable to ask what kinds of programs are needed to develop academic staff professionally for this complex set of tasks. The response to such a question may be translated into a need for academic staff with “strong professional, pedagogical, and technical skills to teach adult students with diverse heritages, socioeconomic background, goals and abilities” (Tsunoda, 1992, p. 13). In other words, lecturers need expertise in the skills in the delivery of teaching and the facilitation of learning, as well as having expertise in the subject or subjects to be taught.

Furthermore, teaching excellence is not a “mysterious talent or vague quality; it can be recognised as a stage of professional growth” (Sherman, 1987, p. 80). This is to say that lecturers can improve their teaching approaches, and can modify their curriculums (Gow, 1992). These statements clearly support the idea that teaching is learnable and has a theoretical framework. Although the personalities of some people are better suited to teaching than others, good teachers are not necessarily 'born' as gifted teachers. If academic staff accept this principle that good

'teachers are born, not made', they may assume that improving their teaching is beyond their power. Many researchers for example, Shulman (1986b; 1987) and Newble & Cannon (1995) acknowledged the learnability of teaching.

Lowman (1991), after a discussion about the skills and abilities which each lecturer must master, concluded that these abilities can be learned, though not necessarily equally well by all. This position was supported by Dunkin and Biddle (1974), who pointed out that the entire process of teacher education "is founded on the assumption that we can improve teaching practices by providing appropriate educational experiences for young teachers" (p. 49). Although between early-childhood, primary, secondary and tertiary levels of education there are obvious differences in teacher characteristics, teaching methods, and facilities, such differences are not sufficiently large to reduce the importance of acquiring teaching qualifications by academic staff in universities. No matter how great the discipline expertise of the individual lecturer, there exists a need to communicate the essential knowledge, skills and attitudes to students. This suggests that special skills, strategies and methods should be developed for one to become an effective university teacher.

Case Against: According to Ramsden et al. (1995, p. 17), "while university teaching is sometimes said to be one of the oldest professions, it also lacks some of the features that normally characterise professions". They referred to such arguments as the lack of a prescribed period of pre-service education, supervised practical experience and in-service education. Dallat and Rae (1993) also noted that "for a variety of complex reasons, universities have generally failed to recognise the value of teaching in

higher education and, until comparatively recently, have done little to improve the quality of the teaching that occurs within their institutions" (p. 283). In 1993, Dallat and Rae identified university teaching as the only profession in England where there was no recognised or required course of training.

Universities have been guided by the 'dictum' that if lecturers know the material, they will teach it effectively (Marx, et al. 1978). It is likely that one of the reasons for the lack of attendance of some academic staff in teaching-development activities is (the 'myth') that knowing a subject well is sufficient training to teach (Stevens, 1988). Fitch (1981) suggested that academic staff need receive no formal training whatsoever in university teaching, and Biggs (1989) reported that "many tertiary teachers, particularly those in the pure or basic disciplines, react quite negatively to suggestions that they should attend courses on tertiary teaching" (p. 15). These lecturers argue that good teaching relies on the quality of the content, not the process of teaching. In other words they say that good teaching must come back to the content of what is learned, and that acquiring teaching skills is not necessary for university lecturers. Furthermore, there is a point of view that students are adults and should be able largely to learn by themselves, even if with guidance. Supporters of this view tend to suggest that acquiring a teaching qualification is not important.

Others argue that they can find appropriate methods of teaching through models encountered in their previous experience, often the methods of their own teachers, or by observing and communicating with other colleagues (Biggs, 1988, 1989; Dallat & Rae, 1993; Moses, 1993; Dunkin, 1995). However, "one could never say that the knowledge of teaching these people

acquire is scientific knowledge" (Dunkin, 1995, p. 22). According to Moses (1993), relying upon experience unfortunately means "the experience of how they were taught, not how they learnt best, enjoyed learning best, were challenged or stimulated most" (p. 184).

3b.2 Institutional Policy on Teaching Qualifications

Case for: Newly released policies suggest that teaching development is being encouraged increasingly in Australian universities. For instance Martin and Ramsden's review (1994) indicated "an expanding emphasis on the development and training of new academic staff as teachers [and the education of] appointed members of staff in the fundamentals of effective teaching practice" (p. 1). They reported that these policies are now more generally accepted as "one of the necessary conditions for improving the quality of curricula, course delivery, and the outcomes of student learning" (p. 1). In England agencies such as the Staff and Educational Development Association (SEDA) have established criteria for the accreditation of teacher training programs (SEDA, 1995). Additionally, Ramsden et al. (1995) reported that "there are moves in the UK and in Australia towards making a period of in-service teacher education compulsory for all university teachers" (p. 18).

Furthermore, almost every Australian university has established a centre for improving the quality of teaching (Dunkin, 1995) and a number of institutions "have gone to considerable lengths to ensure that teaching performance is an important criterion in decisions concerning appointment, tenure and promotion" (Dunkin, 1995, p. 21). Among the other policies and actions revealed are the "establishment of a system of

awards for excellence in teaching; [and the] establishment of a committee at the national level for the advancement of university teaching" (p. 506). Wright and O'Neil, (1994b) also reported that there is a widespread belief in a number of countries that tertiary institutions must put a greater emphasis on teaching. This teaching-improvement movement which has taken place in higher education can be considered a good indicator of the necessity for acquiring qualifications for teaching in higher education.

There is an increasing emphasis on the importance of the teaching role and the advancement of teaching abilities of lecturers. This is indicated by the emergence of awards for excellence in teaching and national initiatives for the development of innovative teaching in countries such as Australia, the United Kingdom and some other European nations (Brew & Boud, 1996). As a result of the policies of European governments in recent decades, the status of teaching in universities is changing. These policies have changed the balance between time spent on teaching and the time spent on research, in some universities, in the direction of teaching, which some regard as more valued (Wubbels, et al. 1996). Furthermore, "mass education places the quality of teaching higher on the political agenda [and] quality of teaching at universities has become one of the main criteria for their funding" (p. 1). In such a situation the acquiring teaching qualifications for academic staff seems a reasonable requirement. More recently Gibbs (1996) reported that a voluntary approach to teacher training in universities is being replaced by compulsory programs. He also reported that in many universities acquiring a teaching qualification is being linked with personnel decisions regarding promotion, tenure or the appointment to particular academic positions.

In the U.K., there exists a pressure to increase the quality of teaching and learning in higher education. This pressure has led over 50 higher-education institutions to implement an entirely voluntary teacher accreditation scheme for their institutions (Baume & Baume, 1996). The institutions have accepted the national scheme developed by SEDA to improve the quality of teaching. Baume and Baume (1996) reported that over six hundred academics were undertaking recognised programs or were already accredited by SEDA. Under this scheme the lecturers who successfully completed the recognised courses were accredited. Accredited lecturers had to demonstrate that they met all of the developed objectives of the scheme such as ability to design a teaching program, use a wide range of teaching and learning methods and use appropriate assessment techniques (SEDA, 1995). In Australia there is also a trend toward the accreditation of universities, the Queensland University of Technology having already gained SEDA accreditation.

Moses and Trigwell (1993) reported that Australian commentaries of higher education suggest that recent employers are more interested in employing graduates with more than just subject competence. They “require people who are also analytical, creative thinkers, attuned to the need for lifelong learning, flexible, good communicators, and are sensitive to social contexts” (p. v). It is questionable how lecturers who do not themselves acquire such attributes can teach and train the students. Therefore, these requirements can be considered as another reason for the necessity of acquiring teaching qualifications for academic staff. Furthermore, most lecturers now teach some large classes with increasingly diverse students in ability, background, culture and motivation. Therefore, it can be argued that they should acquire the variety of teaching skills needed to run their courses effectively. This

point was also raised by university students who suggested that pedagogical qualifications be given consideration when making new appointments (Raaheim, 1991). This suggestion was also raised by the Scottish Union of Students who “urged universities to provide courses on all methods of teaching for their staff and to give greater consideration to teaching ability when appointing and promoting academic staff” (Dallat, 1993, p. 270).

Changes and transitions which occur in educational expectations, teaching theories and methods, new facilities which are provided for tertiary education and new conditions which govern tertiary education, all imply a need for appropriate changes in curriculum design, teaching methods and academic staff perceptions. According to Saul (1990) these changes “require a well-trained work force with the ability to acquire new skills, attitudes, and behaviours at a significantly faster pace in order to remain competitive in a global economy” (p. 51). However, since many academic staff are not trained to teach they may not feel confident about their ability to change the way they teach (Weimer, 1990).

More recently, when programs of university teachers in USA and UK were reviewed by D’Andrea (1996), she reported that the key elements of current practice in the two countries included the accepted need for development of pre-service and in-service programs for university teachers. Similarly, Bok (1986) President of Harvard University stated that staff development programs need to be a part of institutions of higher education. He stated that

many faculty members need help, and efforts to give such help must play an important part in any comprehensive program to improve the quality of instruction. Furthermore, even if professors teach well at the

moment they are tenured, there is no guarantee that they will continue to do so during their decades of service thereafter (p. 239).

Case against: Most tertiary teachers in Australia and other parts of the world traditionally are employed without having acquired formal or informal teaching qualifications (Matheson, 1981; Weimer, 1990; Dallat & Rae, 1993; Griffiths, 1993; Moses, 1993). More than that, a large proportion of PhD students start teaching in colleges and universities “never having taught before and never having any formal instruction in how to teach” (Weimer, 1990, p. 9). Martin and Ramsden (1994) studied the policy of 11 Australian Universities regarding teaching improvement. They reported that, in spite of distinctive needs of new and less experienced academic staff for acquiring teaching skills, universities did not provide academic staff with enough support to develop their competence as lecturers. Martin and Ramsden reported that there is still no clear definition of a course of teaching methods, and no agreed-upon responses to the following important questions:

Is it a short series of workshops on classroom technique? Is it one part of a general orientation program? Is it a stage in a long process of professional development? Should it occur before a person has started teaching, or after? Should it provide, or count towards, a qualification in teaching? (p. 57).

In 1988 Stevens reported that “the established reward structures in colleges and universities frequently emphasise research productivity rather than teaching ability. Tenure and salary are often based more on research than on teaching merit” (p. 63). However, more recent research by Wright and O’Neil (1994a; 1994b) supports the assertion that teaching should be

considered for tenure and promotion, in order to improve the quality of teaching in universities. It is obvious that, if promotion and salary are largely contingent on research productivity, academic staff will be challenged largely in that direction. If achievement in research is the only criterion for increasing academic rank and position in universities, the consequence, in practice, will be academics who consider research and publication as their priority rather than teaching, even for lecturers who may regard teaching as very important. Although involvement in research can help to improve the quality of teaching, excellence in research does not guarantee excellence in teaching (Wubbels, et al. 1996). It means that universities must establish a reasonable status for teaching. The first priority of a particular university or research institution may well be research. But if teaching is considered as equally important as research then the development of teaching skills must be given equal status to research skills. For instance, while Doctoral students, theoretically and practically, learn a significant amount about research methods during their study at the university, there are generally no training programs for them in teaching. Obviously only some of these students will be university teachers in their future careers, but all of them are potential teachers.

Although the sustained emphasis reported in many countries such as USA, Australia, UK and some other European countries on improving the abilities of academic staff in teaching is necessary, this emphasis need not distract attention from other roles of academics, such as research. Considering this point, Brew and Boud (1996) suggested that “academic preparation and development must be viewed holistically, “[covering] diverse aspects of the academic role - teaching, research and administration” (p. 12). It seems the university communities must learn from the past:

appropriate status is advisedly given to both teaching and research in universities, neither to be over- or under-valued.

3b.3 Evidence Referring to Acquiring Teaching Qualifications

Case for: Much research suggests that the acquisition of teaching qualifications is significant for the improvement of teaching and student learning (Berman & Skeff, 1988; Biggs, 1989; Weimer, 1990; Dunkin, 1990a; Sparks & Bradley, 1991; Elton & Partington, 1991, 1993; Gow, 1992; Dallat & Rae, 1993; Griffiths, 1993). Martin and Ramsden (1994) reported from subsequent studies that “new staff generally found their teaching responsibilities to be difficult and stressful. Their anxieties and their inexperience in teaching and managing demands on their time added to their stress” (p. 2). Kugel (1993) also reported that beginning lecturers “have been taught a lot about the subject they are about to teach, but little about how to teach it” (p. 317). Kugel for example, said that new lecturers often talk too fast or speak unclearly or they cover too much material or too little in their subjects. Then he suggested that beginning teachers have a lot to learn about designing courses, preparing for classes, delivering instruction, managing discussion, developing good assignments and examinations, marking and grading. In spite of the importance of acquiring teaching qualifications, especially for new academics, most universities consider principally the discipline expertise of the new staff in their staff selection. Martin and Ramsden (1994) suggest as a part of quality management strategies, that “universities should demonstrate much more active commitment to improving the teaching of their new academic staff” (p. 59), and promoting the acquisition of teaching qualifications.

As one example in a study of Simon Fraser University in Vancouver when 15 hours of instruction on principles of learning and teaching were evaluated, "participants were perceived by their students to be better tutorial leaders and more willing to improve their teaching" (Dunkin & Barnes, 1986, p. 773). Although students can evaluate some of the teaching components (see 3.d), it is debatable how much the students really know about some aspects of curriculum, for example. Furthermore, a study by Dunkin (1990a) showed that more than 80 per cent of lecturers who participated in development activities such as workshops on teaching rated the activities as helpful. It is argued here that it is the responsibility of lecturers and their institutions to develop the ability for effective teaching. For example, the lecturers' weaknesses in teaching could be overcome by attendance at teaching courses or workshops at the beginning of their employment or by in-service programs. It is acknowledged here that attending such courses is one of the conditions for improving teaching.

In another study which was carried out by Dunkin (1995) at the University of Sydney to compare beliefs of novice and expert academic staff about the nature of teaching effectiveness, he concluded that "it seems utterly reasonable that the acquisition of a wide range of concepts about teaching [is one] of the distinguishing marks of excellence in university teachers" (p. 32). This opinion supports the argument that academic staff should acquire teaching qualifications for improving their teaching performance. Teaching-improvement programs are not only for new academics, since mature academics also have more diverse needs. According to McKeachie (1996) some mature academics "are eager to learn about innovations in teaching, others want to think more deeply about the goals of education or to learn the latest developments in cognitive and motivational psychology"

(p. 17). Interested people in all professions seem to tend to keep themselves up to date. The above opinion supports the idea that universities need to equip their lecturers with training in pedagogical principles and skills. However, according to D'Andrea (1996) "higher education is long overdue to consider the issue of pedagogical preparation for those who teach in universities" (p.1).

Seldin and Annis (1991) pointed out that for a long time all over the world, most academic staff have been evaluated and rewarded for their research productivity, while their teaching performance has been largely ignored. Now, the situation is changing in many countries and teaching is considered an important criterion for academics. New academic staff increasingly participate in induction courses and other kinds of programs to be trained for university teaching (Lally & Myhill, 1994). Gillett (1995) also recently reported that many Australian institutions "encourage academic staff to apply for promotion on the basis of excellence in teaching, and across the country staff-development programs and graduate award courses have appeared" (p. 506). In addition some Australian universities offer graduate certificate courses which integrate professional teaching practice with theory (Moses 1993).

Case against: Stevens (1988) reported that the academic culture does not view teaching "as an endeavour to be examined, discussed, and reviewed. Professors are part of a community of scholars with whom they share their ideas about research. However, a community of teachers rarely develops; teaching remains a private affair between professor and student" (p. 64). In addition, many lecturers rely heavily upon their prior teaching experience while they are teaching (Dunkin, 1990c). This might be one of the reasons

that some tertiary teachers are reluctant to attend teaching improvement programs. For instance, Raaheim (1991) reported that teaching-improvement courses have been offered for academics in some countries without much success. The courses were attended “by very few and often only by those who least of all need to alter their educational practice” (Raaheim, 1991, p. 24).

Stories with some sad consequences due to the insufficient educational skills of lecturers are reported in the literature. Research reports that the traditional mode of instruction has been that of the “one person talking and the many listening ... [Students] write much and understand little” (Radloff & Sampson, 1988, p. 4). Although lecturing is one of the methods of information delivery, it is based on ‘reception learning’ which is only one of many kinds of learning, albeit a useful one (Ausubel, 1963). Weimer (1990) reported that there are full professors who are expert in their subject matter, who get books and articles published and do research and receive grants, but since they cannot present and deliver lectures appropriately to students, their course enrolments remain consistently low. He claimed it is obvious that they do not want to teach badly, even the ones who do teach badly. It was also reported by McKeachie (1986) that, while many faculty members are excellent researchers and excellent teachers, some excellent researchers are poor teachers. Each qualified inquirer is not necessarily a good teacher. Since the efficiency of lecturers who are excellent in teaching as well as research is better than others, programs should be established and required for improving teaching and awarding qualifications.

In spite of the increasing attention toward teaching improvement in university, Lally and Myhill (1994) reported that still it seems most current

academic staff get their ideas or models of teaching from their own previous experience, first as a student and then as a teacher. In other research Matheson (1981) even reported that universities “have long rejected any idea that academic staff require any formal training in any matter other than their subjects” (p. 3). In addition, although teaching improvement programs are widespread in universities and generally approved, Maxwell and Kazlauskas (1992) added “yet they muster only moderate or even little participation, often are relatively ineffective, and have particularly little impact on those who most need to improve their teaching” (p. 352).

3b.4 Objectives and Ways of Acquiring Teaching Qualifications

The following aims are typical of programs which are offered by centres for staff development to improve university teaching and award qualifications:

- To enhance participants' understanding of teaching and learning processes so that they can make appropriate and informed decisions about course design and choice of teaching, learning and assessment methods;

- To provide participants with an opportunity to reflect on their practice and enhance their pedagogical skills, hence improving the standard of teaching and the quality of student learning in their institutions;

- To establish a network of support among participants that will enable them to conduct their teaching duties with a greater degree of confidence, understanding and satisfaction;

- To recognise and enhance the value of teaching in higher education (Dallat & Rae, 1993, p. 277).

Similarly, Piccinin and Picard (1994), after examining the course outlines which are offered for teaching assistants in Canadian universities, pointed out that the objectives of these courses fall into the following three categories:

- 1) theory and research on learning and teaching,
- 2) development of skills in applied teaching,
- 3) philosophy of higher education and professional and ethical issues (p. 63).

The first category includes theories of learning and teaching and writing course objectives and preparing syllabi, as well as topics in educational measurement. Issues such as leading discussions, lecturing, design and use of visual aids, building rapport and building classroom climate, preparing assignments, tests and examinations and evaluating students are introduced in the second category. In the third category aims and goals of higher education, philosophy of teaching, faculty development and ethics in university teaching are addressed.

Understanding the principles of learning and how they relate to university teaching is clearly important. This was mentioned by Dallat and Rae (1993), and also by Piccinin and Picard (1994). Teaching and learning should be linked together in any teaching-improvement program.

A variety of ways to improve university teaching and to train academic staff is reported in the literature. However “which practices are most cost effective and how best to involve faculty members in appropriate activities at different stages of their careers are among the future issues that need to be addressed” (Centra, 1989, p. 174). Recently this topic has, as has been shown, been considered by many researchers and universities and several approaches have been implemented. Some of these are now described.

Centra (1993), after collecting several syllabi of teaching-improvement courses in university teaching for graduate students offered in the USA, pointed out that the following are some of the most effective practices for teaching improvement and qualifications:

- 1) videotaping students as they employ different teaching methods, then criticising their performance.
- 2) using case studies and vignettes to apply concepts and principles and to analyse complex teaching situations.
- 3) having students maintain course logs that include reflections on their own presentations and growth during the course, as well as comments on class discussions, readings, and other assignments.
- 4) having students observe exemplary teachers, then using written descriptions of the observations in class as a basis for discussion on different successful teaching styles.
- 5) having students read about and discuss student learning styles and the nature of human learning.
- 6) teaching students what a course syllabus should contain.
- 7) suggesting ways to evaluate one's own instruction and student learning in a course (p. 18).

In another study conducted in 51 Canadian Universities by Wright and O'Neil (1994a), those individuals who were primarily responsible for teaching improvement were asked to rank 36 practices which they thought had the greatest potential to improve teaching at their respective institutions. The survey results provided a considerable insight into the perspective of key role players in teaching improvement, at least in Canadian higher education. The preferred activities were grouped into nine categories as follows, in priority:

1. Employment policies and practices,
2. Deans' and heads' interaction with faculty members,
3. Senior administrators' support,
4. Educational events such as workshops and conferences on teaching,
5. Structure and organisation, such as centres for improving teaching,
6. Development opportunities such as attending teaching conferences and leave for study,
7. Formative evaluation of instruction,
8. Developmental resources such as mentoring programs and expert consultation, and
9. Summative evaluation of instruction.

The findings of this survey suggested that the provision of incentives to lecturers in the form of employment rewards, is the most acceptable way to improve teaching. The creation of a supportive environment by deans, heads and senior administrative staff in which effective teaching is encouraged, is another important strategy for improving teaching in university.

Reading about teaching, videotaping and microteaching, attending seminars and workshops of teaching, discussion groups, private conversations, instructional observation, feedback activities with students and the use of instructional grants such as developing supplementary materials and audiovisual illustrations are other methods which can positively affect the quality of teaching (Weimer, 1990). The most common type of teaching-improvement program in Australian universities focuses on providing a training course in basic teaching techniques such as lecturing, running small groups, and assessment skills. Some of these courses include theoretical material on principles of teaching and learning (Martin & Ramsden, 1994).

It seems questionable why only some teaching improvement programs included theoretical issues. Although focusing on practical issues is important (and practice necessarily should be part of any teaching-improvement programs), knowing some theories of teaching and learning is also essential.

When 212 academic staff from all Departments of a single large university were asked about their willingness to participate in different types of teaching-improvement methods, over half indicated an interest in undertaking a videotaped review of their lectures, a faculty peer review, professional development and student evaluation (Berman & Skeff, 1988).

In recent years, the Educational Methods Unit of Oxford Brookes University has offered a Certificate in Teaching in Higher Education for its new academic staff. The course comprises nine modules of which six are compulsory and three are chosen from six optional modules. Each model is run over 12 hours with two projects of 20 hours work. The modules include lecturing, audio-visual aids, small-group teaching, course designing, learning packages, evaluating teaching, assessment and course design (Dallat & Rae, 1993). Although programs are becoming modularised and more flexible in teaching improvement for universities, such programs are not a common teaching development in universities. In addition, it seems the combination of practice and theory in the lecturers' context is not strong in these models. As mentioned above, the marriage of theory and practice, which is one of the strongest points in teaching improvement programs, might not be considered as much as it should be.

Following their review of several reports of teaching-improvement programs, the following recommendations were made by Martin and Ramsden (1994) to help new academic staff to solve their difficulties in their first year of teaching in universities, and gain qualifications. These included developing courses for new staff, including "orientation programs and courses over longer periods; more co-operation at both institutional and departmental levels through developing mentoring systems where senior staff helped and guided new staff, and taking more care designing appropriate teaching loads [e.g., lighter loads] for new staff" (p. 2). Similarly, a series of recommendations was suggested by a commission which was conducted to improve the quality and status of teaching in Canadian universities. Among them, were increasing the teaching training for graduate students, the expansion of faculty development opportunities in universities, funding for pedagogical innovations; and encouraging teaching evaluation and rewarding teaching effectiveness (Wright & O'Neil, 1994a).

In contrast with the above, Menges (1994) reported that lecturers believe that new ideas about teaching come more frequently from their colleagues than from readings or workshops about teaching. He suspected "this is because conversations with departmental colleagues are likely to cover content as well as method" (p. 302). Moreover, it is possible that lecturers from a particular field are familiar with their fields and can communicate better and can refer to relevant examples. Probably discussion and consultation with experienced colleagues who are familiar with teaching methods in their own discipline are more useful than with staff developers who are familiar only with teaching methods. Maxwell and Kazlauskas (1992) also pointed out that teaching-improvement programs often emphasise general

teaching skills, whereas lecturers tend to be concerned with specific teaching tasks, related more with their disciplines. Consequently, programs which are offered by professional, discipline-based associations appear more promising. When these programs are offered to postgraduate students who are likely to become lecturers, experienced academics could train them with a “firm educational foundation and subject mastery [to become] scholar-teachers with the compassion, understanding, and technical skills to teach a particular discipline” (Tsunoda, 1992: 16).

But there are some difficulties with discipline-based programs. If the best lecturers are chosen for directing these discipline-based teaching-improvement and mentor programs in universities, the above problem might be reduced. But departments with a strong research culture seem unenthusiastic about teaching-improvement activities. Teaching-improvement programs tend not to be rewarded. On the contrary, they might be opposed by some academics. Another difficulty with discipline-based teaching improvement is that the selected mentors from each discipline may reinforce their own unacceptable methods of teaching, to those who want to learn how to teach effectively.

Another method to improve teaching performance is formative evaluation where all of the information obtained from students, colleagues, or specialists, is discussed with the lecturer and is meant to improve teaching programs and teaching performance. However, Centra (1993) pointed out that this does not always lead to improvement in teaching. He pointed out that significant teaching improvement is likely to take place if the evaluation fulfils four conditions, which he named as (1) new knowledge, (2) value, (3) how to change, and (4) motivation. He explained that

through formative evaluation the teachers must first learn something new about their teaching performance. Secondly, they must value the information; this generally means they must have confidence in the source and in the evaluation process. Thirdly, teachers must understand how to make the changes called for; and finally, teachers must be motivated to make the changes (p. 9).

Centra represented his proposal in the following diagram (Figure 3.2).

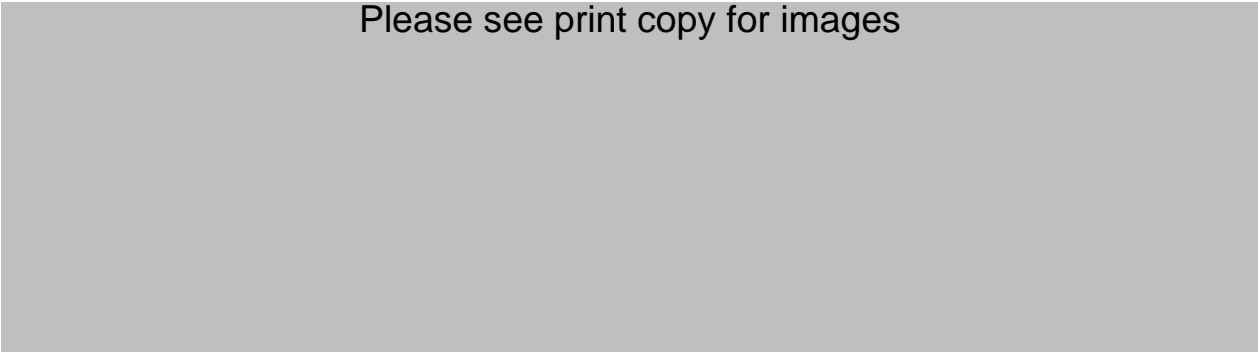


Figure 3.2: The NVHM model for change (Centra, 1993, p. 15)

Traditionally, any teaching-improvement programs in universities tended to comprise short courses with a very specific focus such as lecturing or audio-visual aids with an emphasis on the practical rather than the theoretical aspects of teaching. Though acknowledging the usefulness of short courses, Piper (1988) argued that they do not make a sound training strategy for university teachers. In order to provide a quality professional training for academic staff, he suggested the establishment of a two-year award-bearing course. Similarly, in regard to presenting suitable activities for improving the quality of teaching of less experienced staff, Martin and Ramsden (1994) pointed out that “the most effective programs are characterised by the holistic, experience-based approach, wherein skills, reflections, and the experience of actual teaching are integrated within a cooperative learning environment” (p. 59). In terms of the length of these programs, they recommended that the programs should be carried out “over a period of at least one semester, and preferably, one year”. Based on

more recent evidence and research, Gibbs (1996) reported that “there is more consensus about the content of preparing programs than about the standards they should achieve. Most want to produce competent [university] teachers but few had a definition of competence that others could agree upon” (p. 4).

Talking about teaching, observing other teachers, and reading journals on college teaching, are other ways to improve teaching. According to McKeachie (1986) one of the best methods is receiving advice from colleagues. Ramsden and Dodds (1989) also suggested that “debriefing with a colleague after a class or course is a worthwhile activity if it is carried out jointly and sympathetically” (p. 38). This is because teaching can be improved by eliminating weaknesses and emphasising strengths. Unfortunately some teachers seem reluctant to discuss their teaching methods with their colleagues or to ask for advice in handling teaching problems.

It should be noted that the policies and ways of improving teaching mentioned above, should include as clients both lecturers and teaching assistants, since teaching assistants also play an important role in most major universities (Piccinin & Picard, 1994). These authors also pointed out that “improving the teaching assistants’ experience may be the most important and accessible way to have a long-term impact on teaching improvement” (p. 116).

Martin and Ramsden (1994) argued that running short courses or workshops such as lecturing, running tutorials and giving feedback to students, is not a very efficient use of educational development resources. They commented that the academic’s needs encompass “establishing

confidence, experiencing collegial support, learning to focus on what helps students learn, and having time to develop and improve" (p. 58). The following recommendations were extracted from reviewing literature about how teaching improvement in universities can lead to successful programs for improving teaching:

- 1) encourage staff to become immersed in learning about teaching;
- 2) reward and support risk-taking;
- 3) make no sharp divide between theory and practice;
- 4) develop peer supports such as co-teaching and mentoring;
- 5) require a high level of independent reflective activity; and
- 6) encourage staff to learn how to see the teaching process from the perspective of students (Martin & Ramsden 1994, p. 7).

Effective implementation of these strategies must be considered a long-term goal, and are not to be fulfilled in a few days of courses. More recently, Gibbs (1996) in reviewing recent improvements and changes in university teaching training, reported that "there is a growing consensus in higher education in Europe and Australia that in the current political climate about 200-250 hours is a reasonable allocation for initial training leading to a qualification" (p. 3).

3b.5 Other Issues Relating to Teaching Qualifications

Finally, in this sub-section some of the important points are considered in relation to acquiring teaching qualifications.

Creating a desirable environment which nurtures and recognises the development of teaching, appears to be one of the important and necessary steps to improve the quality of teaching in universities. Such

environments would include support for mentoring and co-teaching programs for academic staff (Martin & Ramsden 1994). Berman and Skeff (1988) also pointed out that the successful implementation of teaching-improvement programs depends on the removal of barriers, either institutional or individual in nature. It is argued that it is not enough for senior scholars in universities to advocate the importance of good teaching. Meaningful rewards, arising out of a suitable institutional environment, are necessary for teaching improvement activities. Elton (1993) also suggested that teaching-improvement can only be achieved through the joint commitment and effort of all those inside the universities. What this requires over the next few years is "a rapid increase towards the professionalisation of university teaching and increasing recognition and resourcing of teaching and rewards for excellence in it" (p. 145).

A high level of institutional and departmental support from the staff-development programs for new, inexperienced academic staff is considered a crucial factor in successful programs (Fox, 1989; Sorcinelli & Austin, 1992; Boice, 1992). For instance, if the teaching loads of new academic staff are reduced, they can spend more time in staff-development activities, or they may be more willing to receive assistance from senior colleagues or heads of departments. Owens (1991) pointed out that intrinsic and extrinsic rewards are necessary for motivating academic staff. He added "all widely accepted contemporary theories of motivation agree on one point: extrinsic rewards have, at least, limited power to motivate people and intrinsic rewards are essential in order to develop highly motivated workers" (p. 128). However, motivation is only part of the solution; continuous practice, feedback, and coaching in teaching improvement are essential to enable even highly

motivated persons to be trained and acquire the necessary skills (Joyce & Weil, 1986).

The findings of Wright & O'Neil's study (1994a) indicated that "a successful comprehensive teaching-improvement strategy should aim to have an impact on the educational environment of the entire institution" (p. 49). Cannon and Widodo (1994) also commented that improving teaching is much more than changing lecturers' approaches to teaching. According to them "it is also about developing institutional policies and reward structures that require, encourage and support teaching quality at all levels of the universities' operations" (p. 107).

Establishing a quality system in staff development will not, however, guarantee the quality of training in university teaching. Quality relies on both a well planned system and the encouragement of an environment that is seen to be compatible with excellence (Griffiths, 1993). Bok (1986) also pointed out that, in order to improve all academic programs at all levels in the university, the creation of an environment that rewards and encourages better teaching is very important. He further explained that building such an environment requires the following incentives and rewards:

- 1) Paying serious attention to the quality of teaching, in addition to research, in deciding on appointments and promotions.
- 2) Encouraging careful, systematic student evaluation of courses that will help instructors discover areas in which their teaching and course materials need improvement.
- 3) Offering grants to faculty members wishing to make their courses better or to experiment with new methods of instruction. Such support

will be especially important in encouraging new uses of computer technology that can help students learn more effectively.

4) Assisting young professors [lecturers] and graduate students to develop their teaching skills (p. 174).

One of the barriers in the way of teaching improvement is the attributes of academics. Weimer (1990) pointed out that "often rigidly held assumptions and beliefs about teaching and learning are resistant to change" (p. 3). Some of these beliefs are: 'if you know it, you can teach it'; 'good teachers are born'; and 'academics teach content'. According to Berman and Skeff (1988) if universities wish to promote intrinsic motivation toward teaching, "they must address the many attitudinal factors presumed to contribute to faculty resistance" (p. 115). For instance, there is an argument that the beliefs that 'good teachers are born, not taught' or 'subject knowledge is the only qualification for becoming a good teacher' should be modified. It is likely that one of the reasons for lack of attendance of some academic staff at teaching-development activities is the assumption that knowing a subject well is sufficient training to teach (Stevens, 1988). It seems useful that, regardless of which methods are used to fulfil the staff-development programs, before any action, participants should be aware of the benefits and the necessity of these programs. On the other hand, some academics have an attitude that most of the responsibility of learning lies with students; and this attitude should also be considered. Although many scholars believe that a prior responsibility of a lecturer is to have students become good, autonomous learners, lecturers still need to know how to guide the students to become independent and life-long learners.

In addition, to increase the lecturers' participation in teaching development activities, it is more effective to motivate than force. This is because motivation not only moves behaviour, it also directs behaviour (Biggs, 1991). Any improvement in teaching effort must begin with the issue of lecturers' participation. Many academic staff are not motivated to improve their teaching (Weimer, 1990). Accordingly, before arranging any program for improving teaching in universities, the lecturers' attitudes toward teaching and its improvements should be acknowledged and lecturers should be exposed to alternative attitudes. Creating motivation and explaining about the importance of these kinds of training programs is probably more effective than compulsion. Other barriers of teaching development activities must be seriously considered when the activities are planned. For example, when 212 academic staff from all Departments of a single large university were asked about resistance to teaching improvement, many lecturers raised the issue that they "are too busy to participate in teaching-improvement activities and that teaching is not adequately rewarded to stimulate the desire to participate" (Berman & Skeff, 1988, p. 124).

Furthermore, since characteristics of academic staff differ, as do the kinds of learning they require, their favoured methods for teaching improvement might differ too. So, rather than developing a single approach, a variety of methods to address the unique needs of academics and institutions is necessary (Berman & Skeff, 1988). To support the variety and focus of individuals, Kerry (1992) suggested that an academic should be the controller of his or her own learning destiny. But he added that "this does not mean that a college cannot and should not require some kinds of professional development to be undertaken by its employees to meet

institutional and authority needs: indeed, they must make such requirements" (p. 181).

Another relevant issue was raised by Joyce and Weil (1986) who pointed out that training in military, industry and medical applications attempts to bring training conditions as close as possible to the work situation, once the appropriate theoretical background is understood. This idea may be usefully applied to teaching improvement in the university. Several other criteria should be considered in running workshops about teaching for academics. These include having clear objectives, qualified leadership, interactive format, opportunity to practise and demonstrate, explicit behavioural intentions and obligatory follow-up (Menges, 1994). Menges reported that, when workshops are carefully planned which consider the above criteria and which are conducted by informed leaders, they can be highly rewarding.

Summary: There are different opinions among experts about the learnability of teaching in universities. However, by reviewing the variety of professional approaches, institutional policies and evidence about the necessity of acquiring teaching qualifications for university teachers, it can be concluded that for teaching excellence in university, lecturers, regardless of their academic rank and length of their teaching experience, should receive some pedagogic training in teaching and learning. Several researchers (Elton & Partington, 1991; Griffiths, 1993; Ramsden, 1993a) support this idea, stating that without such training programs, there can be no real improvement in the quality of teaching in universities. It can also be concluded that, although the characteristics of some people are more adapted for teaching than others, people are not 'born' to be good lecturers.

Teaching is an ability and can be learned. People who are willing to be good lecturers may improve their abilities to teach by taking advantage of courses, workshops, conferences, readings and other professional development activities, as discussed in the preceding pages. However, the influence of acquiring teaching qualifications on the lecturers' teaching performance should not be overlooked. Teaching qualifications represent one of many factors which can improve the process of teaching (Shulman, 1986b; 1987; Cannon & Widodo, 1994; Newble & Cannon, 1995).

The rationale for such a strong position on the desirability of acquiring teaching qualifications for academic staff may be that, in the absence of teaching training, academic staff tend to teach as they were taught themselves, even in the face of considerable research data which demonstrate that other strategies and methodologies for teaching may be more effective. While note is taken that some academics consider that the main responsibility is on the student to learn, nevertheless, the teaching skills of lecturers are important in order to guide the students. Additionally, as Griffiths (1993) argues, the lack of previous training for academic staff is "one of the major factors working against the achievement of quality in university teaching" (p. 249). However, the teaching-improvement programs should be seen as one requirement. Development of academic staff in other professional areas such as research and administrative skills could usefully be considered too.

This section reviewed a variety of approaches to teaching improvement and some of the related recommendations raised by previous research. No one of the suggested ways for teaching improvement is appropriate for all instructors and for all institutions. Rather, as Weimer (1990) says, all

methods "are possible ways to better teaching, made 'right' or 'best' only after they have been carefully matched with the instructional needs of the teacher, course content, and instructional setting" (p. 32). He further explained that no one approach of staff development is right for all institutions; the culture and goals of a particular institution should determine what is right for it. It is generally acknowledged that recent budget cutting in Australian universities means lecturers are asked to take an heavier teaching load than 20 years ago, so they have less time to attend to all their duties, apart from getting teaching qualifications.

Although many studies recommended the usefulness of acquiring teaching qualifications, limited research has been conducted to find out what changes occur in the teaching performance of lecturers who acquired TQ. In other words, it is useful for the purpose of teaching improvement to explore what changes occur in the process of teaching in the classroom when a lecturer acquires TQ. These changes can be reported by lecturers, or observed by independent persons and students. Therefore, it is reasonable, as one of the research questions of the present inquiry indicates, to examine the teaching performance of the lecturers who acquired a teaching qualification and those who did not acquire a teaching qualification.

3c) Other Attributes of Lecturers

It was pointed out in Chapter Two (theoretical background) that many attributes of lecturers affect teaching performance. Eight of these attributes were selected for examination in the present study. Among these eight, two of the main attributes, which were emphasised in Biggs' (1988; 1989) model of teaching and have been discussed separately in the last two chapters. The remaining six attributes are discussed in this section. They are (1) language background, (2) gender, (3) academic rank, (4) academic degree, (5) academic discipline, and (6) extent of university or college teaching experience. Some other influential attributes are mentioned at the end of this section

3c.1 Language Background

Research supports the proposition that language abilities influence the impressions which speakers make upon their audience (Haleta, 1996). Specifically, in education "teachers using a powerless language style will create less favourable impressions with their students than teachers using a powerful language style" (p. 19). However, to have good communication with students, lecturers have to have something more than language abilities. In addition to verbal language, communication in class is carried out through non-verbal signals and slang, which sometimes are different from one culture to another. For example, in the United States of America the practice of students addressing lecturers by their first names, is sometimes regarded as positive behaviour, but in Japan it may be perceived as inappropriate (Neuliep, 1995).

Regardless of the lack of research relating to lecturers' language abilities and idiosyncrasies, and their teaching performance, it seems that one characteristic, clarity of explanation, can be closely related to lecturers' language abilities. Sherman (1987) and Schonwetter (1993), in their reviews of the literature on this subject, reported that teachers' clarity has constantly been recognised as an important criterion of teaching excellence. They pointed out that clarity related to the teachers' ability during the delivery of material. Being able to explain concepts clearly, so that the students seem to gain in understanding, is one of the characteristics of effective lecturers. According to Hines, Cruickshank and Kennedy (1985) and Murray (1991) the following behaviours denote teachers' clarity: using relevant and concrete examples, asking questions, synthesising and summarising material periodically, repeating difficult points or ideas, stressing important points, writing key terms on the display board, suggesting practical applications and signalling the transition from one topic to the next.

In studies conducted to investigate student opinion about characteristics of excellent teachers, 'ability to explain clearly' was considered one of the most important capabilities (Musella & Rusch, 1968; Blai, 1975; Feldman, 1976). Recently, Schonwetter (1993) pointed out that "outstanding instructors present complex ideas and concepts and their connections in logical ways that are clear and easily understandable for students, especially those who know little about the material" (p. 11). It seems here that usually a lecturers' clarity is better where the first language is the same for teacher and student, rather than where the first languages are different.

Another issue relating to teaching excellence is described as 'immediacy'. Immediacy is defined as "nonverbal and verbal behaviours which reduce

physical and/or psychological distance between teachers and their students” (Christophel & Gorham, 1995, p. 292). Nonverbal behaviours include lecturers’ showing vocal expressiveness, smiling in class, having eye contact with the class and gesturing and moving around the classroom during teaching (Gorham, 1988; McCroskey, McCroskey, Richmond, Sallinen & Fayer, 1995). Verbal behaviours include using humour, addressing students by name, referring to a class as ‘our class’, initiating conversations with students before or after class and encouraging students to ask questions and engage in conversation (Gorham, 1988; Neuliep, 1995). Christophel and Gorham (1995) in their review of related research concluded that there is a “relationship between teachers’ use of immediacy behaviours and enhanced affective and cognitive learning outcomes” (p. 292). McCroskey et al. (1995) report that a significant correlation was established between teachers’ immediacy scores and their scores of teaching evaluation, measured by students. According to Moore, et al. (1996) the existence of immediacy in the educational environment, “in turn contribute[s] to students’ willingness to learn and their desire for continued education” (p. 38). However, other research (Kearney, et al. 1985; Moore, et al. 1996) suggested that the importance of immediacy differed for students in different disciplines. Students in engineering, accounting, computer science and maths gave significantly lower immediacy ratings for their lecturers than students in sociology, psychology and communication. Perhaps some disciplines or specific subjects require the lecturer to use the blackboard or overhead projector more than others.

Some light might be shed on the attributes of university lecturers by referring to research on attributes of high-school teachers. In a study conducted by Johnson (1994), 1,000 secondary-school principals across the

United States of America were asked about the criteria they use when hiring teachers. The results of 434 respondents indicated that the first criterion was communication skills. Communication included items such as oral and interpersonal communication, enthusiasm, listening and writing skills. Johnson (1994) concluded that the results suggest that the teachers' communication skills are "vital to the educational process - even more so than those typically associated with preparation for teaching, e.g., curriculum development, student evaluation skills, disciplinary skills and educational philosophy" (p. 14). In a study carried out by Broder & Dorfman (1994) to identify those teacher skills and course attributes that were important to students, it was found that interpersonal skills comprised a major part of teaching quality. Then they recommended that "departmental efforts to recruit teaching faculty should give special consideration to the interpersonal skills of prospective teachers. While the candidate's knowledge is important, the ability to deliver that knowledge is equally, if not more, important" (p. 246). As an example in the tertiary level, Lowman (1991) pointed out that superior college teaching involves two distinct sets of skills:

The first is speaking ability. This includes skills not only in giving clear, intellectually exciting lectures but also in leading discussions. The second is interpersonal skills. Such skills allow one to create the sort of warm, close relationship with one's students that motivate them to work independently (p. 153).

All of the above research about clarity, language and communication abilities and immediacy, justifies the necessity of considering the language background and abilities of lecturers as an important attribute. However, little attention has been paid to this matter by research. The literature reviewed did not identify research which directly examined the role of

lecturers' language background in their teaching performance. The lack of research in this area may be the result of a history of homogeneity of the first language of lecturers and students in most educational institutions. However, in multicultural countries such as Australia where the first language of many academic staff and students might be different from the common and official language, there is a need for further investigation.

3c.2 Gender

The results of research about the role of lecturers' gender in student ratings is mixed. When Feldman (1993) reviewed some of these studies, he reported that the results were inconsistent across studies. In this extensive review of 28 studies Feldman summarised the findings as follows:

Although a majority of studies have found that male and female college teachers do not differ in the global ratings they receive from their students, when statistically significant differences are found, more of them favour women than men. Across studies, the average association between gender and overall evaluation, while favouring women (average $r = +.02$), is so small as to be insignificant in practical terms (p. 151).

This relates to another question that is important here - was there any difference in the treatment of male and female students by the male and female lecturers? In addition, based on the laboratory studies, Centra (1993) pointed out that students generally do not rate male and female lecturers differently.

Feldman (1993) also reported that students tended to rate same-gendered lecturers a little higher than opposite-gendered lecturers. That is, female

students rated female lecturers higher and male students rated male lecturers higher. Similarly, in Basow and Silberg's study (1987) involving over 1,000 students, the importance of gender in the evaluation of lecturers was supported. They concluded that "male students gave female professors significantly poorer ratings than they gave male professors on the six teaching evaluation measures; [and] their ratings of female professors were poorer than those of female students on four of the six measures" (p. 308). In spite of the above statistically significant results, Basow and Silberg (1987) suggested that the magnitude of the mean differences actually was quite small, and more research is needed before definite conclusions can be drawn.

The possibility that lecturers treat students of their own sex differently from students of the opposite sex has been raised. In considering this possibility, Dunkin (1987b) reported that, based on the research in primary and secondary schools, "there is no strong support for the hypothesis that teachers treat students of their own sex more advantageously than others" (p. 607). He also reported that there is little indication in the literature that there is an interaction between the sex of the teacher and the sex of the student that positively affect the students' learning. However, there is still may be some doubt about this issue, especially at university level.

There are findings that may assist in the interpretation of the results of some of the student-ratings research which reported that female academics rated higher than males. In a survey study conducted by Goodwin and Stevens (1993) in which 2,555 academic staff participated, the attitudes of female and male academics toward good teaching was investigated. They generally reported that

the findings suggest that female professors [lecturers] might place greater value or importance on, or be more interested in, enhancing students' 'self-esteem' and in encouraging student interaction and participation in class. Female professors also appear to be more interested in seeking 'outside' assistance in attempting to improve their teaching (p. 182).

Wigington, et al. (1989) also pointed out that it is assumed that "females are more expressive and males more instrumental" (p. 341). Based on these statements, it seems reasonable to suppose that some university students would value the warmth and expressiveness characteristics of women, while other students would value the more instrumental approach to instruction which males tend to offer.

When Feldman (1993) looked at the different dimensions of student ratings, he found that "female teachers receive very slightly higher ratings on their sensitivity to and concern with class level and progress than do men (average $r = +.12$)" (p. 151). In other dimensions either no differences were found or the differences were small. In another study, Ferber and Huber (1975) have found differences in student ratings of male and female academics according to their disciplines. They reported that females received higher ratings in traditionally female disciplines (such as home economics) compared to female academics in traditionally male disciplines (such as engineering). Based on the evidence from the primary and secondary levels, Dunkin (1987b) reported that

The impression that emerges most strongly is that the classrooms of female teachers tend to be warmer, more nurturant milieux while male teachers' classrooms are more highly organised and task-oriented. The number of studies supplying the evidence is, however, quite small and

generalisations about the effects of teacher sex upon classroom events are hazardous (p. 607).

Would this be due in part to the nature of classes taught by men and women (e.g. a few or no men in early-childhood classes)? The answer is not clear.

Ward and Grant (1996) reported that older studies, focused on the physical and natural sciences, concluded that men published more than women at comparable career levels. However, recent studies, examining publications of men and women in all of the fields of studies, reported more similar publication records for women and men (Mackie, 1985; Ward & Grant, 1985). In spite of this growth, men's publication rates in some laboratory sciences still are more than women's publication rates (Sonnert, 1995). This was supported by other evidence which reported that women have fewer publications (Cohen & Gutek, 1991; Everett & Entrekin, 1994). Furthermore, while it was reported that Australian male and female academics are similarly self confident as teachers, men are more self confident about research than women (Landino & Owen, 1988). On the basis of the above studies it might be inferred that women are more focused on teaching in their career rather than publication, though this difference is small. This phenomenon, in turn, may explain why the student ratings of women in some studies reported slightly higher than those of men.

In summary, more research and more direct observation from classrooms is needed to determine whether female and male lecturers actually behave differently. The necessity of doing more research in this area is consistent with Dunkin's (1990b) comment that "the concern about equity issues and,

in particular, the well-known evidence about career reward differences between female and male academics, are strong reasons for including sex as a variable in any research on performance criteria" (p. 52).

3c.3 Academic Rank

Academic rank serves as a hierarchical structure for academic staff to pass through during their careers within the universities. Research productivity, quality of teaching, and administrative responsibilities in university are some of the criteria for promotion in academic rank, but Kasten (1984) pointed out that research productivity is the major criterion for promotion in universities.

In a study conducted in the USA by Wigington, Tollefson and Rodriguez (1989), in which 13,000 questionnaire forms were completed by students at a mid-western university, the authors concluded that academic staff at the assistant- and associate-professor ranks obtained overall higher mean ratings than either instructors or full professors. However, Marsh (1991b) in a longitudinal study over 13 years, at a private US university, concluded that student ratings "tended to be positively correlated with academic rank; ... teachers with higher academic ranks tended to receive somewhat higher evaluations" (p. 305). Centra (1978) also reported that teaching assistants receive lower global student ratings than other lecturers with higher rank. Marsh (1991b) explained that academic rank had a varied pattern of relations with different dimensions of student ratings. For instance, while academic rank positively correlated with lecturers' ability in subject knowledge and value of course materials, it negatively correlated with class

discussion, 'respect for students' (which he did not define), helpfulness and availability to students.

In an extensive review of research about academic ranks, Feldman (1983) pointed out that, with respect to the frequency of various types of results, the predominant outcome is that a statistically significant association between the academic rank and overall student ratings is not found. However, whereas the overall relationship was positive, lecturers with high academic rank tended to be rated higher than others on a few dimensions such as knowledge of the subject matter and value of course material. The relationship tended to be inverse for several other dimensions. Lecturers with low academic rank tended to be highly rated on dimensions such as encouragement of discussion in class, openness to others' opinions, concern with students, helpfulness and availability to students.

Centra (1993) argued that, since research increases the lecturers' awareness and currency in their subject matter, it would be reasonable to expect the establishment of positive relationships between research productivity and student ratings. On the other hand it could be perceived as a negative relationship, because lecturers with high research productivity spent more time on scholarship. He added that the correlation between research productivity and teaching effectiveness, in general, is found to be moderate. He then argued that "the lack of a strong relationship indicates that the measures of research productivity typically used in personnel decisions (for example, number of articles published) cannot be assumed to reflect teaching effectiveness" (p. 74). This is may be because the abilities and

personality traits needed for being a good lecturer and a good researcher are different.

Three ideas have been reported in the literature about the relationship between research productivity and instructional effectiveness. Some investigations found they are reinforcing, rather than in competition. However, others reported that they tend to be in conflict, while a third view is that they have no relationship to each other (Fox, 1992; Volkwein & Carbone, 1994).

In a national survey in social science faculties in the USA, involving 3,968 academic staff, Fox (1992) found that academic staff with high publication productivity have strong investments in research but not in teaching, especially for teaching at the undergraduate level. Based on the findings, she concluded that "research and teaching represent not a single dimension of academic investments, but, rather, different dimensions that are at some odds with each other" (p. 303). It can be inferred that, since high publication levels are associated with increased research productivity and consequently the rank of academics, lecturers of high academic rank might be more interested in doing research, than working to improve the quality of their teaching. It should be noted, however, that research productivity and publication productivity are not strictly identical. On the other hand, Gee (1989) reported that the number of articles published is the best established measure of research productivity, though nature of publications (e.g. books compared with brief reports) is relevant to the measure.

Noser, Manakyan and Tanner (1996) reported that the relationship between research productivity and teaching effectiveness is one of the controversial

topics among academic staff. They conducted a survey among 1,000 lecturers in all of the Faculties of Economics throughout the USA. Self-report measures of research productivity, lecturers' opinions on the relationship between research and teaching performance, and students' perception of lecturers' teaching performance were used in the study. It was found that there is a significant but marginal positive relationship between research activity and teaching effectiveness for lecturers who mostly teach at the undergraduate level. However mixed or conflicting results were found for lecturers who mostly teach at the graduate level.

Acknowledging the desirability of research for universities, the above researchers pointed out that evidence of a direct relationship of research to teaching is very weak. It was suggested that "the activities of teaching, research and service should be evaluated on their own merits, and relative emphasis should be established based on the mission of each individual institution" (Noser, et al. 1996, p. 319). But university commissions' reports insist that teaching and research are equally the responsibilities of universities (see 1.3).

In summary, there is no consensus that the ranks of academics are positively or negatively correlated with the academics' teaching performance. Little attention has been paid in the literature to investigate the reasons of the positive or negative relationships.

3c.4 Academic Degrees

Being master of the subject which a lecturer teaches is likely to be one of the characteristics of good lecturers (Murray, 1980b; Miller, 1988; Centra &

Bonesteel, 1990; Lowman, 1991). It seems that, normally, this mastery is developed by acquiring a high degree in the specific field of study. It seems that acquiring academic degrees is one of the attributes which can improve the quality of teaching and in turn student ratings. However, it does not mean that all of the lecturers with a doctoral degree are necessarily superior in knowledge, to those who have a master's degree; only that they are likely to be.

It is noted that Dunkin and Biddle (1974) included the academic degree as an influential variable in the process of teaching in their model of teaching. This variable was mentioned in the presage variables group under the 'teacher training' factors and named 'university attended'. Being master of a subject area which normally is covered by a high degree in a particular field of study, was not considered by some writers as a criterion of an effective teacher. It seems that this criterion is subsumed under other dimensions. Schonwetter (1993) for instance stated that "clarity of [lecture] content assumes that the instructor has mastered the course content adequately" (p. 11).

Because having academic degrees or obtaining higher ones, is one of the important requisites for appointment and promotion of lecturers in universities, possibly researchers assumed that the examination of the role of academic rank was in itself an adequate predictor of teaching performance. However, the level of academic degree nowadays is considered a criterion for staff selection and also for promotion in university.

After searching, in early 1997, educational databases including ERIC and Austrum, and in nine of the internationally prominent professional journals in higher education, no research was found about the influence of academic degree in the quality of teaching in university. Therefore, it seems necessary to consider this unexplored issue in future research.

3c.5 Academic Discipline

Academic discipline was considered by some researchers (Braskamp, et al., 1984; Dunkin, 1990a) as one of the characteristics which affects the lecturer's teaching performance. Researchers such as those in UNESCO (1978) have classified the fields of university study into five groups: humanities, social sciences, natural sciences, medicine and technology. Kolb (1989) and Becher (1989) suggested a further classification of the disciplines into 'hard' and 'soft'. Natural science, medicine and technology were classified under hard, and humanities and most of the social sciences were classified under the soft disciplines. Although this dichotomy may be useful for some purposes, the definition of hard and soft is unclear and does not provide a reasonable logic for comparing different disciplines. Boundaries between academic disciplines are, of course complex and subtle. In fact, Becher (1989) described academic disciplines as 'territories' and 'tribes'.

Braxton and Hargens (1996) in their recent extensive review of disciplinary variation, classified disciplines as 'high-consensus' and 'low-consensus' fields of enquiry. It seems that this classification was supported by previous research. For instance, Lodahl and Gordon (1972) reported that physical scientists experienced significantly more agreement about the extent, nature and content of their discipline when they collaborated in research than did

lecturers in political science and sociology. They also found more consensus about the composition of undergraduate curricula in the natural than in the social sciences. Braxton and Hargens (1996) concluded that “in general, researchers usually attribute high level of consensus to the physical sciences, low level to the social sciences, and even lower to the humanities” (p. 17). They explained that these classifications were based on the levels of consensus that academic members exhibit on such matters as appropriate theoretical orientations and proper research methods. However, according to Braxton and Hargens (1996), some researchers argued that “these attributes are unfounded, and that there is little or no disciplinary variation in consensus” (p. 17).

As a result of the complexity of human beings, the accomplishment of research in humanities fields seem more difficult than in other fields. In addition, due to the existence of different philosophical approaches, culture and expectations in societies, scholars can reach less consensus in humanities fields, compared with the physical sciences.

Neumann and Neumann (1983) reported that the student evaluation which examined overall assessment of the instructor and the course, tended to result in lower ratings for high-consensus fields than low-consensus fields. Similarly, It was indicated from the analyses carried out by Feldman (1978) that academics, as a group in different disciplines obtained different ratings from students. The disciplines were categorised into the three following levels based on the student ratings of the academics in each discipline.

Highest ratings:
English, History, Humanities, Arts and Foreign Languages.

Middle ratings:

Social Sciences, Political Sciences, Sociology and Anthropology.

Lowest ratings:

Physics, Chemistry, Geography, Mathematics and Engineering.

A survey study conducted by Ramsden (1991a) about the quality of teaching in 13 Australian universities, including 3,372 final-year undergraduate students, found differences between fields of study based on five teaching components. The components were: good teaching, clear goals, appropriate workload, appropriate assessment and emphasis on independence. Based on the results, Ramsden (1991a) stated that "it may be true that medicine and engineering are typically taught less well than Drama, Art, History and English in Australian higher-education institutions" (p. 139).

Similar results were obtained by Ainley and Long (1992) who studied the responses of some 50,000 university students who graduated in 1992 from Australian universities. They were asked about five aspects of their courses including the clarity of goals, the nature of the assessment and overall level of satisfaction with the course. The Course Experience Questionnaire, with five-point items developed by Ramsden and his colleagues (Ramsden, Martin & Bowden, 1989; Ramsden, 1991c), was used in the study. Considerable variation was reported in means of the five components between broad fields of study. Arts, Humanities and Education had relatively high means while Engineering and Medicine had relatively low mean scores. This means that, based on the graduate students' judgment, the quality of teaching in the fields of Arts, Humanities and Education is superior than the other fields of study. It should be noted that substantial variation in the mean scores of some of the broad fields of study was

reported. For instance, within the field of Arts the mean scores for History and Psychology varied considerably, and in the field of Science the mean scores for Geology and Computer Science showed a similar wide variation. There might have been several reasons for such findings, such as the complexity of demands of the subjects, which should be further investigated.

Recently, the Graduate Careers Council of Australia carried out a survey among about 70,000 students who graduated from all Australian universities in 1995. Graduates were unhappy with the teaching quality in Medicine and Dentistry (Garcia, 1996). On the other hand, graduates in Humanities, in particular, History, Literature Studies, Language and Social Work, were the most satisfied with the quality of teaching. Centra (1993) examined the student ratings in different disciplines in regard to five components of teaching. According to the result of this study, no differences were found in ratings of course planning and examinations. However, as indicated in Table 3.2 ratings of the academics-student interaction, course difficulty and communications scales in the natural sciences, mathematics and statistics were low, compared with most humanities classes. Basing his judgement on the relevant literature, Centra (1993) pointed out that related analyses indicate one consistent finding: "classes in Mathematics and the Natural Sciences are likelier to receive low ratings than those in other disciplines" (p. 68). Moses (1993) also stated that "student evaluations of teaching consistently and cross-nationally are lowest in science and engineering courses" (p. 184).

Table 3.2: Disciplinary Comparisons

Discipline	Differences
1. Course organisation and planning	No difference
2. Faculty-student interaction	Natural sciences and mathematics and statistics about 30 percentile points lower than humanities
3. Course difficulty and work load	Natural sciences and mathematics and statistics about 30 percentile points lower than humanities
4. Communications	Natural sciences and mathematics and statistics slightly (10 to 20 percentile points) lower than humanities
5. Tests and exams	No difference

Source: Centra (1993) p. 70

Considering the discipline differences from another approach, some researchers (Goodwin & Stevens, 1993; Braxton & Hargens, 1996) have pointed out that lecturers in high-consensus fields spend more time with, and are more oriented towards, research activities than low-consensus fields. On the other hand, Braxton and Hargens (1996) stated that

low-consensus fields are more oriented to teaching than high-consensus fields. Faculty [academics] in low-consensus fields are more interested in teaching, devote more time to it, and tend to receive higher instructor evaluations. Departmental chairpersons in low-consensus fields also place greater emphases on teaching activities, and devote more of their own time and attention to teaching functions. Finally, teaching and research roles show greater complementarity in low-consensus fields" (p. 36).

A survey study carried out by Smeby (1996) at four Norwegian universities investigated the disciplinary differences in relation to the amount of time spent teaching. All regular academic staff from all disciplines (N = 2415)

participated in the study. The results showed that the amount of time spent on teaching and teaching preparation in various fields of study, is significantly different. A similar result was reported in an earlier study conducted by Kyvik (1991). However, Tierney (1991) found few and insignificant differences between disciplines in relation to their concern about teaching performance, pedagogical practice and lecturer-student interactions. For example, academics in Education in many universities might not be typical of academics in other faculties because many lecturers in Education aim to be teacher-scholars, rather than researchers. This tendency is likely to have been especially strong in the past, when most academics in Education were located in teachers' colleges. The emphasis for them was very strong on teaching, because tradition emphasised teaching much more than research in most teachers' colleges. The emphasis between teaching and research has been more balanced in other faculties, but there are recent tendencies to develop teaching competence more (de Lacey, 1997).

Although no definite reasons were suggested for disciplinary differences, Ainley and Long (1992) stated that Electrical Engineering, Law and Medicine "have very strict entrance requirements and might be thought to attract the most able students. Perhaps the graduates of these courses are simply more critical than graduates of courses with less strict entrance requirements" (p. 37). Such an explanation is based on the researchers' impressions and no systematic investigation was reported between the entrance requirements of students and the students' evaluation which was reported by graduates.

As indicated by the existing limited research about disciplinary differences, little attention, it appears, has been paid to determining the reasons for the differences found between fields. Cashin (1990) reported that there is

increasing evidence to support the conventional wisdom which believes that different fields of study are different in character. He also noted that students rate academic fields differently. Cashin (1990) added that "the real problem arises from our not knowing why the different fields are rated differently" (p. 118). Although it is not clear whether ratings differ because of the nature of academic fields or for other reasons, he raised the following possible explanations:

- 1) The more quantitative courses tend to receive lower ratings. A possible explanation is that students' quantitative skills are more poorly developed than their verbal skills.
- 2) The more sequential courses, where success depends heavily on the mastery of material from a previous course, tend to receive lower ratings. This holds true for most maths and science courses.
- 3) Students in different majors rate courses differently, because of differences in attitude, in academic skills and goals, in motivating, in learning styles, or in models of effective teaching.
- 4) A final explanation may be that some academic fields might be poorly taught. Probably the real explanation lies in some combination of the explanations just offered" (p. 118-119).

Smeby (1996) pointed out that the reason for these differences may be the genuine characteristics of the discipline. However, Clark (1987) warned that it is too bold to refer to an 'epistemological determination of work' between the academic disciplines. Smeby (1996) further explained that "types of knowledge may, for example, influence the time needed for preparing lecturers, some types of teaching may be more relevant in some fields than in others, and the extent to which lecture and seminar teaching is felt necessary may differ across fields" (p. 69). He also mentioned that, although the teaching content is heavily influenced by disciplines, curriculum and teaching plans are framed within the institution in which the learning occurs. Furthermore, there are "institutional norms concerning faculty

members' teaching loads and the time they are expected to use for preparation" (Smeby, 1996, p. 69). Therefore, this suggests that the disciplines have a limited influence on their academic staff, regarding the amount of time spent on teaching.

Barnes and Ellner (1983) pointed out that one of the problems which persist in the research on college teaching is the practice of viewing teaching as an act itself rather than in relation to a particular topic or group of students. It seems there are skills which vary in teaching effectiveness in different course levels and subject areas, even though McCord (1985) stated that "the task of analysing teaching in relation to different learning situations remains untouched by investigations of college instruction" (p. 126). This possibility, that teaching effectiveness varies in different faculties, is perhaps one of the reasons that student ratings are reported differently among the disciplines. Nowadays it seems teaching is examined by students in all disciplines by the same ratings forms, instead of a specific form for each homogeneous group of disciplines. Ramsden (1991a) also commented that if cultural differences and staff-student ratios are different between the fields, comparisons should be made within the fields of study. Therefore, comparable analyses should be accomplished among the discipline or subject matter within the same location; and more fairly within the disciplines. In spite of these reasonable comments, it is surprising that Goodwin and Stevens (1993) reported that there is general agreement across fields of study on what practices constitute good teaching (see 3a.4).

3c.6 Teaching Experience

In a study conducted to examine and explain the characteristics of excellence in teaching, Sherman (1987) reported that academic staff often mention

experience as “an important factor in achieving excellence [in teaching]. Most teachers see themselves developing into progressively better teachers as they gain teaching experience” (p. 71). Based on interviews with lecturers and on anecdotal reports, Sherman (1987) pointed out that “experience appears to contribute gradually to more sophisticated and effective ways to manifest the five characteristics of excellence” (p. 71): enthusiasm, clarity, preparation, simulation and knowledge. As an example, he suggested that, over time, “it is conceivable that an instructor’s repertoire will be enriched so that a greater variety of student confusion can be anticipated and accounted for” (p. 71). This point also was supported by research conducted by Centra (1978), who reported that first-year lecturers receive lower ratings than those with more seniority.

In contrast, Feldman (1983), in his extensive review of the relationship between teaching experience and overall student ratings, found no relationship. That is “the more experienced the teacher, the somewhat lower the students’ overall evaluation of the teacher” (p. 11). This inverse relationship showed up more frequently for some of the teaching dimensions in student ratings than for others. These dimensions were enthusiasm, clarity, encouragement of questions and discussion, and openness to others’ opinions. He commented that the influence of this relationship might be underestimated in studies where linear relations were considered. He also added that, in a few studies where the non-linear relation was considered, an inverted U-shaped relation was suggested. In these studies the ratings of lecturers improved initially, peaked at some points between three and 12 years and then declined slowly. Feldman (1983) inferred these findings from research showing that students’ ratings are related negatively, though weakly to years of teaching experience. This

point is supported by the longitudinal study of Marsh (1991b) who concluded that "teachers with less teaching experience tended to receive somewhat higher evaluations" (p. 305). Cashin and Hocevar (1995) also in his more recent review of research, concluded that "in general, years of teaching experience are not correlated with student ratings" (p. 4).

Similarly, Barnes (1987) in his review of studies of the impact of teaching experience on teaching effectiveness, reported that research frequently found a negative relationship. He stated that "it appears that teachers get better during the first few years of their careers but after this, their effectiveness levels off and probably declines" (p. 609). He added that in substantial studies, it was reported that "increase[s] in teaching experience, at least after the early years in the classroom, are associated with lower student achievement levels and with a tendency for teachers to reject innovations and alterations in educational policy" (p. 611). Barnes (1987) acknowledged that the resolution of this problem is not clear and easy. He concluded that "the overall impression seems to be of a curvilinear, but possibly an overall negative, relationship between years of teaching and effectiveness" (p. 610).

In contrast to the above somewhat equivocal findings, Marsh and Hocevar (1991b) in a longitudinal study in which student ratings of 195 lecturers were examined over a 13-year period, reported that the students' ratings of lecturers were remarkably stable. The finding of this study contrast with the results of other research which reported the establishment of weak negative or inverted U-shaped relationships between student ratings and teaching experience. However, the authors (Marsh & Hocevar, 1991b), emphasised the validity of their findings, indicating that their study was longitudinal rather than cross-sectional. They explained that

in cross-sectional designs the ratings of teachers with many years of experience are used to infer how less experienced teachers will be evaluated many years in the future, whereas the ratings of inexperienced teachers are used to infer how experienced teachers were (or would have been) evaluated many years in the past; both these inferences must be made cautiously (p. 312).

Some research (Feldman, 1983; Marsh & Hocevar, 1991b; Cashin, 1995) indicates that lecturers' teaching performance is inversely related to their teaching experience. However, there seems to be no consensus as to why such a relationship exists. If the teaching performance mean scores of lecturers with high teaching experience decrease, it is interesting to know what is happening in other parts of lecturers' activities such as research and administrative activities. If the relationship between research, and extent of teaching experience is positive it might be recommended that these lecturers be employed for research in universities. Shifting their ability from teaching to research and administration need not necessarily be perceived as a weakness. Universities can use different abilities of academics. Perhaps some inexperienced academics, realising that they are new to the job, initially try harder to overcome any perceived shortcomings.

Teaching experience is accepted as an asset, presumably positively related to teaching performance (Barnes, 1987). It is also seen as easily accessible information and tends to be included in research. Barnes pointed out, however, that "a sampling of some of the findings of studies since the early 1960s indicates that experience is neither easily nor effectively defined nor measured" (p. 608). It appears the following questions were not examined in the relevant research. First, is having teaching experience in primary and

secondary settings useful for teaching in tertiary settings. If it is, to what degree? Secondly, when a researcher wants to examine the relationship of teaching experience with quality of teaching at tertiary level, should teaching experience in other settings (e.g. school) be considered? If it is, has it the same value as tertiary teaching experience? Therefore, Barnes' point (1987) still seems reasonable, when she stated that "the field is open to high-quality research, the results of which could be of value to administrators as well as to teachers themselves and those involved in their selection and training" (p. 611).

3c.7 Other Attributes

There are some other lecturers' attributes which are influential in teaching performance. Although examination of these variables is beyond the scope of this study, some of them are as follows:

Personality: Lecturers' personality traits can be measured through self-report or by report of others such as students or colleagues. However, Feldman (1986) reported insignificant correlation between personality traits measured by lecturers themselves and students' teaching evaluation. In contrast, moderate or large correlations were found in studies where lecturers' personality traits were measured by students.

Self-efficacy: Self-efficacy was defined by Bandura (1982) as individuals' perceptions of power and capability in interaction with their environments. Based on Bandura's studies it can be inferred that those who believe that they will succeed on a task, are more likely to accomplish the task. Consistent with this statement, Prieto, et al. (1994) found that self-efficacy of

teachers appears to be positively correlated with their teaching behaviours, and self-efficacy itself is improved via teaching experience and training programs.

Being a researcher: A good lecturer ought to be a good researcher in a university. A person who only lectures can be considered a transmitter of knowledge, passing on the accumulated work of others. Although one of the attributes of a good lecturer is that he or she has to be acquainted with the literature, a lecturer should be engaged in research and writing and link teaching with research. Nevertheless researchers also need to be in touch with what is happening as part of their teaching. Obviously these issues are related to the role of universities in society, whether university is responsible for research, teaching or both.

Summary: Although much research has been conducted to investigate the influences of lecturers' attributes, the results are still controversial. Furthermore, one of the weaknesses in the research related to lecturers' attributes is that most of it consists of correlational studies. The influences of other perceived lecturer attributes which may affect teaching performance are seldom considered and controlled. It is clear that conducting experimental research for examining the variables of the present study is difficult in terms of ethical issues and the long period of time required for adequate enquiry.

Furthermore, most of the research reviewed in this chapter has examined the relationship between students' perception of teaching performance (reflected in the students' overall ratings) and various characteristics of

lecturers subsequently identified by the researchers. Although these undifferentiated overall ratings are useful, they cannot describe the lecturers' abilities in different components of teaching such as planning, rapport and grading. It is possible that any lecturer with any attributes may or may not be strong or weak in some component of teaching. It is argued here that more information could be obtained regarding teaching performance if the analyses were done in different components of teaching. Therefore, in addition to examining the overall student ratings, the ratings in different components of teaching have to be taken into account too.

In spite of the existing research and literature investigating some lecturers' attributes such as gender and academic rank, little or no attention has been given to other attributes such as language background and academic degree. Therefore, it is necessary to undertake further research. It is the purpose of the present inquiry to study the effects of the eight lecturer characteristics (six mentioned in this section and two in the last two sections) on their teaching performance, taking into account the weaknesses of the previous research. It is acknowledged that there are some other influential lecturer attributes like personality which affect the lecturers' teaching performance. However, the examination of these attributes is beyond the scope of this study.

3d) Teaching Performance

It was pointed out in the theoretical background of this study in Chapter Two that, although examination of teaching performance is difficult, several methods are used in universities, of which student ratings is the most common. As teaching performance is the only dependent variable in this study, it is necessary to examine it further. In this section the measurability of teaching performance through available methods is discussed. Since student ratings are confirmed by research as an acceptably valid and reliable source and provide a feasible evaluation in the context of the present study, the purposes of this method, and opposing views about it, will be reviewed further. Finally the uni- or multi-dimensionality and scoring of student ratings will be discussed.

3d.1 Measurability of Teaching Performance

Performance has been defined in an educational context by Ellis (1993) as "observable behaviour; what a teacher, student or organisation actually does" (p. 304). However, he noted that most of a teacher's work in preparing for teaching is carried out outside the classroom. Even if all of the behaviours of teachers, including inside and outside of the classroom, were observed, there is no general agreement about the significance of the observed events. Although research and teaching are two central activities of academic staff in universities, within the current academic culture, the examination of quality and professionalism in research is much easier than in teaching (Elton & Partington, 1991). Brown and Atkins (1988) reported that it is said that teaching cannot be evaluated and research can. They, however, pointed out that "there is a wide range of methods available which are at least as reliable and valid as those used customarily to evaluate

research" (p. 39). Ramsden (1991a) also argued against those critics who consider that students' evaluation is 'subjective' "and therefore irrelevant to the objective measurement of performance" (p. 146). He pointed out that this view seems to rest on a misunderstanding of students' evaluation. For over a decade, educationalists have published many papers and books regarding establishing criteria for quality in university teaching (Elton, 1993).

Four types of outcomes which might be used for evaluating the effectiveness of teaching were described by Wexley and Yukl (1984). These are the reaction of students to teaching, the measurement of the amount of learning, the ability of students to put into practice what they have learned, and, finally, a cost-benefit analysis of the program. However, Miller (1988) noted that only the first of these, the reaction of students, is readily available for use in the regular evaluation of courses or teaching. The second and the third outcomes have been used from time to time and the fourth rarely. Therefore, it seems that the evaluation of teaching is not an easy process.

In spite of this difficulty, Entwistle and Tait (1991) have identified some components which measure some aspects of teaching performance. They are the provision of clear goals, appropriate workload and level of difficulty, assignments providing choice, quality of explanations, level of material and the pace at which it is presented, enthusiasm, and empathy with students' needs. Similarly, Ramsden (1991a) described the following criteria as the key factors which define good teaching in higher education. He pointed out that students are able validly to comment on them. The criteria are:

concern for and availability to students; enthusiasm and interest of teachers; clear organisation and goals; feedback on learning; the encouragement of student independence and active learning; an

appropriate workload and relevant assessment methods; the provision of a suitably challenging academic environment (p. 132).

In summary, It seems that there is little consensus about the measurability of teaching performance, and that it is a complex matter, and cannot be quantified easily. However, there are some methods which can examine some of the components of teaching as indicators. These are now examined in the following sub-section.

3d.2 Methods of Teaching Evaluation

Several ways of assessing teaching performance are now regularly applied in research and practice. These include peer evaluation, supervisor evaluation, classroom observation, review of course planning documents, self evaluation and student ratings. However, Feldman (1989b) reported that generally the following six sources are considered in research institutions and universities to evaluate the lecturers' teaching performance:

- 1) Current student ratings: Ratings made by students who are in the [university] teacher's class(es) at the time of rating.
- 2) Former student ratings: Ratings made by students no longer in the teacher's class(es). Studies that were located vary from those that considered students who had attended the teacher's classes only a semester or two before, ... to one from 10 to 13 years earlier.
- 3) Self-ratings: Ratings that each teacher makes of himself or herself.
- 4) Colleague ratings: Ratings made by the teacher's peers at the university, whether or not they are in the same department as the teacher and whether or not they visited the teacher's classes.

5) Administrator ratings: Ratings made by administrators at the college, usually department chairpersons and/or dean(s) but also including supervisor of graduate instructors.

6) External-observer ratings: Ratings made by 'neutral' or outside observers of the teacher (either from observation in the classroom or from viewing videotapes of the teacher in the classroom) who generally have been trained in some way as raters (p. 138).

Although little research has been conducted on comparing self and colleagues' evaluations with students' evaluations, these two methods of evaluation are described in the rest of this sub-section as follows:

Students' evaluation: Cashin (1995) suggested that the term 'student ratings' is preferable to 'students' evaluations'. He clarified this point by stating that "'evaluation' has a definitive and terminal connotation; it suggests that we have an answer. 'Ratings' implies that we have data which need to be interpreted" (p. 1). However, the two concepts are regarded as essentially inter-changeable through most of the literature. There are several sources for obtaining student input toward teaching evaluation. They include the open-ended question, goal assessment, student lecture notes, student rating scales, and student evaluation committee; but student ratings scales is a widely used source in higher education (Fuhrmann & Grasha, 1983). Student ratings are still the most commonly used assessment scales of university teaching and teachers (Centra, 1993; Lally & Myhill, 1994). However, some lecturers prefer a series of open-ended questions rather than student-ratings surveys. This is because written comments in response to open-ended questions are useful for improving teaching (Miller, 1988). Although written comments are useful, possibly some students worry about making negative comments, fearing that their handwriting would be

identified. But in a study conducted by Braskamp and Ory (1981) in which 3,240 students' written comments were analysed, highly significant correlations were found between the overall ratings of teaching taken from student ratings, and the written comments. Although accurately converting the written comments to quantified format is not possible, Braskamp and Ory reported that many of the dimensions identified from the written comments were similar to those derived from the student ratings.

In addition to the above methods of student evaluations, continuous feedback from the students including interpreting the lecturers' looks on their faces, the quality of a subsequent discussion in class, students' questions and their attendance in class are different kinds of students' evaluations. All of these are part of the network of informal feedback which a teacher can receive if the teacher reflects on the process of teaching (Fuhrmann & Grasha, 1983). However, Fuhrmann and Grasha mentioned that, to use this information more effectively, it must be collected systematically and formally, rather than informally by lecturers themselves. Bok (1986) also recommended that, in order to improve the quality of teaching in university, student ratings should be conducted carefully and systematically.

Self evaluation: While the research evidence found that academic self-evaluation can contribute to improvement in teaching performance, this kind of evaluation is not recommended for tenure and promotion purposes (Centra, 1989). Since academics are usually aware of the areas of teaching in which they are strong or weak, self evaluation can be useful in consultations for teaching improvement and professional development. Fuhrmann and Grasha (1983) emphasised the usefulness of this method and stated that

"although you can collect data about yourself from your students and colleagues, your most important data source is your personal perceptions. Paying attention to your experiences and feelings and monitoring your progress toward the ideals you set for yourself is extremely important" (p. 213). However, the tendency of people to report their strengths and be reticent about their weaknesses, seems a potential bias in this method. Furthermore, lecturers' reactions to their teaching are based on their assumptions and definitions of good teaching which might not be consistent with a wider opinion in research. To help avoid this bias, lecturers could check their ideas about teaching with research of the kind mentioned above, and with experts.

Peer evaluation: Lecturers can infer the teaching effectiveness of their colleagues from their colleagues' actions, including their comments and debates at faculty meetings and committees, presentations at department meetings and any interaction of the lecturer with students witnessed in his or her study or around the department (Feldman, 1989b). While colleagues may or may not visit the lecturer's classroom when a lecturer is teaching, judgement based on the evidence mentioned above would probably not be acceptable because of inadequate sampling of the lecturers' behaviour. In terms of the reliability of class visiting, although it is possible to increase the reliability of peer evaluation by training the observer or developing an extensive observation schedule, it seems it is not realistic in resource terms to ask academics to spend too much time on this activity. However, trained and experienced colleagues can assist the lecturers with suggestions for overcoming any problems they might be facing in their teaching, by visiting the classrooms. Centra (1989) pointed out, however, that, while peer

evaluation is essential in judging research and scholarship performance, peer evaluation about teaching is more uncertain.

Other methods of evaluation: Besides internal evaluation such as student ratings or peer evaluation, some external methods may be used for teacher evaluation in higher education. They might include invitations to teach in other universities and organisations, membership of professional groups, publications on teaching and teaching grants (Griffiths, 1993).

Notwithstanding the usefulness of the above methods, as was mentioned in the theoretical background, student ratings are used in this study to provide data for the examination of teaching performance. Consequently, this method is examined further in terms of supporting and opposing views about student ratings. These are reviewed in the following sub-sections.

3d.3 Purpose of Student Ratings

The results of student ratings of teaching are often used for four purposes: 1) as formative feedback to help lecturers to improve or modify the quality of teaching, 2) to help students to decide on which course to take from which lecturer, 3) as a summative measure to help the relevant academic committees in the decision-making process as part of the evaluation process to decide on promotion and tenure, and 4) to help research into identifying effective teaching and learning (Abrami, et al. 1990; Marsh, 1992; McKeachie, 1990; Amin, 1994).

Other reasons have been advanced for systematic evaluation of teaching performance including a need to respond to the increased demand for

accountability in the expenditure of public funds and public criticism of undergraduate instruction (Miller, 1988; Broder & Dorfman, 1994). Obviously student ratings can be considered as one method of investigating these two issues.

Although these purposes are important, it should be noted that the point of any evaluation method is not just to judge the quality of teaching, but also to provide information upon which lecturers can act to improve their teaching (Ramsden & Dodds, 1989). Weimer (1990) also emphasised this point, saying that one of the most important purposes of any kinds of feedback on teaching performance is to help lecturers clarify, elaborate, or correct their understanding of how they teach. More than that, McKeachie (1986) pointed out that "the ultimate test of the usefulness of student ratings as a measure for improving teaching is whether teaching becomes more effective as a result of the use of student ratings" (p. 278). Obviously, the impact of student ratings on improving teaching depends largely on the nature of the lecturers and their institutions. If lecturers try to overcome their weaknesses in teaching, their effectiveness will be improved. Merely being aware of their weaknesses is unlikely to improve their effectiveness.

The research shows that the quality of teaching can be improved through the use of student ratings. For example, in some of the nineteen studies analysed by Cohen (1980) lecturers were given professional consultations and guidance on how to improve their teaching based on the student-ratings data. Gains in subsequent ratings were found for such lecturers. More recently, this result was supported by a research conducted by Marsh and Roche (1993) in the University of Western Sydney, Macarthur, on which 92 academic staff participated. The authors concluded that student ratings

feedback coupled with an expert's consultation is an effective basis from which to help enhance the quality of a lecturer's teaching performance.

Therefore, the results of student ratings can help evaluate performance and subsequently help overcome weaknesses and consolidate strengths. It should be noted that, although student ratings can be useful to improve lecturers' teaching performance, good results do not necessarily follow. Lecturers do not change their methods simply because they receive feedback from students. Lecturers need information about teaching behaviour or goals that are important, and they have to know how to make the necessary changes. Lecturers who are willing to improve their teaching "will welcome opportunities to receive feedback on their teaching and will be prepared to put it to use in attempts to improve their teaching" (Dunkin, 1990a, p. 281).

Furthermore, experience has shown that, when centres which are responsible for teaching improvement in university offer consultation services along with student-ratings results, there is less resistance from lecturers to student ratings (Arreola & Alemoni, 1990). They also reported that, if teaching-improvement programs were offered without reference to the results of student ratings, they tended to attract mainly lecturers who least needed these services. Following this experience they suggested that an "evaluation system should provide diagnostic information on the strengths and weaknesses that faculty members possess and then follow up with programs or materials to help them enhance their strengths and overcome their weaknesses" (p. 54). Getting the best value out of student ratings can involve more than just looking at numerical results. Considering how the lower results might be reviewed, modified, or

changed is valuable. When this kind of review is discussed with an expert or experienced colleague, more benefit is likely to be gained.

3d.4 Support for Student Ratings of Teaching Performance

Over the past two decades there has been increasing use of student ratings as an indicator of the quality of teaching (Marsh & Dunkin, 1992; Centra, 1993). The systematic use of student ratings is almost universal in North American universities and is becoming more common in other countries (Centra, 1993; Ellis, 1993a; McKeachie, 1994). A survey of teaching-evaluation activities, carried out in the United States at 40 large research universities, found that all of the institutions involved collected evaluation data, and used student ratings (Ory, 1990). Centra (1993) reported that "rare is the American college or university that does not currently use student evaluations of teaching in one way or another" (p. 47). Nowadays student ratings are used by 94 per cent of Canadian universities (Wright & O'Neil, 1994a). Student ratings in Australian universities are becoming more widely considered and comprise one of the indicators in examining academic performance (Prosser & Trigwell, 1990; Marsh, 1992).

As previously noted (1.1) research findings suggest that student evaluations represent a simple, valid and reliable method of assessing some components of teaching effectiveness. Stringer (1993) suggests that student ratings are relatively uncontaminated by potential biases. According to Marsh (1987) and Cashin (1995), who have done substantial research on student ratings, reviews of the literature indicated that a considerable body of research supports the acceptance of student evaluations as a valid and reliable method of examining the effectiveness of course-delivery methods. Cashin

(1995) concluded that “in general, student ratings tend to be statistically reliable, valid and relatively free from bias or the need for control; probably more so than any other data used for evaluation” (p. 6).

Ramsden (1992) pointed out that “there is no other single measure of teaching performance which is as potentially valid” (p. 132) and Seibart (1980), concluded that, although the other methods have merit, they are less reliable, more expensive and logistically more complicated. In addition, in terms of reporting the impact of teaching on the students, Crooks (1990) believed that students themselves are the best observers and reporters. Accepting the need for the use of a variety of sources in teaching evaluation, Ramsden (1991b) emphasised that students’ evaluations must be included in any variety of methods, as students are in an excellent position to comment on the quality of instruction. Previously, Miller (1975), acknowledging the preferability of using several methods for teaching evaluation, pointed out that, if one is forced to choose the most significant kind of classroom evaluating, it would be student ratings. Students are an extremely valuable source of information and feedback on teaching (Fuhrmann & Grash, 1983; McKeachie, 1996). This may be because students “are the ones whom we are trying to teach, and they may know what is going on in their own heads better than anyone else. Secondly, they are in class every day (or at least often) and thus have a better sample of teacher behaviour than most observers are likely to have” (McKeachie, 1996, p. 14).

Feldman’s (1987) meta-analysis showed that student ratings were used in many studies to reflect academics’ teaching effectiveness. Volkwein and Carbone (1994) reported that the vast majority of studies on teaching effectiveness rely upon student ratings as the dependent measure.

According to Marsh (1987), research results clearly demonstrate that a considerable amount of useful information can be obtained from student ratings. They are useful for improving teaching, for personal decisions, for students in the selection of courses and for the study of teaching (Marsh, 1987; Abrami & d'Apollonia, 1990; McKeachie et al., 1990; Marsh and Roch, 1993; McKeachie, 1994). Miller (1986) added that students are the best judges of the subjects they study, and are well equipped to make global ratings such as 'how would you rate this lecturer in comparison with others throughout the campus?'. X

3d.5 Concern About Student Ratings of Teaching Performance

In spite of the stated advantages and widespread use of student ratings to examine teaching performance, some challenges are made to this method (Smith & Cranton, 1992). For example, Brown and Atkins (1988) reported that some writers claim that teaching performance should not be evaluated by students. Others argue that students' evaluations do not "provide useful feedback to teachers and administrators, that the process is biased, and that the students' ability to evaluate teaching is questionable (Broder & Dorfman, 1994, p. 235). One of the common arguments against using students to evaluate teaching is that students are inexperienced and uninformed regarding effective teaching (Gardner, 1984).

Some academics disagree with the results of student ratings when they are numerically reduced to a single figure, especially with its implications for staff promotion (Day, 1993). Panter (1993) argued that the evaluation of teaching is "ultimately a matter of informed professional judgement. It cannot be reduced to comparing numbers on survey results" (p. 14).

Furthermore, students may not be competent to rate or evaluate some of the important aspects of teaching (Miller, 1986; Cashin, 1989, 1995; Ramsden, 1991a). For instance students cannot knowledgeably comment on the curriculum (Ramsden 1991a; Panter, 1993). Ramsden (1991a) stated that students "cannot comment on the time and effort put into curriculum design, for example; nor are they necessarily able to comment validly on matters such as the relevance, quality and up-to-dateness of the content" (p. 132).

Centra (1989) criticised the unity of student-ratings questionnaires and pointed out that, while teaching in some disciplines like performing and fine arts is more individualised or emphasises the small group, different forms of student ratings are needed. He stated, in these disciplines "student evaluations should focus on a different set of factors from those from lecture or discussion courses" (p. 166). At least when the student ratings are intended to be used for personal decision making, comparisons among academic staff across courses or faculties should be avoided, or at least the various instructional settings should be considered. Smith and Cranton (1992) recommended that "ideally, data from courses with the same characteristics would be collected in separate data files, analysed as to the relationships between skills and overall ratings, and then used to guide decision making" (p. 763).

Clearly, students' judgements are acceptable only in some specific areas. For example, the reason that 'instructor knowledge of the subject matter' is not frequently rated as a factor in student ratings, is that most lecturers do not think that their students can or should judge the lecturers regarding their knowledge about subject matter (Centra, 1993). This was supported by Lally

and Myhill (1994) who stated that “students are not able to judge items about the relevance, appropriateness, and up-to-dateness of the course content or the subject knowledge of the teacher” (p. 30). Students are generally capable of judging about “what they have learned, the ability of the teacher to communicate with them, and how well prepared and accessible the teacher is” (p. 30). Similarly, Menges (1994) noted that students are reliable reporters of attentiveness and clarity of lecturers, and also the value of various components of the course including readings, examinations, and projects. But they cannot accurately judge the quality or currency of course content. Similar points were raised by McKeachie (1986) who also commented that “judgments of the appropriateness of content, goals, and level of achievement are probably more competently made by peers” (p. 281).

However, it seems that Marsh (1992) does agree that students can judge the disciplinary knowledge of lecturers. He developed the following four items as a part of his student-evaluation questionnaire and grouped them under the ‘breadth of coverage’ in that questionnaire. The items are:

- 1) Lecturer contrasted the implications of various theories.
- 2) Lecturer presented the background or origin of ideas and concepts developed in class.
- 3) Lecturer presented points of view other than his/her own when appropriate.
- 4) Lecturer adequately discussed current developments in the field (p. 298).

It seems that McKeachie (1990) also accepts the results of student ratings in terms of judgment on the quality of all aspects of teaching. He stated that students can not only “provide data about the effects that instruction has had on them, but they also have an excellent opportunity to observe what

the teacher does and what the course requires (p. 194). He added that “despite faculty doubts about the ability of students to appreciate good teaching, the research evidence indicates that students are generally good judges”.

Murray (1980a) warned that student ratings are intended to measure only classroom instruction, rather than all of the components of university teaching. Within this limit, he also stated that “it is probably fair to say that student ratings are the best (i.e., most valid) measure available for the quality of classroom instruction. Important evidence of the validity of student ratings is that they correlate positively with ratings of independent observers and with objective measures of student learning” (p. 40). In addition to Murray’s report, the existence of a positive relationship between student ratings and student achievement was also reported by Ramsden (1991a). Based on the responses of 50 in-depth interviews which were collected from the winners of the Alumni Association’s Distinguished Teaching award, lecturers accepted the student evaluations as an indicator to study their own teaching. However, they did not accept their use for tenure and promotion, particularly when academic committees gave much attention to small quantitative differences (Lewis, 1993).

While Cashin (1995) agreed that student ratings are valid and reliable, he pointed out that they are only one source of data and “must be used in combination with multiple sources of data if one wishes to make a judgment about all of the components of college teaching. Further, student ratings are data that must be interpreted” (p. 6). Accepting the need for using the variety of methods for teaching evaluation, especially when it is to lead

to an important decision, McKeachie (1990) emphasised that “student ratings are the best validated of all the practical sources of relevant data” (p. 195).

Wilson (1987) claimed that the student ratings reflect and support the traditional role of lecturers as information-givers and the student as receiver. However, Murray (1987) responded that highly rated lecturers are more likely to use non-traditional methods than lecturers receiving lower student ratings, because the students find the former group easier to learn from. It should be noted that the use of a valid and reliable instrument for student ratings, and the establishment of a fair procedure for data gathering, do not automatically yield valid and reliable results. Validity and reliability of the data also depend on the interpretation of the data; that is to say, using student ratings must be judged in context, e.g., considering the available resources and facilities. Although filling out the teaching-evaluation questionnaires by students is one kind of evaluation, the main and the real evaluator is a person or a committee who makes a judgement based on the student ratings provided (Theall & Franklin, 1990). Therefore, obtaining valid results of student evaluations is not only based on developing a questionnaire, but also on gathering data and on its interpretations. According to the Association of University Staff of New Zealand, “the type and purpose of the teaching, the background of students, the resources available and the voluntary or compulsory nature of the course, should all be considered” (Hall & Fitzgerald, 1995, p. 307).

While teaching performance might be assessed on the basis of students’ judgments, this basis might on occasion be open to some manipulation on the part of the lecturer in each case. Occasionally, unexpected circumstances invalidate student ratings. Lecturers should therefore be encouraged to

raise their concerns with people who are responsible for the interpretation of the data. This matter is not too serious when the role of evaluation is formative, but when student ratings are used in promotion, tenure, and merit decisions, this issue can raise anxiety, uncertainty and hostility (Theall & Franklin, 1990). Student ratings should never be used alone in determining instructional effectiveness for personnel decision making. Student ratings "are not completely diagnostic of all elements in the instructional domain. How such data should be used in a comprehensive system of instructional evaluation, and how much weight they should carry, should be determined at the departmental level" (Arreola & Alemoni, 1990, p. 53).

Other difficulties might occur with student assessment of lecturers. For example, some lecturers say that they want to make students motivated by questioning. They think a good lecturer should be leaving questions open for the students to find answers themselves. These lecturers might get a lower grade from the students, than the lecturer who gave to students everything and made them very comfortable. Another similar criticism is that lecturers who have high expectations from students, may not be appreciated, and then not be rated highly by students until they become more mature and can better assess their experience. However, when Overall and Marsh (1980) collected student ratings from one hundred courses at the end of each course, and then also later - at least one year after graduation, a correlation of .83 was found between the two sets of ratings both for individual items and overall averaged ratings. This is an indicator of maturity of university students to be able to evaluate their lecturers. On the other hand, perhaps one year is too short an interval to test this criticism adequately.

Furthermore, it seems that students now seem to have more authority than in the past, because they pay tuition fees and for other reasons. For example if a lecturer fails a student, there may be an inquiry into why the student failed. Deans of students have been appointed to assist these appeals. These matters take up time for lecturers which they may not like. Therefore, possibly, some lecturers might be tempted give the students a high grade to avoid trouble. Giving a high grade to students possibly results in a high grade for the lecturer too. These and other ways of manipulating the student ratings lead one to conclude that students' evaluations have to be treated cautiously. Though the above possibilities were acknowledged by McKeachie (1990) and Marsh (1992), they added that students who are honest in their comments can make reliable descriptions of their classroom activities, and accurate judgements about their teachers.

One of the most common mistakes in the application of student ratings is "to forget that they do not constitute judgements in themselves. However valid and reliable, they can never be more than a guide to making decisions" (Ramsden, 1991a, p. 147). Multiple sources of data are needed in order to provide sufficient information to make valid judgements about teaching effectiveness. Not too much reliance should be placed on evidence from any kind of teaching evaluation method (Crooks, 1990; McKeachie, 1990; Ramsden, 1991b; Cashin, 1995). Additionally, it should be considered that the student-evaluation survey is a technical instrument which should be developed, applied and judged by specialists. In addition, "great care needs to be taken, and much skill is required, in setting the questions, collecting and analysing the data, and acting on the result" (Ramsden & Dodds, 1989, p. 35).

After considering the above arguments supporting the use of student ratings on one hand, and warning of difficulties in their use on the other hand, it was decided that the former arguments were strong enough to justify their use, with caution, in the present enquiry.

3d.6 Scoring of Student Ratings

One of the ongoing debates about student ratings is whether a single averaged rating across all items of a student-ratings questionnaire should be reported or whether ratings by each item or dimension should be made in student evaluations of teaching performance (McKeachie, 1986; Marsh, 1987, 1992; Abrami & d'Apollonia, 1990; Hativa & Raviv, 1993; Marsh & Roche, 1993).

McKeachie (1986) argued that one of the commonest mistakes in student-ratings systems is to compute an average score from a group of items. He pointed out that such a procedure assumes that all items are measuring the same phenomenon (effective teaching) and are of good value, when "in fact most scales contain several types of items, each providing useful information. Their purposes are different and they cannot meaningfully be lumped together" (p. 290). When using student ratings as a source of information to provide a basis for improvement, it cannot be assumed that all items have equal importance (Smith & Cranton, 1992). This point was supported by Marsh (1987; 1992) and Marsh and Hocevar (1991a) who carried out substantial research into students' evaluations of teaching in higher education. They argued that if the items of student ratings are summarised by an average score, there is no basis for knowing what is being measured. If a survey contains separate groups or related items that "are derived from a

logical analysis of the content of effective teaching, ... then it is possible to interpret what is being measured" (Marsh & Hocevar, 1991a, p. 9).

With respect to the above argument, some researchers concluded that student ratings of teaching are multidimensional (Watkins, Marsh & Young, 1987; Marsh & Hocevar, 1991a; Marsh & Roche, 1993; 1994). Marsh (1992) and Marsh and Hocevar (1991a) summarised the benefits of student ratings in four categories: teaching improvement, personnel decisions, course selection by students, and research in teaching and evaluation. They then concluded that for three of the above (the exception is personnel decision) "there appears to be general agreement that appropriately constructed multiple dimensions are more useful than a single summary score" (p. 10).

In contrast, Miller (1988) reported that other researchers calculate average ratings for the evaluation of teaching when the number of responses is above thirty and the response rate is higher than sixty per cent. Hativa and Raviv (1993) also concluded that global questions in student-ratings questionnaires such as 'overall I rate this lecturer as ...' can almost perfectly predict the mean of all of the items of a student-ratings questionnaire. They further explained that the global score "can simply replace the mean of all instructor-attribute items and serve as a single score that faithfully represents all dimensions of teacher ratings" (p. 625). Thus, in two studies carried out by Dunkin (1990c; 1991), academic staff were asked in nine specified teaching tasks, represented in nine different items, to indicate their perceived competence in teaching on a three-point scale (1-3) on each of the items. Then the average score over the nine items was used as the score for

each lecturer. This method also was used in similar situations and for similar purposes by Ramsden and Moses (1992) and Kember and Gow (1994).

There is considerable debate about the use of a single, averaged rating across all items, and whether ratings on each item should be reported. Abrami and d'Apollonia (1990) pointed out that "multidimensional rating has the potential for useful application to purposes other than summative ratings" (p. 109). Cashin (1995) concluded that "no single student-rating item, nor set of related items, will be useful for all purposes" (p. 1). McKeachie (1994) argued that if the results of student ratings are to be used to assist personnel decisions, two to five general items might be sufficient. If student ratings are required to be used for teaching improvement in universities, "a more detailed, behaviorally oriented set of items relevant to particular kinds of courses is probably more appropriate" (p. 327).

Marsh (1992) also recommended that, when formative evaluation is the purpose of student-ratings, careful attention should be given to the different components of teaching (e.g. rapport or assessment) which are to be measured. He further explained that "surveys should contain separate groups of related items which are derived from a logical analysis of the content of effective teaching and the purposes which the ratings are to serve, and should be supported by empirical procedures such as factor analysis" (p. 280). Ramsden (1991a) commented that there is no elementary solution in the usage of the two methods. He pointed out that "there is a trade-off between completeness and usefulness of results on the one hand, and efficiency in rank-ordering units on the other" (p. 146). He added to the warning already noted above that student ratings used to evaluate academic staff should be cautiously interpreted, this time because these are normative

rather than criterion-related data. Student ratings “say nothing absolutely about whether a unit is perceived to be good or bad. They simply tell us whether it is better or worse than the rest. The highest-rated unit may still have teaching which its students regard as unsatisfactory” (p. 147).

In a recent study by Centra (1994), to evaluate academics’ teaching effectiveness as assessed by peers and deans, ratings were made on separate items, on categories and on total teaching. First, calculations were made on 13 various aspects of teaching effectiveness, developed on 13 items such as helping students to link classroom experiences to the broader context of their lives, adjusting courses to individual needs and staying current in the field. Then, these 13 aspects were categorised into three areas: motivational, interpersonal and intellectual-skill areas, and the ratings were calculated for each category. Finally, the sum of the 13 items was calculated for each lecturer. Researchers reported that the use both methods (total averaged, and item or category rating) was supported by evaluation experts and users (Abrami, 1989a). Abrami for instance, referred to Johnson’s survey (1989) which found that “an equal number [of experts] favoured, as were opposed to, the use of only global ratings for promotion and tenure decisions” (p. 221).

In the debate about the two approaches, advantages and disadvantages are found in both. Therefore, it seems more conservative and reasonable to utilise both approaches in the examination of teaching performance, and this judgement applied in the present study.

Irrespective of the use of an overall averaged rating across all items, or one rating for each item, many influential factors impact upon the student

ratings which should be considered in data gathering. Some of them are: number of student ratings results, response rate in class, level of respondents, class size and place and time of evaluation (McKeachie, 1986; Cashin, 1990; Murray & Rushton, 1990; Weimer, 1990; Centra, 1993). These matters will be identified and considered in this study and are explained in the next chapter (see: 4b.5.2.3, Criteria Used to Select Data). However, McKeachie (1990) commented that these variables “make a difference, but not a large enough difference to cause researchers to misclassify a good teacher as poor” (p. 195).

Summary: There are several methods for evaluating teaching performance. Student ratings, as one of these methods, has been used in the last two decades by many tertiary institutions around the world. While there have been some significant criticisms of these ratings, many researchers have considered student ratings to be valid, reliable and relatively free from bias for evaluating some components of teaching effectiveness. It has been previously argued from substantial research that despite some reservations, students are well placed to observe and report on lecturers and their impact on students. Since this appears to be the case, student ratings should be included in any range of methods that measure the quality of teaching, provided appropriate caution is taken in the interpretation of results.

It has been shown, too, that it is debatable whether this wide application of student ratings is solely an indicator of its usefulness or is rather a result of its simplicity in data gathering, scoring and cost-effectiveness. It was noted that there are some weaknesses in student evaluation. Comments by many researchers show that students should be used as only one source for

evaluating teaching. Teaching performance should also be evaluated by other sources including teaching portfolios, peer reviews and institutional assessments. The results of teaching evaluations must therefore be interpreted cautiously, especially when a single method is used or it is used for personnel decision making. Although use of student ratings is widespread and supported by many researchers, it should be noted that its effectiveness depends upon many factors such as the appropriateness of the instrument; the processes of data gathering, scoring and analysing; and the objectivity in interpreting the results.

Another issue in the debate over student ratings is whether evaluations should report an averaged single scores or 'multi-scores' for a survey. It seems that each method can be adopted in some of the usages of student evaluation, including teaching improvement, personnel decisions, research and student awareness. For instance, item or category scoring, rather than average ratings, seems very useful for teaching improvement. Since student ratings are used in the tertiary sector for many purposes such as teaching improvement and promotion decisions, several research findings suggest it is better to interpret the data from different approaches. Here it seems preferable to calculate the ratings through both item means and the overall mean score.

In practice, using several methods for teaching evaluation needs much more resources than most universities can afford. Therefore, they compromise between the availability of resources, usefulness of methods, accessibility of sources, easy implementation of evaluation and other factors. Instead of evaluating all or some of the subjects being taught by lecturers in every semester, one solution to producing an optimal compromise between

the 'comprehensive' approach and the 'practical' approach (considering financial and time constraints) in evaluating tertiary teaching may be to evaluate (1) one of the subjects randomly, or (2) all of the subjects in order, in each semester, by different methods of evaluation as mentioned above. By applying this policy, after two years, the teaching performance of lecturers will be examined by four sets of judges including students, peers, experts and committee members. These results could then be considered and interpreted by a committee of experts and representatives of lecturers. The recommendations of such a committee should be a valid basis for making personnel decisions and for teaching-improvement purposes.

Therefore, if any tertiary institution wants to obtain an accurate and comprehensive view of the teaching performance of its lecturers, student ratings should be included as one of the indicators in the evaluation process. Students cannot provide a complete picture of the teaching process which should be evaluated, as students' evaluations should be used in conjunction with other forms of evaluation, especially when the results are used for personnel decisions. In fact, it seems that insufficient attention is paid to obtaining opinions other than those of students. Obtaining input for evaluating teaching from one source, that is student ratings, limits the breadth, fairness, usefulness and effectiveness of the evaluations. Therefore, "much more specialised and sharp instruments need to be developed to assess adequately such a complex activity as teaching in a university" (Lally & Myhill, 1994, p. 65).

Summary of Chapter

This chapter reviewed the effects of lecturers' attributes on their teaching performance, focusing on two important factors: lecturers' attitudes toward teaching, and whether they hold teaching qualifications.

First, the theories of teaching and learning and the relationships between them were reviewed. It was concluded that teaching and learning are inseparable; one cannot adequately be considered without the other. Some researchers believe that teaching is in fact, the facilitation of learning.

Theories of teaching and learning generate models of teaching and learning. In other words models of teaching flow from theories of teaching and learning. Thus, the Biggs (1988; 1989), and the Dunkin and Biddle (1974) models of teaching were chosen to guide this inquiry. Based on these models and the relevant literature, the relationships between lecturers' attitudes toward teaching and teaching performance were reviewed. Subsequently, it was necessary to explore the criteria of effective teaching in the tertiary sector. This review was followed by an exploration of the influence of lecturers' teaching qualifications and six other variables on teaching performance. Finally, literature relating to assessing teaching performance in the tertiary sector, focusing on student ratings, was reviewed.

This literature review suggests that models of teaching can be the basis for further research in teaching. Based on the two applied models and the review of literature, a relationship was established between lecturers' attitudes toward teaching and their actions in the classroom. This

relationship can be applied to explore lecturers' attitudes toward teaching, subsequently seeking to modify or improve any defective attitude towards teaching through teaching-development activities.

It was also found that, although there is no entire agreement among researchers about the criteria and dimensions of effective teaching, a measure of consensus could be drawn from the research. Subsequently, the criteria were classified into five dimensions: (1) lecturer-student interaction and rapport; (2) organisation, planning, or structure; (3) grading and assignments; (4) work load and course difficulty; and (5) instructor enthusiasm. An attempt was also made through the literature, to find some indicators for 'best' methods of teaching in universities.

Section two reviewed the literature related to the necessity of acquiring teaching qualifications for university teachers. After reviewing contrasting philosophical approaches, institutional policy and recent evidence, it was concluded that effective teaching in universities is a professional activity unto itself. Since each professional discipline has its own learnable principles, university teachers should be professionally developed to be effective and competent teachers.

In the third section, the roles of six other influential factors on teaching performance were reviewed. These six variables are (1) language background, (2) gender, (3) academic rank, (4) academic degree, (5) academic discipline, and (6) extent of tertiary teaching experience.

Finally, it was determined through reviewing the research and the points of view of experienced practitioners, that student ratings can be a valid and

reliable method of contributing to an assessment of a lecturer's teaching performance.

It has been acknowledged that there are other variables which are influential to lecturer teaching performance. As an example, the kind of learning required for improving teaching performance is an important influential variable. The examination of these variables however, is beyond the scope of this theses, but should be further examined in future research.

In this chapter, reasons have been set out to show why it is important to examine the eight lecturer attributes considered in this study. The method of the examination of these influential attributes on the lecturers' teaching performance is presented in the next chapter.

CHAPTER FOUR: METHOD

In this chapter the design of the study is explained in section a, and then the process of the two phases of research are explained in sections b and c.

4a. Research Design

The present study uses integrated methodology comprising an 'ex-post-facto design' as the most appropriate for retrospective research in the educational setting (Cohen & Manion, 1989), and a semi-structured interview.

The design is applied to the Dunkin and Biddle (1974) and Biggs models of teaching (1988, 1989). Biggs highlights two characteristics of teachers: their conception of teaching, and how their skills in teaching impact on both teaching process and student learning (Figure 2.5). A part of this model indicates the potential relationship between the lecturer's conception of teaching and acquiring teaching skills on the one hand, and teaching performance on the other.

The measure of teaching performance in this research was derived from a student evaluation of teaching at the University of Wollongong. The data was accessed through the Centre for Staff Development (CSD). The ex-post-facto design enabled the researcher to maximise the use of this extensive data source which had previously been unexplored. Attitudes toward teaching, teaching qualifications and six other demographic and professional-background variables were surveyed through two other specifically designed questionnaires.

Although student ratings is a valid and reliable measure of the quality of teaching, it is only one indicator. Therefore, in addition to using survey methods for gathering students' and lecturers' views across the full sample of participants, a semi-structured interview was chosen to explore a smaller sub-sample of the academics' views and perceptions. Both quantitative and qualitative methods of data gathering and analysis were selected as appropriate forms for the purposes of this inquiry.

Within the continuing debate about the relative merits of qualitative and quantitative research methods, it is now acknowledged that they are complementary and both may assist the researcher to a deeper understanding of research issues (Borg & Gall, 1989; Greene, Caracelli and Graham, 1989; Crowson, 1992; Peshkin, 1993; Miles & Huberman, 1994; Creswell, Goodchild & Turner, 1996). According to Burns (1997) "one method is neither better nor poorer than the other. The choice of which research method is used should be based on an informed understanding of the suitability of that method for particular research" (p. 294). That is, while the survey provides information about the full population, observations and interviews yield an in-depth insight into the views of participants. Therefore, "paradigm selection and appropriate methods of data collection depend on what one wants to discover" (Creswell, Goodchild & Turner, 1996, p. 117). The inquiry methods can support one another.

Although a definition of the qualitative method varies among academics; observation of participants, document collection and unstructured and semi-structured interviews are the central data gathering techniques of this approach (Burgess, 1985; Glesne & Peshkin, 1992; Burns, 1997). The semi-structured interview which was applied in the second phase of the present

study was defined by Gall, Borg and Gall (1996) as a technique in which the researcher asks "a series of structured questions and then probes more deeply using open-form questions to obtain additional information" (p. 310).

According to Peshkin (1993) "every method of data collection is only an approximation to knowledge. Each provides a different and usually valid glimpse of reality, and all are limited when used alone" (p. 28). Therefore, methods from both paradigms are used in the present study to explore the research questions from different perspectives. Kinnick and Kempner (1988), in their argument about the rationale of using integrated methodology, concluded that "the quantitative study addressed the question, 'what happened' while the qualitative study addressed the question, 'why did it happen'" (p. 301). According to Glesne & Peshkin (1992), quantitative studies in general "identify sets of variables and seek to determine their relationship. Qualitative inquiry, on the other hand, generally searches for 'understanding' of some phenomenon" (p. 16). Furthermore, Miles and Huberman (1994) after presentation of the sometimes opposing views of supporters of qualitative and quantitative approaches, commented that this kind of argument is essentially unproductive. Rather, they concluded "we have to face [the situation] that numbers and words are both needed if we are to understand the world" (p. 40). However, the integrated methodology is recommended when potential obstacles, such as practical issues of time, resources, expertise and suitable participants, do not exist.

McCord (1985) reported that the application of quantitative research methods will result primarily in descriptive findings; however, their

implementation in educational contexts may be due to the difficulty in establishing a control group, as was the case in this inquiry. McCord proceeds to argue that the qualitative method might hold more promise for interpretation. In this method, participants can be involved in the research as collaborators instead of subjects, for example, by giving their interpretations through an interview. In supporting this idea, he concluded that "it may be time for quantitative and qualitative approaches to take a step closer to becoming intertwined [integrated] and applied to the study of instruction" (p. 128). This perceptive is also supported by Borg and Gall (1989) who argue that "research designs used by many investigators [in social and behavioural sciences] do not fit either model to the exclusion of the other, but instead use some combination of these paradigms" (p. 383). Rossman and Wilson (1991) suggested three broad reasons as benefits of integrated research as (1) to enable confirmation of each of the two approaches via 'triangulation'; (2) to provide more detail insights and develop analysis; and (3) to initiate new lines of thinking, related to the topic of research. This approach was also emphasised by Miles and Huberman (1994) who state that

careful measurement, generaliseable samples, experimental control, and statistical tools of good quantitative studies are precious assets. When they are combined with the up-close, deep, credible understanding of complex real-world contexts that characterise good qualitative studies, we have a very powerful mix (p. 42).

Integrated research may be carried out through the following four outlined models (Steckler, et al., 1992). In these models different weights are given to qualitative and quantitative methods.

Model 1) Qualitative methods are used to help develop quantitative measures

and instruments.

Model 2) Qualitative methods are used to help explain quantitative findings.

Model 3) Quantitative methods are used to embellish a primarily qualitative study.

Model 4) Quantitative and Qualitative methods are used equally and parallel.

Model 2, which is shown in Figure 4.1, is considered the most suitable for doing the present research, because the main source was numeric data from student ratings and academic surveys. In the McClelland and Auster study (1990) for example, for which Model 2 was chosen, the main sources of data were two surveys of students. Qualitative data were included “where they helped to illuminate relationships revealed in the survey... the degree of agreement between the two (survey and qualitative evidence) gave additional confidence in the survey results” (p. 618).

Please see print copy for images

Figure 4.1 : Integrated qualitative and quantitative data
(Steckler, et al. 1992, p. 5)

Considering the above, the selection of student ratings and lecturers' surveys in phase one and semi-structured interviews in phase two was based on the fact that these two are appropriate and complementary methods for undertaking the present research. Interviews with 25 of the academics, involved in the first phase of the study, were completed in order to explore and interpret the lecturers' attributes which affect their teaching performance. Three main research questions were included in the

interviews and the academics were asked to explain the reasons for their responses.

In terms of appropriate format for the presentation of methodology and the results of the integrated research , Creswell, et al. (1996) acknowledged that experts have few guidelines to help the researcher. However, Creswell (1994) suggested three Models for presentation of integrated research. He named them as (1) 'two-phase Model' which presents the study in two distinct phases. It could begin with either qualitative or quantitative. In Model (2) which he called 'the dominant [vs.] less dominant format', the researcher presents the research to focus on either a dominant qualitative or quantitative throughout the study. In Model (3) the 'mixed methodology format' the researcher integrates both qualitative and quantitative at all phases of the research process.

The present Chapter has applied Creswell's 'two phase Model'. However, the results of two phases of the study are integrated and discussed in the Results and Discussion Chapters. The approach of the present study is consistent with the study conducted and presented by Kinnick and Kempner (1988). It seems that this method of presentation is easy to follow for readers. As a result, the two phases of conducting the ex-post-facto and interview studies are presented in the following two sections.

4b. Phase One: Ex-Post-Facto Study

The variables, research questions, population and sampling, instruments, data collection and statistical analyses are explained in the following sub-sections.

4b.1 Variables

The eight independent variables and one dependent variable of the study are introduced in this sub-section. Although in an ex-post-facto design one variable “can not with confidence be said to depend upon the other in the same sense as in an experimental study” (Ary, Lucy & Razavieh, 1972, p. 271), this method is a modification of the experimental design, where the division of the variables into dependent and independent is usual (Ary, et al. 1972; Cohen & Manion, 1989; Tuckman, 1994).

The only dependent variable of this study is the teaching performance of academic staff. Six of the independent variables are non-continuous (categorical): gender, language background, teaching qualifications, academic rank, academic discipline and academic degrees. The remaining two, university teaching experience and attitudes toward teaching, are continuous. All of these variables are operationally defined as follows:

4b.1.1 Independent Variables

Information related to the eight independent variables were gathered from the two respondents’ self report on the two research questionnaires according to the following explanation:

Lecturers’ attitudes toward teaching: Lecturers’ attitude toward teaching was surveyed as an indicator of the lecturers’ commitment to effective teaching. This variable was assessed through a purposefully designed five-point Likert scale questionnaire comprising 37 items about effective teaching. Ramsden, et. al. (1992), suggest that this kind of instrument can be used to explore a lecturer’s commitment to effective teaching, and can be a valid

indicator of teaching quality. The questionnaire was coded so that scores four and five correspond to a positive attitude towards effective teaching. The items of this questionnaire were devised from the principles for examining teaching effectiveness from the writing of behaviourists, cognitivists and personality theorists and relevant literature (Mackie (1981; Genn, 1982; Bowden & Anwyl, 1983; Feldman, 1988; Ramsden & Moses, 1992; Everett & Entekin, 1994; Kember & Gow, 1994). Detailed information of the development of the scale, its validity and reliability, are presented in 4b.5.1.

Teaching qualifications (TQ): Academics are considered to have teaching qualifications if they have completed an education degree or an education diploma or if they have attended relevant professional development workshops and short courses deemed to be equivalent to a semester-length subject. For the purpose of analysis, the respondents are grouped into two categories, those with TQ, and those without TQ, classifications being made on the basis of self-reports in the research survey (Appendix T).

Gender: Subjects identify themselves as being male or female.

Language background: The sample is divided into academics whose first language is English (ESB) and those whose first language is other than English (NESB), as reported by the participants.

Academic degrees: According to self report, the sample is divided into three groups: Doctoral, Masters, and Other (Post Graduate Diploma or a Bachelor's degree).

Academic discipline: The University of Wollongong is organised into the nine faculties. Because of the low number of participants in some faculties

responses are clustered here into five discipline groups: 1) Arts and Creative Arts, 2) Commerce and Law, 3) Education, 4) Engineering and Informatics, and 5) Science and Health. This division was carried out according to their similarity in nature, previous divisions in this university and the advice of senior staff in the Faculty of Education. Although the division of academics into 39 Departments is more appropriate for analysing the 'field' (discipline) differences, it was not possible as a result of the limited number of participants and the limitation imposed by confidentiality relating to detailed bibliographical questions.

Academic Rank: The sample is divided into the following five existing groups: Professor, Associate Professor, Senior Lecturer, Lecturer and Associate Lecturer.

Years of university or college teaching experience: The number of years of experience in formal university or college teaching is considered in this category.

4b.1.2 Dependent Variable

Teaching performance (TP) is the only dependent variable in this study. It is examined through an average of students' ratings of lecturers' performance. The measure was derived from an instrument developed by the Centre for Staff Development (CSD) in 1988 comprising 25 Likert-scale items about subject design, organisation, assessment, lectures and tutorials (Appendix G). This instrument is used in the University, along with Heads of Department assessments, to provide an indicator of the quality of teaching of individual members of staff for annual reviews, promotion and tenure applications (Panter, 1994a).

It was found impractical to embark on a comprehensive evaluation, in terms of ethical and managerial issues and the time required to collect information about the lecturers' teaching performance by visiting classes, talking with peers, interviewing department heads and using other methods of evaluation. As a result, student evaluation was selected as a suitable method, considering the support of the researchers as reviewed in 3d. Although assessing teaching performance through student ratings might not be a perfect method, it does contribute to an understanding of what good university teaching and teachers are, particularly in the present time when there is a focus on quality university teaching.

Data on teaching performance, derived from more than 20,000 student evaluation surveys covering 548 courses during 1991-1993, were provided by the CSD. For each member of academic staff who participated in the study, on average 157 student ratings, ranging from 58 to 617, were considered to examine the lecturers' TP. The extensive university-wide database of teaching evaluations held by CSD provided a rich historical source of student ratings which could not have been otherwise practically generated for the study.

In addition, the CSD provided the overall university mean scores for each of the 23 items from the student-rating questionnaire for the period 1991-1993, for all academic staff. These data were computed by Faculty groupings and were used for comparison analysis between TP of population and TP of sample of the study (see Table 4.2).

4b.2 Research Questions

The following nine research questions guided the present study:

1. To what extent do lecturers' attitudes towards teaching correlate with their teaching performance?
2. Is there a significant difference between the teaching performance of university lecturers who have acquired teaching qualifications and those who have not?
3. Is there a significant difference between the teaching performance of university lecturers for whom English is their first language and those for whom English is not their first language?
4. Is there a significant difference between the teaching performance of male and female university lecturers?
5. Is there a significant difference between the teaching performance of university lecturers according to academic rank?
6. Is there a significant difference between the teaching performance of university lecturers with different academic degrees?
7. To what extent does lecturers' length of tertiary teaching experience correlate with their teaching performance?
8. Is there a significant difference between the teaching performance of academic staff in different faculties?
9. Which lecturers' attributes have a significant impact on the quality of lecturers' teaching performance?

4b.3 Population and Sample of Study

The population for this study was defined as all of the full-time academic staff (N= 513) of the University of Wollongong in 1994. One fourth of the staff (N= 128) were randomly selected from an alphabetical list of academic staff for the pilot study and did not participate in the main study. The remaining three-fourths (N = 385) were selected for the main study.

In the main study, 385 questionnaires were sent to the staff who were not selected for the pilot study. According to administrative data (Branch, 1994), 29 academic staff were on study leave in the second session of 1994, so could not be involved. Moreover, 62 had commenced duties in 1994 (Branch, 1994) and so did not have student evaluation results and could not be included in the study. This is because the compulsory student ratings were suspended in 1994 for the purpose of improving and refining the services offered by CSD (Panter, 1994b). As a result, 294 academics constituted the target group or accessible population for this research, of whom 176 (60%) became the sample, 118 academics not responding (Table 4.1).

Of those involved, 91 (52% of the sample) held qualifications in teaching and 84 (48%) did not. There were 124 males (71%) and 51 females (29%). English was the first language of 149 (85%) of the academic staff and their academic ranks were proportionately: Professor 10%, Associate Professor 12%, Senior Lecturer 30%, Lecturer 36% and Associate Lecturer 8%. There was no response to the relevant question from the remaining 4% of the respondents.

The respondents were drawn from all faculties proportionately (Arts 11%, Commerce 16%, Creative Arts 5%, Education 15%, Engineering 7%, Health and Behavioural Science 14%, Informatics 14%, Law 5% and Science 14%) and the proportions for discipline groups were derived from these percentages. Respondents reported from one to 38 years of university teaching experience (M = 12.6 years, SD = 8.5 years).

Table 4.1: Sample of Study and Response Rate of Different Groups of Involved Academic Staff

Groups	Sub Groups	Main Study	Not Included	Target Group	Received Response	Return Rate %
Gender	Male	279	59	220	124	56
	Female	106	32	74	51	69
Rank	Professor	39	8	31	17	55
	Associate Pro.	53	8	45	21	47
	Senior Lec.	109	16	93	52	56
	Lecturer	150	30	120	63	53
	Associate Lec.	34	18	16	13	81
Faculty	Arts	58	18	40	18	45
	Commerce	65	19	46	27	59
	Creative Arts	20	5	15	9	60
	Education	36	6	30	25	83
	Engineering	38	5	33	11	33
	Health & B. S.	43	16	27	24	89
	Informatics	54	5	49	24	49
	Law	19	4	15	8	53
	Science	52	10	42	23	55
TOTAL		385	91	294	176	60

As indicated in Table 4.1, an overall response rate of 60% was received in the main study, with some variation in responses among the different academic ranks and faculties. There was a balance between the response rates of three academic ranks out of the existing five, the exceptions being Associate Lecturers (81% responses) and Associate Professor with 47%.

There was also a balance between six out of the nine existing Faculties, the response rates of Health and Education being considerably higher (89% and 83% respectively) and the Faculty of Engineering lower (33%) than the average rate. The response rate of females (69%) was 13% higher than male academics (56%).

The sample was representative of the academic community of the university with respect to three characteristics: academic rank, gender and faculty representation. For academic rank the analysis yielded a χ^2 value of 1.58 (df = 4 and $p < .81$), for gender χ^2 was .89 (df = 1 and $p < .34$) and for faculty χ^2 was 8.12 (df = 8 and $p < .42$). As there were no significant differences between the two groups, the researcher concluded that there was no sampling bias in regard to these characteristics. However, as the available information about the teaching qualifications of academic staff across the university was not available, no comparison analysis was possible between the sample and the population for this variable.

In addition to the above comparison analysis, and the appropriateness of the 60% response rate for the survey study among the academic staff, comparisons between overall teaching performance of the research sample and the population in five faculty groupings were undertaken. The results are summarised in Table 4.2. This table shows that when the overall TP

mean score of the sample and population were compared, the same rank order was established. However, the standard deviation (SD) of their TP indicated that the sample is more homogeneous than the population.

Table 4.2: Comparison Between Overall TP Mean Score of Sample and Total Population in Different Faculties of the University Between 1991-1993

Faculties	Sample (N=176)			Population (N=?*)		
	Mean	SD	Order	Mean	SD	Order
Arts and Creative Arts	4.01	.38	1	3.98	1.02	1
Education	3.77	.40	2	3.8	1.05	2
Science and Health	3.73	.34	3	3.64	1.11	3
Commerce and Law	3.61	.31	4	3.52	1.11	4
Engineering and Informatics	3.53	.40	5	3.38	1.16	5

* The number of academics who were evaluated was not reported by CSD.

4b.4 Pilot Study

According to Borg and Gall (1989), a preliminary trial of “research measures and techniques is essential to the development of a sound research plan” (p. 77). In this case a pilot study was undertaken to receive feedback on the research questionnaires, to check the validity and reliability of the questionnaires, to examine the response rate of the population, to check the data-collection procedure and to trial the planned statistical analysis.

One fourth of the population (N = 128) were selected randomly for the pilot study and 34 (27%) replied. The depressed response rate could be attributed to the facts that some staff were on study leave at the time of the pilot study and others, being new to the University, had no student evaluation results

on which to report. The need for academic staff to give permission for access to their confidential records of student evaluations, the ambiguities of some items, the large number of questions, and a lack of familiarity with the objectives of the study, may also have exerted a negative influence on the response rate of the pilot study. These factors were considered in revising the questionnaire and its administration (see 4b.5.3).

The pilot study proved very useful for the development of an appropriate instrument format and the data-gathering procedure. The actions and techniques used for administering the data collection and increasing the response rate are explained in the Data Collection section (4b.6).

4b.5 Instruments

Data pertinent to the study were collected from three sources. First a purposefully designed questionnaire was developed to survey lecturers' attitudes toward teaching (see 4b.5.1). Secondly, existing student ratings data collected by CSD during 1991-1993 were purposefully structured for examining the lecturers' teaching performance (see 4b.5.2). Thirdly, biographical and professional attributes of participants were collected by another questionnaire (Appendix T). Data related to the eight independent variables of this study (see 4b.1.1) were gathered by this survey. The processes of developing items for the first instrument and examining the validity and reliability of both surveys are explained in the following subsections.

4b.5.1 Attitudes Toward Teaching

The instrument designed to investigate lecturers' attitudes toward effective teaching was based on a survey of relevant literature, expert opinion and the comments of lecturers and students. This instrument (Appendix F) contained 37 items in a five-point Likert scale. The items were coded: strongly agree = 5; agree = 4; undecided or neutral = 3; disagree = 2 and strongly disagree = 1. Scores 4 and 5 were deemed to correspond to a positive attitude towards specified components of effective teaching.

Development of Items: In this instrument, lecturers' attitudes towards teaching are clustered into five dimensions: lecturer-student interaction, organisation, grading and assignments, work load, and instructor enthusiasm, consistent with the dimensions suggested in the literature (Entwistle & Tait, 1991; Ramsden, 1991c; Marsh, 1992; Centra, 1993). As Ramsden and Moses (1992) suggest, "there are many difficulties in constructing an acceptable index of teaching effectiveness in higher education" (p. 280) but the chosen dimensions appear to represent an acceptable index or synthesis of the literature (see 2.3). The number of items in each dimension and two representative items from each dimension are reported in Table 4.3.

Once the dimensions of the attitude questionnaire had been determined, the appropriate items for each dimension were selected from the relevant theories and literature and previously developed questionnaires (Mackie 1981; Genn, 1982; Bowden & Anwyi, 1983; Ramsden & Moses, 1992; Goodwin & Stevens, 1993; Kember & Gow, 1994; Everett & Entrekin, 1987; 1994; Centra, 1994). The items developed by Ramsden and Moses (1992) for

examining the lecturers’ attitudes toward teaching, provided an important source for the attitude survey in this study.

Table 4.3: Ten Representative Items from the 37-Item Lecturers’ Attitudes Survey on the Five Dimensions of Effective Teaching

Dimension	Representative Items by Dimension
Interaction (8 Items)	Academic staff should be concerned about the emotional and personal development of their students. Consulting hours of academic staff should be clearly advertised and kept for students.
Organisation (8 Items)	Discussion and teamwork activities are more effective than lectures in developing conceptual understanding. It is the lecturer's task to link the subject matter with what had been already taught and what is going to be taught.
Assignments (8 Items)	A combination of continuous assessment and final examination is the best method of grading students' learning. The results of examinations and student assignments should be used by academics to modify teaching.
Workload (6 Items)	It is the lecturer's task to understand the difficulties students may be experiencing with their work. Even the most capable students should be extended by university subjects.
Instructor Enthusiasm (7 Items)	University teaching is an activity that gives me a great deal of satisfaction. It is not the lecturer's task to make a special effort to get students interested in the subject.

Validity of the Instrument: To ensure the validity of the draft instrument, the following five processes were carried out by the researcher during the development of this survey:

(1) Items were extracted from the theories and literature regarding the principles of effective teaching and previous questionnaires (Anastasi, 1988). Minor amendments were made to the items to accommodate the research-questionnaire format.

(2) The survey was constructed and items arranged in consideration of such factors as clarity, brevity and reading attractiveness (Ary et al., 1985; Borg & Gall, 1989), and balanced in the number of items in positive and negative format.

(3) The questionnaire was distributed to fifteen experts who had wide experience in tertiary teaching and research. They were asked to provide feedback on such factors as the clarity, length, suitability of the items and their relevance to tertiary teaching and representation of the dimension to be measured.

(4) The questionnaire was revised by eliminating or rewriting some items that had been viewed as being redundant or unclear.

(5) The trial questionnaire was finalised and distributed to the pilot group, who were asked to complete the questionnaire, check punctuation, mark ambiguous items, make comments about these items, and add any suggestions that could improve the instrument.

Reliability of the Instrument: The reliability of a survey instrument is its level of stability. This can be determined through several approaches: test re-test; alternate-form; split-half; Kuder-Richardson, coefficient alpha (Cronbach) and internal consistency (Anastasi, 1988; Borg & Gall, 1989). Since the population of the study was comparatively small and a test re-test seemed inappropriate, the split-half, coefficient alpha (Cronbach) and

internal consistency tests were used to measure the reliability of the questionnaire.

In the first instance these tests were applied to data derived from 34 respondents in the pilot study. As a result, seven inappropriate items were deleted and small wording changes made on some other items. In the main study, the same analyses were applied with 176 respondents and the following outcomes achieved:

(1) Split-half reliability: This test can determine "whether the halves of a test are measuring the same quality or characteristic" (Borg & Gall, 1989, p. 260), or according to Anastasi (1988, p. 120) "provides a measure of consistency with regard to content sampling".

To determine questionnaire reliability, all odd-numbered items were considered as one subtest, and all even-numbered items as another subtest. The process, using Spearman-Brown formula (Tuckman, 1994), produced split-half reliability values of 0.80. The obtained value indicated that the content sampling of this questionnaire was reliable.

(2) Coefficient alpha (Cronbach): The consistency of responses to all items in the test is another method for determining the reliability of a test (Anastasi, 1988). In this case, coefficient alpha (Cronbach) was used as a generalised formula and was considered an appropriate method for computing reliability (Borg & Gall, 1989). The reliability coefficient of this scale was 0.77. This result suggested that the questionnaire was reliable with regard to both its content sampling and content homogeneity (Anastasi, 1988). The reliability values of each of the five dimensions of the questionnaire, using Cronbach alpha, are presented in Table 4.4.

Four dimensions were in the high 0.60s and 0.70s, suggesting that the items within each dimension were generally homogeneous and were rated by academic staff with some consistency.

Table 4.4:
Cronbach Alpha and Correlation of the Score for Each Dimension with the Total Score of the Questionnaire From the Responses of 176 Academics

Dimensions	No of Items	r *	Cronbach a
Lecturer-student interaction	8 Items, 1- 8	.80	.73
Organisation or structure	8 items, 9-16	.73	.65
Grading and assignment	8 items, 17-24	.76	.55
Workload or course difficulty	6 items, 25-30	.68	.68
Instructor enthusiasm	7 items, 31-37	.67	.82

* All correlations are significant at $p<.0005$

(3) Internal consistency: The internal consistency of all items of the questionnaire was computed through (a) the correlation of each item score with the score of relevant dimension and (b) the correlation of each item score with the total score of the questionnaire. Internal consistency, which can be based on items or subtest, essentially measures the homogeneity of a test (Anastasi, 1988). The purpose of this test is

to identify those items that best agree with the test and will thus yield the greatest degree of internal consistency ... This item-analysis procedure provides an indication of the degree of agreement or overlap between each individual item and the total test, that is, the extent to which each item measures what the total test measures. (Tuckman, 1988, p. 194).

Interpretation of the internal consistency would depend on the correlation between an item or a subtest with the total score. That is, “the larger the correlation between an item score and the total score, the greater the relationship between what the item is measuring and what the total scale is measuring” (Tuckman, 1988, p. 237).

The results of the first approach of internal consistency indicated that 32 items out of 37 demonstrated highly significant correlations ($p=.0005$) with the scores of their relevant dimensions, four items were significant at .001, and one item (23) at .005 (Table 4.5).

In the second approach to measuring internal consistency, 28 items had statistically significant correlations at .0005 level with the total score of the survey. Nine remaining items also demonstrated acceptable levels of correlation ($p = .05$), as demonstrated in Table 4.5. For ease of interpretation, the p-value of each correlation is shown by the numbers of stars drawn at the above correlation numbers.

Another procedure to measure internal consistency is to correlate the score of each dimension of a questionnaire with the total scores obtained on the whole test. The results of this test for five dimensions of the questionnaire are presented in Table 4.4. Internal consistency coefficients for the five dimensions ranged from 0.67 to 0.80, indicating the strong relationship between what each of these dimensions and the total score are measuring.

The correlation obtained shown in Tables 4.4 and 4.5 indicates that all items have satisfactory values and the items within all of the five dimensions are measuring similar attributes.

Table 4.5: Correlation of the Score for Items with the Total Score of Each Dimensions and Questionnaire From the Responses of 176 Academics

Item	r with Dimension	r with Scale
1. Concern about the progress of students.	.63****	.60****
2. Taking personal interest in students.	.53****	.48****
3. Concern about the emotional and personal development of stud.	.72****	.57****
4. Advertising and keeping consulting hours for students.	.25***	.15
5. Concern about students' academic progress in a subject.	.44****	.38****
6. Encouraging unmotivated students.	.73****	.66****
7. Providing remedial assistance for students.	.69****	.54****
8. Maintain of formal student-teacher relationships.	.43****	.20*
9. The appropriateness of teaching and assessment methods.	.43****	.34****
10. Most subject matter should be practical and relevant.	.66****	.49****
11. Caring about student needs in subject design.	.56****	.42****
12. Caring or catering for the least capable students.	.58****	.39****
13. Explanation of subject goals and purpose.	.41****	.41****
14. Use of discussion and teamwork activities.	.50****	.37****
15. Linking subject matter to previous and future material.	.46****	.41****
16. The effectiveness of educational technology in teaching.	.51****	.28***
17. Validity of final examinations.	.52****	.38****
18. Student participation in framing the criteria for evaluation.	.68****	.42****
19. Feedback on student work using marks and grades.	.46****	.41****
20. Method of student assessment.	.33***	.18
21. Informing students about their strengths and weaknesses.	.54****	.50****
22. The purpose of assessment strategies.	.56****	.41****
23. A combination of assessment methods.	.22**	.16
24. Modification of teaching based on the results of examinations.	.55****	.50****
25. Understanding student difficulties.	.57****	.57****
26. Presenting material caring for the least able student.	.53****	.44****
27. Giving extra tutorial assistance to students.	.62****	.47****
28. The level of difficulty of subject content.	.52***	.26**
29 Caring for different levels of student ability in subject planning	.37****	.17
30. Extending the most capable students.	.39****	.18
31. Teaching satisfaction.	.70****	.50****
32. Satisfaction with students' progress.	.57****	.50****
33 Parents' satisfaction when child chose to teach at university.	.59***	.35****
34. Lecturers' responsibility in getting students interested in the subject.	.52****	.55****
35. Dissatisfaction with career choice.	.71****	.40****
36. Disinterested in university teaching.	.65****	.41****
37. Dissatisfaction leading to career change.	.77****	.37***

No star $p < .05$

* $p < .01$

** $p < .005$

*** $p < .001$

**** $p < .0005$

The strong inter-correlation of the five dimensions presented in Table 4.6 is another indicator that the developed items and dimensions of the questionnaire are measuring similar attributes (Linke et al., 1991). The existence of strong inter-correlations supports the use of an overall mean score for all 37 items of the survey as the representation of lecturers' attitudes toward effective teaching. Linke et al. (1991) pointed out that "the validity of using any form of scaling to calculate a unidimensional rating [single score] is questionable when interrelations among the scales [dimensions] are small" (p. 38).

Table 4.6: Inter-correlations Between the Five Dimensions of the Teaching-Attitude Questionnaire from the Sample (N = 176)

Dimensions	Interaction	Organisation	Grading	Workload	Enthusiasm
Interaction	1				
Organisation	.46	1			
Grading	.55	.50	1		
Workload	.45	.40	.38	1	
Enthusiasm	.43	.33	.38	.26	1

A correlation > .24 is significant at $p<.001$

The above results were supported when the academics' responses were subjected to factor analysis to examine the "construct validity of the questionnaire and to define the underlying dimension" (Cranton & Smith, 1990, p. 207) of the instrument. Factor analysis indicated two factors which accounted for 68% of the variance (Table 4.7). The first factor explained 53% of the variance and the second 15%. Although two factors emerged, all dimensions had a factor loading ranging from 0.64 to 0.81 on Factor One.

When all dimensions are loading on one factor, the entire questionnaire may reasonably be used as a composite indicator to generate a single rating for a variable (Richardson, 1994; Linke et al., 1991) - in this case lecturers' attitudes toward teaching.

Table 4.7: Varimax Rotated Factor Matrix for the Teaching Attitude Survey from the Responses of 176 Academics

Dimensions	Factor Scores	
	Factor 1	Factor 2
Interaction	.81	.02
Organisation	.74	-.18
Grading	.78	.01
Workload	.67	-.50
Enthusiasm	.64	.48
Variance	53%	15%
Eigenvalue	2.67	.75

It is suggested by the researcher that in these circumstances, because of the strong inter-correlation between different dimensions of the questionnaire (Table 4.6) and the loading of all the dimensions in one factor (Table 4.7), the entire questionnaire can be used as a composite indicator to generate a single mean rating of perceived attitude toward teaching consistent with Linke et al. (1991) and Richardson (1994).

Considering the processes of the development of the instrument, including the item development, validity and reliability, it can be concluded that this 37-item survey is appropriate to examine the lecturers' attitudes toward

effective teaching. Now the development, validity and reliability of the other questionnaire of this study, student ratings, is explained as follows.

4b.5.2 Student Ratings Questionnaire

The questionnaire was developed by the Centre for Staff Development (CSD) at the University of Wollongong to examine lecturers' teaching performance. Data gathered by this instrument during the 1991-1993 period at the University were used in the present study. The following discussion examines the principles, structure and application of the survey, as well as the examination of the validity and reliability of the questionnaire. Finally, the criteria used to select the data are discussed.

Student ratings of teaching were surveyed using an instrument which comprises 25 Likert-scale questions about different components of teaching, including subject design, organisation, assessment, lectures and tutorials (Appendix G). As questions 26-30 were about lecturers' laboratory performance, they were excluded from the present study, as the majority of lecturers did not have laboratory activities and could not be compared. This reason for the exclusion of these five items was confirmed by Ramsden (1991c) in similar research.

The survey instrument was designed to measure the students' perception of lecturers' teaching performance by an average rating on selected components of teaching. As Ramsden (1991c) pointed out, this kind of questionnaire does not measure student achievement. It "focus[es] on those aspects of teaching which we know to be associated with effective learning" (p. 82). The following principles were considered in designing the survey:

evaluation of teaching must be comprehensive, and focus on all relevant categories of teaching;

staff, through their Unions and Deans should participate in the development of instruments and procedures;

the evaluation system must allow for the range of teaching methods used in Departments or Schools and by individual staff members;

students may not be asked questions about dimensions of the teaching (e.g. quality of content) about which they may not have an informed opinion (Huntley-Moore & Panter, 1993, p. 17).

Validity of Instrument: CSD established the validity of its survey instrument through a rigorous, research-based design process and a subsequent internal examination of the content of the instrument. Requests by several Australian and overseas universities for this Centre to write guidelines for national distribution represent an indicator of the appropriateness of the survey (University of Wollongong, 1993a).

Furthermore, an evaluation of this teaching-evaluation system by academic staff and students in spring session of 1991, showed that "most academic staff found it relatively painless and many found it a useful means of gaining an overall picture of their teaching as seen by their client group" (Huntley-Moore & Panter, 1993, p. 18). Also, 95 per cent of student respondents stated that they were happy with the frequency and continuity of student evaluation surveys (Huntley-Moore & Panter, 1993).

In order to maximise the validity of students' rating results, CSD tried to create a specific environment by using the following procedures in the implementation of the survey (Huntley-Moore & Panter, 1992, p. 4).

surveys are conducted by trained centre staff who have no connection with the individuals being surveyed;

unless otherwise requested surveys are conducted during the last four weeks of the teaching session;

surveys are conducted at the beginning of classes with the academic absent from the room;

students are given detailed instructions including the purposes of the survey;

no surplus forms are distributed and all completed forms are collected; and

blank and completed forms are held under secure conditions.

Reliability of the Instrument: During the development of the survey, CSD staff reported that all necessary statistical actions were undertaken to examine the validity and reliability of the survey. Nonetheless, the reliability of the applied instrument, which according to Borg and Gall (1989) is an extremely important characteristic of the test, should be reported. Therefore, its reliability was calculated by the researcher through split-half, coefficient alpha (Cronbach) and internal-consistency techniques. The responses of 1,934 students in 57 different subjects from all faculties during the 1991-3 survey period were used for these analyses.

The split-half reliability values were 0.98 for the scale. The obtained value indicates that this questionnaire is reliable with regard to the content sampling. That is, its odd and even items have equal values at 0.98. The coefficient alpha reliability (Cronbach) value of this questionnaire was 0.93. This figure indicates that this questionnaire is reliable at 0.93 with regard to its content sampling and content homogeneity (Anastasi, 1988).

The internal-consistency reliability of the instrument was examined by computing the correlation of each item score with the total score of the instrument. An examination of the correlation matrix indicated that 22 items were statistically significant at $p < .0005$ level and Item 22 was significant at $p < .001$ (Table 4.8).

Table 4.8: Correlation of Each Item Score with the Total Score of the Student Rating Questionnaire

#	Component	r	p
1	Aims communicated clearly	.85	.0005
2	Preliminary course information clear	.78	.0005
3	Information about assessment clear	.71	.0005
4	Parts well integrated into course	.60	.0005
5	Assessment proportions reflect work	.64	.0005
6	Students' understanding of content	.58	.0005
7	Enthusiastic about attending class	.65	.0005
8	Enthusiastic about attending other lectures	.07	No sig.
9	Enthusiasm for subject increased	.75	.0005
10	Material made interesting	.65	.0005
11	Material presented clearly	.87	.0005
12	Logical sequence in presentation	.80	.0005
13	Quantity of material presented	-.07	No sig.
14	Stimulates thought on subject	.82	.0005
15	Lecturer understands subject	.78	.0005
16	Lecturer interested in helping students	.81	.0005
17	Tutor understands subject	.70	.0005
18	Tutor responses the students' questions	.75	.0005
19	Learning tasks worthwhile	.85	.0005
20	Tutor stimulates students	.82	.0005
21	Feedback on assignments helpful	.84	.0005
22	Assessed work returned promptly	.49	.001
23	Marking of work reasonable	.67	.0005
24	Suitable written feedback on tasks	.71	.0005
25	Quality of feedback comments helpful	.80	.0005

The remaining two items (8 and 13) were not statistically significant. Item 8 was a comparison item and asked respondents about their enthusiasm for other subjects, a point of no interest to this study. Item 13 seemed to be problematic, because of its direction of response. According to CSD the direction of all items is from 5 to 1, except for item 13 which is reversed and it may have caused difficulties in the response-entry process. Additionally, the wording of the response scale could have indicated that the quantity of material presented by a lecturer should be reasonable, rather than too much or too little (Appendix G). Therefore these two non-correlated items were excluded from the data base for this study.

This decision was justified when the 1,934 responses from all faculties were subjected to factor analysis (Table 4.9). Factor analyses "have been used both to address the construct validity of the questionnaire and to define the underlying dimension" (Cranton & Smith, 1990, p. 207) of the instrument.

Factor analysis indicated four factors which yielded 'eigenvalues' greater than one and accounted for 77% of the variance. The first factor explained 51% of the variance, the second 13%, the third 7%, and the fourth 6% of the variance. Although four factors emerged, 23 out of 25 items had a factor loading ranging from 0.47 to 0.87 on factor one.

Items, 8 and 13, the two that were excluded from the database, were loaded at 0.69 and -0.69 on Factors Four and Two. As a result, these two items are referred to as "non-loaded", and the remaining 23 items were loaded on one factor (Table 3.9). Using the same justification of Linke et al., (1991) and Richardson (1994), as noted in section 4.5.1, the entire questionnaire was

considered an appropriate composite indicator to generate a single rating for the variable, in this case lecturers' teaching performance.

Table 4.9: Factor Loading of the Student Rating Questionnaire from the Responses of 1,934 Students

Item Number	Factor Scores			
	Factor 1	Factor 2	Factor 3	Factor 4
1	.85	.11	.25	-.09
2	.79	.14	.36	.02
3	.71	-.42	.17	-.07
4	.59	.06	.47	-.15
5	.63	.52	.33	-.08
6	.60	.50	-.11	-.15
7	.66	.53	-.20	.42
8	.02	-.38	.35	.69
9	.76	.48	-.19	.08
10	.65	.56	-.30	.24
11	.87	.07	.31	.02
12	.80	-.06	.47	-.006
13	-.09	-.69	.04	.51
14	.82	-.02	-.05	.45
15	.79	-.39	-.07	-.08
16	.83	-.20	-.07	-.14
17	.71	-.49	-.02	-.23
18	.78	-.14	-.13	-.32
19	.86	.06	.14	.08
20	.84	.05	-.13	.18
21	.83	-.20	-.26	.06
22	.47	-.34	.05	-.34
23	.66	-.36	-.33	-.05
24	.68	-.25	-.36	.009
25	.78	-.25	-.36	-.004
Variance (%)	51	13	7	6
Eigenvalue	12.75	3.26	1.70	1.60

Criteria Used to Select Data: The following criteria, which were suggested in the relevant literature, were considered to increase the probability of valid and reliable student ratings:

Number of student-rating results: Murray and Rushton (1990) indicated that "when a teacher is teaching courses that vary considerably in type, the five-course-rating minimum should be used for administrative decisions" (p. 60). However, Lally and Myhill (1994) argued that at least two courses over two semesters should be sampled. In this research, considering the other necessary criteria, student ratings results from five classes were selected from each lecturer involved in the study.

Time of evaluation: As a lecturer's ratings may change from semester to semester (McKeachie, 1986; Lally & Myhill, 1994), evaluations were selected from a variety of semesters during the 1991-1993 period.

Variety of subjects: It is possible that a lecturer's performance across subjects may be inconsistent (Weimer, 1990). Consequently, the student-evaluation results were selected from a variety of subjects for each lecturer.

Class size and place: Class size, available facilities and environmental conditions may affect the quality of delivery and consequently the student ratings (Centra, 1993; Hall & Fitzgerald, 1995). Therefore, the data were selected in approximately equal proportion according to class size from three categories including under 20, 21 to 100, and more than 100 students from different class locations. However, Centra (1993) pointed out that the differences in student ratings by class size "are not specially large and probably have little practical significance" (p. 67). It was also reported by Marsh and Dunkin (1992) that there is no correlation between class size and the overall student ratings.

Response rate in class: According to Cashin (1990) the ratings of classes where more than ten students were enrolled and at least 60 percent responded to the evaluation survey were selected for the study.

Level of respondents' students: Some researchers, e.g. Centra (1993) and Lally and Myhill (1994) argue that a lecturer who teaches well at the undergraduate level does not necessarily teach well in postgraduate classes, so the student ratings were selected from both levels where possible.

Other criteria such as the age and sex of respondents, which have been shown to have little effect upon ratings, were not considered in the selection of survey data (McKeachie, 1986). Although these factors may have influences the student ratings, using a large number of student ratings in the present study (20,000) diminishes the effects of such influences. There are some other student-based variables such as motivation or institution-based variables such as number of students in a class which affect teaching performance and they are not within the control of the lecturer.

In summary, considering the quality of development, validity and reliability of the questionnaire employed, it is argued that the CSD teaching evaluation survey is a suitable instrument to fulfil the objectives of the study.

4b.6 Data-Collection Procedures

Data were gathered from self-reporting academic staff and official data from the CSD through the following procedures. These stages were approved by

the Research Ethics Committee at the University of Wollongong on 4th November 1993 and 7th December 1994 (Appendices A and B).

(1) A short explanation of the aim of the study and its procedures was provided in a covering letter to the academic staff (Appendix C). In this letter they were encouraged to be involved in this research, and to grant permission for CSD to provide the investigator with five security-coded copies of their teaching-evaluation results.

(2) The researcher attended meetings of all Faculties or Departments (except Physics and Psychology Departments) to explain the aim and the process of study (Appendix K). In these meetings, academic staff were encouraged to participate in the study, and their questions were answered by the researcher. The project was welcomed by most faculty members in these meetings.

(3) Academics were requested to complete the two attitudinal and bibliographical research questionnaires and sign the consent form. By means of this consent form, academics enabled the researcher to extract their student ratings from the stored data in CSD (Appendix D). These documents together with a return envelope were forwarded with a request to return them to a specified staff member of CSD in keeping with university requirements for confidentiality and anonymity. Academic staff were not required to indicate their names and departments on the research questionnaire to minimise any suspicion that the survey might be a form of staff appraisal.

(4) Follow-up actions to encourage participation in the study included sending two separate reminders and letters of appreciation (Appendices L and M) within one month to all of the target group. To avoid confusion,

the researcher mentioned in the second reminder that those who had already responded should ignore the reminder. Furthermore, another letter of thanks and follow-up was sent to Deans and Heads of Departments (Appendix N). All participants were invited to receive a summary of the outcomes of the research.

(5) To ensure confidentiality, the questionnaires and consent forms were coded numerically by CSD, and only the questionnaires were delivered to the researcher. To avoid respondent identification, this process was coordinated by CSD and the researcher had no role in it. Furthermore, the names of subjects did not appear in the documents submitted to the researcher.

(6) Besides the questionnaires, the raw copies of teaching-evaluation results elicited from the existing information in CSD were given to the researcher (Appendix H). Although these results were delivered to the researcher anonymously, they were coded the same as the questionnaires. The researcher classified the teaching-evaluation results for the purpose of this study.

In summary, the data-gathering procedures were as follows:

- encourage staff involvement in the study and obtain their agreement;
- send and receive the two questionnaires and consent form;
- arrange for coding of questionnaires;
- elicit teaching evaluation results from the extant data in CSD; and
- match teaching-evaluation results with the questionnaires.

4b.7 Data Entry

A considerable amount of data was generated, including more than 20,000 student-evaluation surveys covering 548 subjects during 1991-1993, attitude

questionnaires of 176 academics containing 37 Likert-format items and another questionnaire including eight biographical and professional questions. The task was to convert these data into a format that permitted efficient and accurate computer-generated statistical analysis. Excel (Jones, 1993) and Statview (Haycock, 1992) software packages were used for the classification and analysis of the data.

Since there were three different kinds of data per respondent, a unique identification number was given to each subject in all three kinds of data and finally all three formats were summarised and entered into a database. The process of classification of each data set is briefly described in the following sub-sections.

4b.7.1 Classification of Student Ratings Questionnaire

As discussed in the literature review, there is disagreement about whether a single overall score (unidimensional approach) is more useful than item or dimension scores (multidimensional approach) for examining the lecturers' teaching performance (McKeachie, 1986; Abrami & d'Apollonia, 1990; Marsh, 1987; 1992; Hativa & Raviv, 1993; Marsh & Roche, 1993). As a result of this discussion and with the intention of carrying out detailed analyses, both methods were used in calculating the lecturers' TP in this study.

Consistent with the multidimensional approach, the mean scores of each of the 23 items were calculated separately for each lecturer. Then according to unidimensional approach, the mean scores of all 23 items of the questionnaire were combined and an aggregate mean (Wright & O'Neil, 1994a) was obtained. This was carried out through the total mean or

weighted mean formula (below) for overall teaching performance of each involved lecturer in the study. A sample of this analysis for two lecturers is attached in Appendix I.

$$M = \frac{(N_1 * M) + (N_2 * M_2) + (N_3 * M_3) + (N_4 * M_4) + (N_5 * M_5)}{(N_1 + N_2 + N_3 + N_4 + N_5)}$$

N= Number of respondents
M= Mean

Five surveys for each participant were selected from the CSD database using the specified criteria (see 4b.5.2.3). The number of students enrolled in each course and number of survey respondents, mean and standard deviation of each item, total mean and level of course were elicited for each survey and entered into the database (Appendix H).

4b.7.2 Classification of Lecturers’ Attitudes Toward Teaching

The aggregate mean scores of all 37 items on attitude toward effective teaching were calculated for each lecturer and entered into the database (Appendix J). The values of negative items were reversed prior to entry.

4b.7.3 Classification of Background Information

Background information was elicited through eight questions and directly entered into the database (Appendix T). These questions were about lecturers’ qualifications in teaching, gender, language background, academic degree, academic rank, academic discipline and years of teaching experience.

The processes described in the preceding three sub-sections were applied for both the pilot and main study. All of the data entered in the main study

were checked continuously by visual inspection on screen and in printed form. Printed data were verified against both the attitude questionnaires and the data elicited from CSD, and necessary adjustments were completed.

4b.8 Data Analysis

The preceding review of literature justified the conclusion that either an average single score or one score per item may be used for examining teaching performance. Therefore, the researcher decided to examine teaching performance by both methods. The average ratings over the complete questionnaire and then the scores of each item were calculated separately.

Descriptive statistical analyses including frequency, percentage, mean and standard deviation were initially used to report the findings. Then, considering the research questions, several inferential statistical techniques were applied. The level of significance of the results is set at 0.05. The techniques used were:

Correlation: The Pearson correlation coefficient was employed in this study as it is appropriate for use where the measurement scale is continuous; for example it was used to examine the relationship between lecturers' attitudes toward teaching and lecturers' teaching performance.

Chi-Square (χ^2): This statistic was used when the data were in the frequency-counts format and the researcher wanted to reveal any significant differences among categories. This technique was used to reveal the

significant differences between the population and sample with regard to gender, academic rank and faculty.

Analyses of Variance (ANOVA): This technique was used extensively in this research to test the differences between two or more means. It was used "to determine whether the groups differ significantly among themselves on the variables being studied" (Borg & Gall, 1989, p. 552), for instance in determining the difference between lecturers' teaching performance, regarding their gender or language background. ANOVA was preferred to t-test, because it "can be used in any situation when a t-test can be used and moreover, can do many things the t-test cannot do" (Ary, Lucy, Razavieh, 1985, p. 165). For example ANOVA is not sensitive to the sample size of the groups.

In addition, when the independent variables had more than two categories, e.g. three levels of academic degree of participants in the study, ANOVA was followed by Fisher's Protected Least-Significant Difference (PLSD), a post-hoc statistical test to identify which pair-wise comparisons among means were statistically significant. This test calculates the "mean difference, critical difference, and p-value for the difference between all pairs of groups in the nominal variables" (Haycock, 1992, p. 328).

However, by doing many separate analyses, the researcher acknowledged the probability of a Type I error (Stevens, Goodwin and Goodwin, 1991). For that reason the findings are interpreted cautiously. Additionally, Multiple Regression Analysis was undertaken to provide a further confirmation of the findings.

Multiple Linear Regression: The advantage of this technique, which has been recognised as one of the most widely used in educational research, is that it "can handle interval, ordinal or categorical data" (Borg & Gall, 1989, p. 601). This technique can determine the combined effects of a set of independent variables, and the separate effects of each independent variable controlling for the others (Kerlinger, 1986).

In the present study Multiple Linear Regression analysis was applied to determine the variance of TP, as a dependent variable, explained by the eight independent variables. It also provided "estimates both of the magnitude and statistical significance of relationships among variables" (Borg & Gall, 1989, p. 601).

In order to assist analysis, the two continuous variables were directly applied in the regression equation and the remaining six non-continuous (categorical) variables were re-coded to dummy variables using the integers 0 and 1 (Norusis, 1990), a process known as 'indicator coding' (Hair, Anderson, Tatham, & Black, 1995). Since three of the categorical variables (academic rank, academic discipline and academic degree) had more than two categories, a reference group was taken for each of them to which all other categories were compared (Afifi & Clark, 1990; Hardy, 1993; Hair, et al. 1995). Collapsing variables such as academic rank with five categories into two groups simplifies the statistical analyses. However, this provides a superficial analysis and results can not differentiate sufficiently.

Factor Analysis: This is an appropriate statistical method for "determining whether a set of variables can be reduced to a smaller number of factors"

(Borg & Gall, 1989, p. 347). Therefore, it was used to examine the construct validity (Cranton & Smith, 1990) of the two questionnaires in this study.

Other techniques: Coefficient alpha (Cronbach), matrix correlation and split-half reliability techniques were also used to determine the reliability of the questionnaires of the study.

4c. Phase Two: Semi-Structured Interview

The second phase of the study, using a semi-structured interview, was conducted in early 1997 to provide deeper analysis of the research questions. The processes involved defining a sample, conducting a pilot study, and collecting and analysing data.

4c.1 Research Questions

The purpose of the interviews of academic staff was to explore their views and personal experience about the attributes influencing their teaching performance. More importantly, the researcher wanted to explore their perceptions as to why these attributes did or did not influence academics' teaching performance. The term 'perception' is used here to include the beliefs and personal understanding of the lecturers. They were asked to rank the four most influential attributes rather than being asked to rank all eight of the attributes. In the pilot study, it was found that ranking four attributes out of eight seemed easier and more time-efficient for the interviewees.

To have started the interview with personal questions could have seemed to be intrusive to the interviewees. Consequently, each interview began with questions about the relationship between the attributes of academics in *general* and their teaching performance before an exploration of their own *personal* experience. The interview proceeded through the following sequence of questions.

1. When you think about academic staff at the University of Wollongong, which of the following characteristics or attributes do you consider the most influential on the quality of academics' teaching performance? Please rank the four most influential:

Gender

Academic rank

Academic degree

Teaching qualifications

Language background of lecturers

Membership of a particular faculty

Years of tertiary teaching experience

Having a positive attitude toward teaching (i.e. in Planning, Rapport and Enthusiasm)

Could you please explain why (the selected four) are influential? What could you say about the remaining four?

2. When you reflect on your personal experience as a university teacher, which of the following characteristics have been influential in the quality of your teaching performance? Options as above in Q, 1

Could you please rank these characteristics from your experience? Why are they influential?

3. Are there any other lecturers' characteristics or attributes (which have not been mentioned in the above list) which could have a considerable

impact on a lecturers' teaching performance? Please name them and give reasons.

For the purpose of simplicity, the term 'influence' was used in the research questions rather than 'cause' in an attempt to avoid any implication of causation.

4c.2 Population and Sampling

As explained previously, the 176 academic staff who participated in the first phase of this study were statistically representative of the total academic staff of the University of Wollongong with respect to their major biographical and professional characteristics (see 4b.3). In the second phase of the study, half (N= 88) of the participants in the first phase were randomly selected and invited to be interviewed.

Since the researcher did not know the names of academic staff who participated in the first phase of the study, for confidentiality purposes (see 4b.6), the University's Centre for Staff Development (now renamed Academic Development Services, ADS) agreed to be involved. ADS contacted the selected half of the participants (Appendix Q) and asked them if they would like to be involved in the follow-up study, sending the consent form (Appendix S) in a labelled envelope to the researcher. In the invitation letter (Appendix R), it was explained why the researcher wanted to carry out follow-up interviews. It was explained that students' evaluation of teaching is just one indicator of a lecturer's teaching performance. Consequently, it is necessary to obtain academics' individual views to provide more insight about the data already gathered.

Out of 88 academics, 25 (28%) agreed to be interviewed (Table 4.10). Since the first phase of the study was undertaken at the end of 1994 (two and a half years earlier), some of the original participants were not accessible, as they had retired, changed their place of work, or were on study leave.

Table 4.10: Response Rate of Different Groups of Academic Staff Participating in the Two Phases of the Study

Groups	Sub Groups	Phase one		Interviewees	
		N	%	N	%
Gender	Male	124	71	16	64
	Female	51	29	9	36
Language Background	ESB	148	85	22	88
	NESB	26	15	3	12
Rank	Professor	17	10	2	8
	Associate Professor	21	12	7	28
	Senior Lecturer	52	30	5	20
	Lecturer	63	36	9	36
	Associate Lecturer	13	7	2	8
Academic Degree	Doctoral	111	63	14	56
	Masters	49	28	10	40
	Other	15	9	1	4
Teaching Q.	With Teaching Q.	91	52	17	68
	Without TQ.	84	48	8	32
Faculty	Arts	18	10	4	16
	Commerce	27	15	2	8
	Creative Arts	9	5	2	8
	Education	25	14	4	16
	Engineering	11	6	2	8
	Health & B.S.	24	14	2	8
	Informatics	24	14	4	16
	Law	8	5	3	12
	Science	23	13	2	8
Total		176	100%	25	100%

While it is recognised that this number does not constitute a statistically representative sample of all of the academic staff at the university of Wollongong, the 25 academics who participated were more or less representative, except for 'empirical mortality' (see 6.2), of the biographical and profession attributes of academic staff used in the wider study (Table 4.10).

While the proportions of the participants in the two phases of the study were generally similar, some variations were evident in some sub-groupings. The percentages of female Lecturers, Associate Professors and Lecturers with teaching qualifications in the second phase of the study were greater than in the first phase. There were slightly higher percentages of participants from the Faculties of Arts and Law and smaller percentages in Commerce, Health and Science.

4c.3 Pilot Study

One female and two male lecturers were interviewed as a pilot study. The purposes were to check the appropriateness of the research questions and the interview procedure.

One of the supervisors of this study was requested to observe the trial interview process to give feedback about it. Then, his comments and the researcher's views were discussed in a joint meeting with all of the three supervisors. Changes considered necessary were made to the interview questions to ensure clarity. A number of recommendations was also offered to the researcher to conduct the interviews appropriately. The findings of the trial interviews were not included in the study.

4c.4 Data-Collection Procedures

When the participants had signed and sent the consent forms (Appendix S) to the researcher indicating their agreement to be interviewed, they were contacted and the time of interview was arranged. The interviews were conducted by the researcher in April and May 1997, in the lecturer's studies. Before commencing the interview, the purpose of the research and interview was explained and the interviewees were reassured about the confidentiality of their data. It was also stated that the transcription of the interview would be sent to them for checking.

The wording of the interview questions was consistent by not fixed. The interview format was semi-structured with appropriate prompting and probes by the interviewer to clarify the academics' ideas or meanings or obtain additional information as recommended by Gall, et al. (1996). Every effort was made to avoid leading the interviewees. In order to make it easier for the academics to rank the responses, the eight attributes considered in the research questions were expanded and listed on a sheet for the interviewees when they were asked to rank their importance (Appendix P).

At the end of interview, the participants were asked to fill out a short questionnaire, asking for some of their bibliographical and professional characteristics (Appendix T).

The interviews were tape-recorded with the participants' permission and subsequently transcribed. Each interview was conducted over an average period of 29 minutes, ranging from 15 to 80 minutes (Appendix U). The

transcribed interviews were send back to the participants to verify the text and to make any modifications.

The interview records were transcribed, identifying the main points (a sample is attached in Appendix V). The transcriptions were reviewed and minor changes were made to the structure of the texts, converting them into basic sentences and paragraphs, where necessary. The reports were sent to each of the participants, who was asked to verify the accuracy of the main ideas and positions, but no editing or revision was requested (Appendix W). Interviewees were asked to return their corrections within one week. It was also indicated that, if the researcher did not receive feedback within one week, it would be assumed that the interviewees wished no corrections to be made. They were reassured that their points will be used anonymously and in a completely confidential manner in the research. This procedure ensured that the transcription data agreed exactly with what the interviewees had said. This checking process increased the validity of the data analysis and the subsequent interpretation.

Eight out of 25 transcriptions were returned with minor corrections. For example, Interviewee 23 changed only the word 'elaboration' to 'aberration', interviewee 15 corrected the words of 'you can seal information' to 'you conceal information'. Some other minor changes, such as adding or changing the place of commas, were made and a few typing errors were corrected. It is inferred that the return of only eight of the 25 transcriptions is a good indicator that the transcriptions were completed accurately.

The procedure of conducting the interviews was approved by the Research Ethics Committee at the University of Wollongong on 12th March 1997 (Appendix O).

4c.5 Data Analysis

The verified transcripts were carefully divided by the researcher into 'meaning units', 'meaningful segments' or 'themes' (Burnard, 1994; Gall, et al., 1996; Burns, 1997). In order to facilitate the presentation of the data and analysis, the 'themes' were classified into several categories based on their similarities to or differences from (Burnard, 1994) each of the eight lecturer attributes. According to Burns (1997) interview data have to be organised so that "comparisons, contrasts and insights can be made and demonstrated" (p. 338). Therefore, the similar points raised by the interviewees were grouped so that a common category could be determined, if any existed. The range of categories enabled the researcher to compare and contrast the academics' views about each of the eight attributes. Then, the data were analysed using the grounded-theory method where categories are derived from the available data rather than previous theories (Biklen, 1992; Glesne & Peshkin, 1992; Gall et. al., 1996). Gall et. al. (1996) explain:

The categories are 'grounded' in the particular set of data that [the researcher] collected. Furthermore, the categories seek to explain the phenomena as well as to describe them. Because of this emphasis on explanation, the categories are considered theoretical. However, even if the categories are purely descriptive, the procedures used in grounded theory are applicable (p. 565).

In terms of the integrity of classifications and the interpretation of results, "it is important that the category system that is developed remains true to the

text that is being analysed" (Burnard, 1994, p. 114). To fulfil this requirement, five transcripts were analysed by the researcher into themes to develop an appropriate initial set of categories. These categories were checked by one of the academic staff in the Faculty of Education and one of the supervisors. Their perceptions about the categories developed were discussed and recommended amendments were made.

Subsequently the 25 transcripts were studied, and the text classified according to the revised categories. These categories again were reviewed and discussed with the above two researchers until a stable set of categories was developed.

To illustrate each of the categories developed in the present study, direct quotations from the transcripts are cited when the data are presented in the Results Chapter. A code number was appended to each quotation to enable the reader to identify the biographical and professional characteristics of each interviewee, by referring to the data base of the interviewees (Appendix U) within the limits of confidentiality requirements .

Summary: This chapter has described the methodology employed in the design of the two phases of this study including variables studied, research questions, population and sampling, the development of the instruments, data collection and data analysis procedures. The results of 'ex post-facto' and 'interview' studies will be integrated and discussed in the next two Chapters, Results and Discussion.

CHAPTER FIVE: RESULTS

The two phases of the present study were designed to investigate the relationships between eight professional and biographical independent variables and teaching performance as the dependent variable, expressed as a function of student ratings of teaching performance and the views of 25 academic staff.

A total of 176 lecturers completed the attitude survey (Appendix F) and the professional and biographical questioner (Appendix T). A small number of academics did not complete all of the questions. As a consequence, the number of participants in the first phase indicated in the data tables in this chapter varies from 169 to 176. Full data sets from the determination of teaching performance were only available from CSD for 130 academic staff. In the second phase of the study, a semi-structured interview was undertaken with 25 of the academics who participated in the first phase of the study.

Data on teaching performance were derived from more than 20,000 student-ratings surveys covering 548 subjects. On a five point Likert scale, total or overall teaching performance scores of participating academic staff ranged between 2.19 and 4.71 with a mean of 3.72. The eight independent variables were surveyed through two questionnaires designed by the researcher.

Descriptive analyses of the important demographic and professional characteristics of the academic staff involved in the first phase are presented in section one. The inferential analyses of the numeric data obtained from the first phase of the study and the interview data related to the influence of

each of the eight lecturer's attributes on teaching performance are discussed from the academics' points of view. Each of the attributes is initially considered individually (5.2 to 5.9), subsequently an overview of the phase one (5.10.1) and phase two (5.10.2) data is developed. Finally, a number of other attributes identified in phase two as influencing teaching performance are discussed in 5.11.

5.1 Descriptive Analysis

Before presenting the results of the inferential and interview analysis, key characteristics of the sample of the study, including gender, academic rank, teaching qualification, language background, level of academic degree and academic discipline, are described in this section.

5.1.1 Gender

This sub-section reports gender differences of academics with respect to their acquired TQ, attitude toward effective teaching and years of tertiary teaching experience. Altogether 124 (71%) male and 51 (29%) female lecturers participated in the study. The difference between the number of males and females participating reflects their distribution in the University, which was male 372 (73%) and female 141 (27%) in 1994.

Teaching qualifications: The study sample was divided into two groups: those with teaching qualifications (TQ) and lecturers without TQ. The distribution of these two groups was then divided into males and females as shown in Table 5.1.

There is almost a balance between the percentage of academic staff who have TQ and who do not have TQ amongst the study sample (52.3% vs. 47.7%). There is also almost a balance between the percentage of males with TQ and males without TQ (54.3% vs. 45.7%). However, there was a much higher proportion of females with TQ than without TQ (69% vs. 31%). Furthermore, the percentage of females with TQ was higher than males with TQ (69% vs. 54%).

Table 5.1: Number and Percentage of Female and Male Academic Staff by their Teaching Qualifications

Gender	With TQ		Without TQ		Total	
	N	%	N	%	N	%
Female	35	69	16	31	51	29
Male	56	54	67	46	123	71
Total	91	52	83	48	174	100

Teaching experience: While participants reported from one to 38 years of academic teaching experience (M = 12.6 years, SD = 8.5 years), Table 5.2 indicates that the males’ teaching experience is, on average, 4.6 years longer than females (9.4 vs. 14).

Table 5.2: Number of Years of Teaching Experience by Gender

Gender	Teaching Experience	
	Mean	SD
Female	9.4	7.11
Male	14	8.72

Attitude toward effective teaching: The attitudes of males and females toward effective teaching (ET) were not influenced by their gender. This result was obtained by calculating the average mean scores from 37 Likert items about different components of teaching, developed by the researcher (see 4b.5.1). Results show that the mean scores of the two groups are similar. Female academics obtained a mean score of 3.88 (SD = 0.36) from a maximum of five and male academics obtained a mean of 3.81 (SD = 0.35).

5.1.2 Rank

Years of teaching experience, language background and acquired TQ of academic staff by academic rank are presented in this sub-section. Academics were divided into five groups, on the basis of their academic rank.

Teaching experience: As might be anticipated, results (Table 5.3) indicate that academics in higher ranks have, on average, more years of teaching experience.

Table 5.3: Years of Teaching Experience by Academic Rank

Rank	Teaching Experience	
	Mean	SD
Associate Lecturer	5.43	5.16
Lecturer	8.61	6.7
Senior Lecturer	15.55	7.07
Associate Professor	18.75	8.61
Professor	20.56	7.52

Language background: Table 5.4 shows that 115 (66%) of the sample are categorised in ranks of Lecturer and Senior Lecturer and 38 (22%) at professorial ranks. When all academics were categorised as either from a non-English-speaking-background (NESB) group or from an English-speaking-background (ESB) group, and placed according to academic rank, only 26 (15%) of the 173 respondents academics, were categorised in the NESB group and 85% in the ESB group.

Table 5.4: Number and Percentage of ESB and NESB Academic Staff among Different Ranks

Rank	ESB		NESB		Total	
	N	%	N	%	N	%
Associate Lecturer	17	85	3	15	20	12
Lecturer	51	81	12	19	63	36
Senior Lecturer	44	85	8	15	52	30
Associate Professor	19	90	2	9	21	12
Professor	16	94	1	6	17	10
Total	147	85	26	15	173	100

Teaching qualifications: The overall percentages of lecturers with TQ and without TQ across the five ranks are similar (53% vs. 47%). However, the percentage with TQ is higher in the two lowest academic ranks (Table 5.5). While approximately one third of academics in the two high professional ranks have acquired TQ, two-thirds of the three lowest academic ranks have acquired TQ.

Table 5.5: Number and Percentage of Qualified and Non-qualified Academic Staff among Different Ranks

Rank	With TQ		Without TQ		Total	
	N	%	N	%	N	%
Associate Lecturer	11	55	9	45	20	11.6
Lecturer	45	71	18	29	63	36.6
Senior Lecturer	24	46	28	54	52	30.2
Associate Professor	5	25	15	75	20	11.6
Professor	6	35	11	65	17	9.9
Total	91	53	81	47	172	100

5.1.3 Teaching Qualifications

This sub-section reports the attitude toward effective teaching of lecturers with TQ and without TQ. It also examines the years of university teaching experience of these two groups.

Attitude toward effective teaching: The results show that the attitude mean score of all academic staff, with and without TQ, toward effective teaching is 3.87 on a five-point scale. However, the mean score of lecturers with TQ toward effective teaching is 0.19 higher than lecturers without TQ (Table 5.6).

Table 5.6: Number of Academics With and Without Teaching Qualifications and their Mean Score of their Attitude Toward Teaching and Years of Teaching Experience

Teaching Qualifications	Attitude toward T		Teaching Experience	
	Mean	SD	Mean	SD
With T. Qualifications	3.92	.36	11.73	8.21
Without T. Qualifications	3.73	.31	13.41	8.75

Teaching experience: The mean years of teaching experience of both with and without TQ groups is relatively high (11.73 and 13.41), as is the average years of tertiary teaching experience of all academic staff across the university (M = 12.6 years, SD = 8.5 years). However, the years of tertiary teaching experience of academics without TQ, is on average 1.7 years greater than for academics with TQ (Table 5.6).

5.1.4 Language Background

This sub-section describes the mean attitude scores of the NESB and ESB academics toward effective teaching. It also explores the years of their tertiary teaching experience and their TQ.

Attitude toward teaching: The results indicate a small difference of 0.03 between the attitude of the two groups toward effective teaching (Table 5.7).

Teaching experience: Teaching experience of the ESB group is on average about one year longer than the NESB group (Table 5.7).

Table 5.7: Number of ESB and NESB Academics and Mean Score of their Attitude Toward Teaching and Years of Teaching Experience

Language	Attitude toward T		Teaching Experience	
	Mean	SD	Mean	SD
ESB	3.84	.35	12.79	8.67
NESB	3.81	.37	11.83	7.70

Teaching qualifications: Overall the percentages of staff with and without TQ among the ESB and NESB groups (Table 5.8) are similar (52% vs. 48%).

Table 5.8: Number and Percentage of Academic Staff According to their Language Background and Teaching Qualifications

Language	With TQ		Without TQ.		Total	
	N	%	N	%	N	%
ESB	78	53	70	47	148	85
NESB	13	50	13	50	26	15
Total	91	52	83	48	174	100

The results in this Table show that there was an even distribution between academics with TQ and without TQ who were categorised as NESB. Among the ESB group, there were 5% more academics with TQ than without TQ.

5.1.5 Academic Degrees

This sub-section reports the number and percentage of academics with TQ and without TQ in each of the three levels of academic degrees: Doctoral, Master’s and Other (Postgraduate Diploma or Bachelor’s). It also outlines the number from ESB and NESB in each of the three levels of academic degree.

Teaching qualifications: With respect to the level of academic degree of the 175 academics who responded to the relevant question, 111 (63%) had obtained the Doctoral degree (Table 5.9).

Table 5.9: Number and Percentage of Academics With and Without Teaching Qualifications among Different Academic Degrees

Academic Degree	With TQ		Without TQ		Total	
	N	%	N	%	N	%
Doctoral	43	39	68	61	111	63
Master’s	37	76	12	24	49	28
Other	11	73	4	27	15	9
Total	91	52	84	48	175	100

This Table shows that the percentages of the academics with TQ and without TQ in the three levels of academic degrees are similar (52% vs. 48%). However, within the academic degrees, the percentage of staff with TQ among the two lowest ranks is higher than in the Doctoral rank.

Language Background: English is the first language of 85% of academics across the three levels of academic degrees (Table 5.10). While NESB staff

represent 15% of the sample, the percentage is higher (19%) for staff with a Doctoral degree and zero amongst the lowest academic degree (Post Graduate Diploma or Bachelor). The results show that 111 (63%) of 175 academic staff in the sample, acquired the highest academic degree.

Table 5.10: Number and Percentage of ESB and NESB Academic Staff by Different Academic Degrees

Academic Degree	ESB		NESB		Total	
	N	%	N	%	N	%
Doctoral	90	81	21	19	111	63
Master	44	90	5	10	49	28
Other	15	100	0	0	15	9
Total	149	85	26	15	175	100

5.1.6 Faculty Membership

It was explained in 4b.1.1 that the academic staff who participated in this study were collapsed into five groups of faculties. This sub-section explores the attitude toward effective teaching of academics in these different groups. It also explores the number of lecturers with and without teaching qualifications and the number of lecturers from ESB and NESB in different faculties.

Attitude toward Effective Teaching: As explained in 4b.5.1 the attitude of academic staff toward effective teaching criteria was examined by a 37 Likert item survey. Table 5.11 indicates that considerable difference exists between the attitude mean scores of staff in Faculty of Education and other Faculty

groupings. The highest difference is shown between the Faculty of Education, at the top (M=3.99) and Faculty of Engineering, at the bottom (M=3.77). However, the results show that the attitude mean score of all academics in different faculties toward teaching is 3.83 out of a maximum of five, which appears to indicate a positive attitude overall.

Table 5.11: Number of Academics in Different Faculties and their Mean Score of their Attitude Toward Effective Teaching Criteria

Faculties	N	Attitude to Effective T.	
		Mean	SD
Education	25	3.99	.35
Arts and Creative Arts	27	3.84	.34
Commerce and Law	35	3.79	.38
Science and Health	47	3.79	.33
Engineering and Informatics	35	3.77	.30

Teaching Qualifications: All of the academic staff who participated in the study were divided into two groups, (with TQ and without TQ) and the number and the percentage of each of the two groups are examined in each of the faculties. While there is an approximate balance between the overall number of academic staff with and without TQ participating in this study (52% vs. 48%), the percentage of staff with TQ is 96 in the Faculty of Education and 26 in Engineering. This is because the disciplinary degree of Education is the subject of Education, which was taken, for the purpose of this enquiry, to be a teaching qualification. It should be noted that these results were elicited from the academic staff participating in the study, not all of the academic members throughout the university.

Table 5.12: Number and Percentage of Academic Staff With and Without TQ from Different Faculty Groupings

Faculties	With TQ		Without TQ		Total	
	N	%	N	%	N	%
Education	24	96	1	4	25	15
Commerce and Law	19	54	16	46	35	21
Science and Health	20	44	26	57	46	27
Arts and Creative arts	14	52	13	48	27	16
Engineering and Inform.	9	26	26	74	35	21
Total	86	52	82	49	168	100

Language Background: Table 5.13 indicates that the percentage of NESB lecturers varies in different faculties.

Table 5.13: Number and Percentage of ESB and NESB Lecturers in Different Faculties

Rank	ESB		NESB		Total	
	N	%	N	%	N	%
Education	25	100	0	0	25	15
Commerce and Law	27	77	8	23	35	21
Science and Health	43	93	3	7	46	27
Arts and Creative arts	24	80	3	11	27	16
Engineering and Inform.	25	71	10	29	35	21
Total	144	85	24	15	168	100

The percentages of NESB lecturers who are members of the Faculties of Engineering and Commerce are higher than the average percentage of NESB academics participating in this study (15%). The percentage of NESB lecturers in the remaining three groups of Faculties is lower than average percentage. While 29% of staff in Engineering and 23% in Commerce were NESB, there was no NESB lecturer in Education.

The following sections report the inferential analyses, obtained from the first phase, and the analysis of the interview data from the second phase of the study.

5.2 Attitude Toward Effective Teaching and Teaching Performance

5.2.1 Phase One

Attitude toward ET was obtained by calculating the mean of 37 Likert items, developed by the researcher (see 4b.5.1 and Appendix F). A measure of teaching performance was obtained by calculating the mean of 23 Likert items developed by the Centre for Staff Development (CSD) at the University of Wollongong (see 4b.5.2 and Appendix G).

When the Pearson Product Moment correlation coefficient was calculated, a significant relationship at $p < .04$ ($r = 0.18$, $df = 128$) was established between the two variables. A scattergram of the analysis in Figure 5.1 displays the distribution and variation of this relationship.

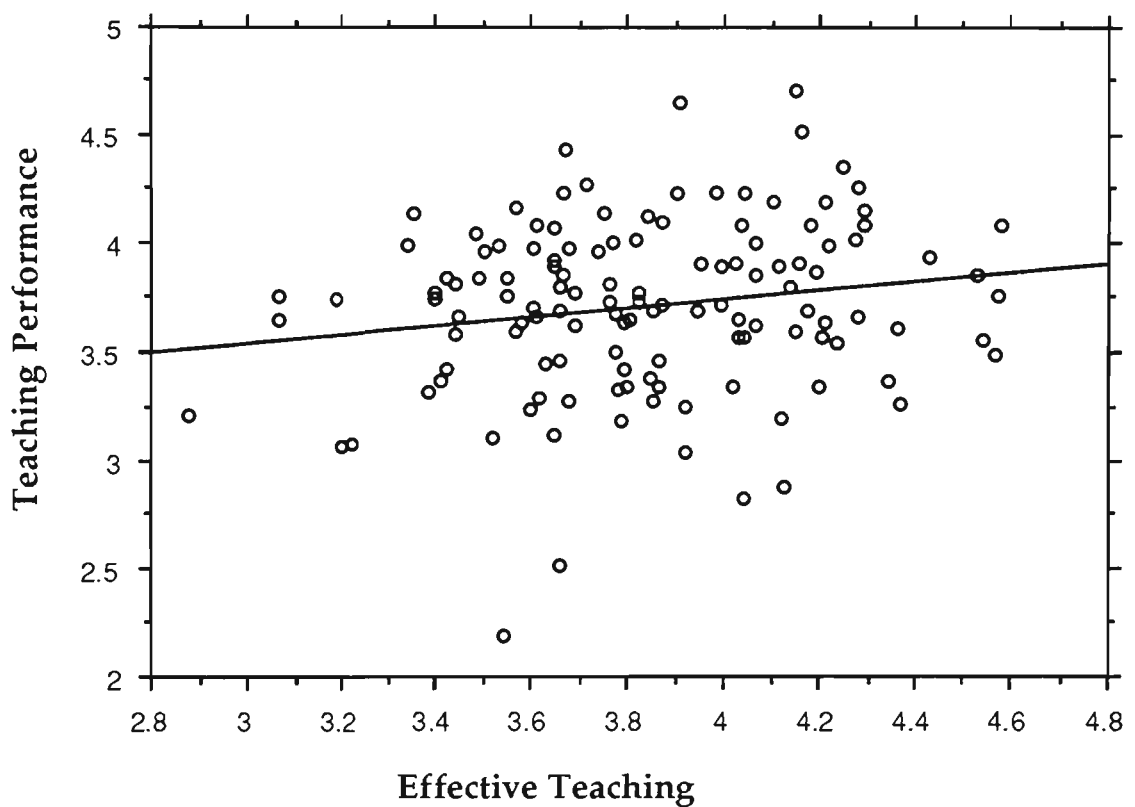


Figure 5.1: Distribution and variation of mean scores of lecturers' attitude toward effective teaching and their teaching performance (N=130)

*Note: The ordination of the computer figure does not begin at zero.

It was explained in 3a.4 and 4b.5.1 that the 37 items of the attitude questionnaire represent five dimensions of teaching including 1) lecturer-student interaction; 2) organisation; 3) grading and assignments; 4) work load; and 5) instructor enthusiasm. It was also noted that the existence of a strong inter-correlation between the five dimensions (Table 4.6) and the loading all of the five dimensions in one factor (Table 4.7) provide an appropriate basis to calculate a grand mean for the whole attitude questionnaire including all 37 items. This is consistent with research conducted by Linke et al. (1991) and Richardson (1994). Further to the above, the analysis was enhanced by examining the relationship of each of the five dimensions of teaching with the mean score of student ratings, which is as an indicator of teaching performance (Figure 5.2).

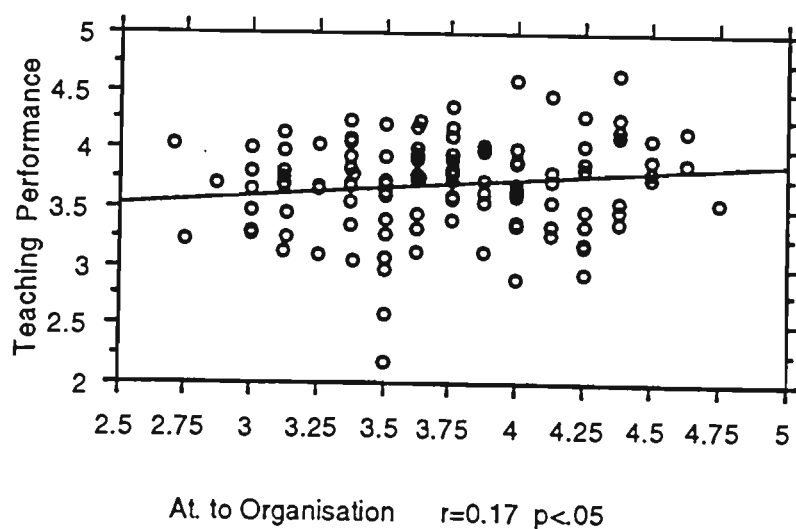
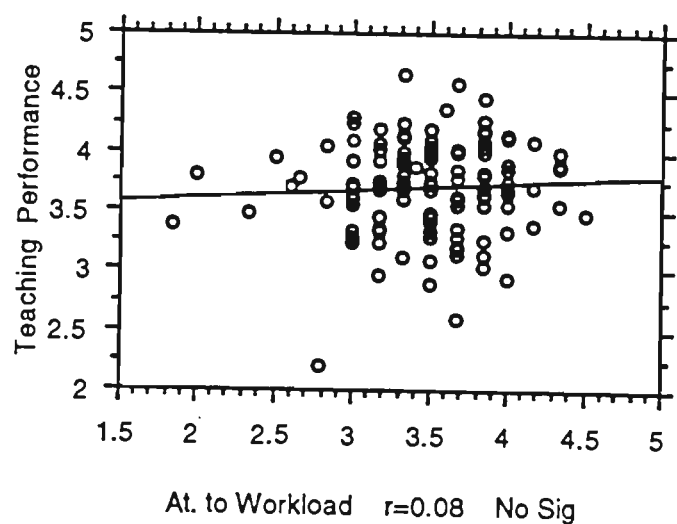
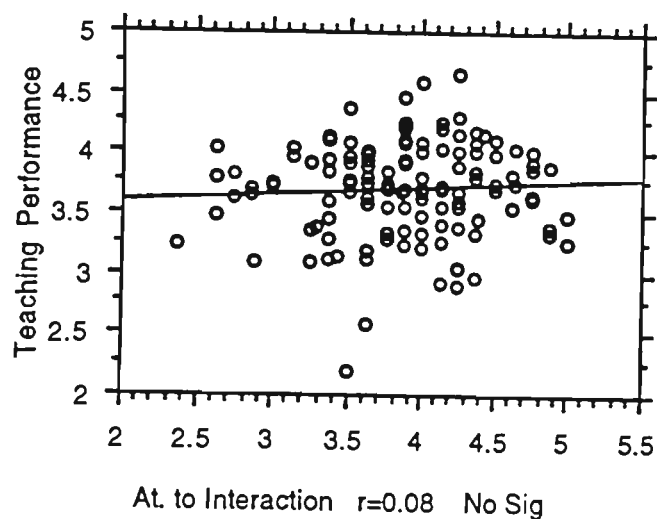
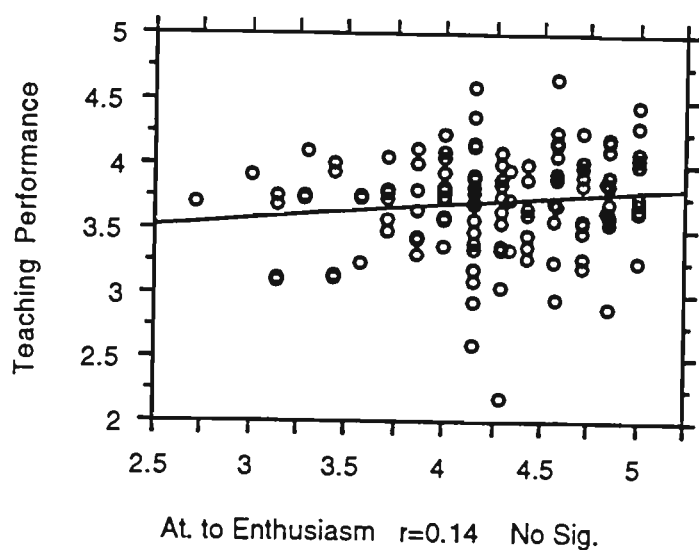
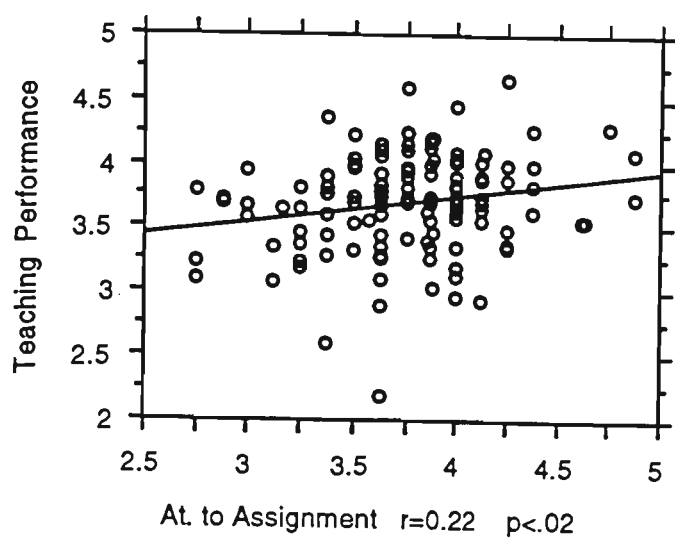


Figure 5.2: Scattergram of five dimensions of teaching with mean score of teaching performance (N=130)

The analysis revealed that the two dimensions of 'grading' and 'organisation' each showed a significant correlation with teaching performance at $p < .02$ and $p < .05$ ($r = .22$ and $r = .17$). The correlation between the dimension of 'instructor enthusiasm' and TP were $r = .14$ at the $p < .1$ level, while that between the other two dimensions (lecturer-student interaction and work load) was $r = .08$, at the $p < .35$ level, which was not significant.

Although three of the five dimensions did not show a significant correlation with TP, the trend is consistent both for grand mean (Figure 5.1), and for and the five dimensions (Figure 5.2). It is acknowledged that the correlations were not strong, yet in both cases the higher mean score on attitude towards teaching was associated positively with higher teaching-performance mean scores.

The calculation of the means of 23 items which examined the lecturers' TP was based on the previously argued position of the unidimensionality of teaching (see 3d.6 and 4b.5.2). In order to examine the lecturers' TP and their attitude towards teaching using a multidimensional approach, an Analysis of Variance (ANOVA), was also undertaken. To facilitate this analysis lecturers were categorised into two groups, 'upper 27 percent' and 'lower 27 percent' attitudes toward teaching, as recommended by Hopkins and Stanley (1981) and Linn and Gronlund (1995). The attitude mean score for the entire sample was 3.83 ($SD = 0.35$), ranging from 2.86 to 4.58 (out of a possible 5.00).

Data in Table 5.14 present a significant difference between the two groups in nine out of the 23 items of TP (full-item statements are in Appendix G and

their short-form statements are in Table 4.7). These nine items described various components of teaching such as lecturing and assessment. The two most significant differences were demonstrated in item six ($p < 0.001$), and items one and nine ($p < 0.01$). Item six asked the students' understanding of the content, item one asked about the ability of lecturers to explain the aims of the course, and item nine asked for a rating of lecturers' enthusiasm for the subject.

Table 5.14: ANOVA Summary for Significant Differences between Lecturers with Upper and Lower 27 Percent Attitude Toward Teaching and their TP

TP Item*	Upper 27 Percent			Lower 27 Percent			F Value	p Value
	N	Mean	SD	N	Mean	SD		
1	31	3.95	.37	27	3.70	.35	7.34	.01
2	31	3.81	.35	27	3.62	.29	4.95	.03
6	31	4.08	.39	27	3.70	.37	14.40	.001
7	33	3.51	.52	32	3.25	.49	4.11	.04
9	32	3.66	.41	29	3.36	.46	7.33	.01
10	33	3.68	.47	32	3.42	.47	5.13	.02
18	27	4.32	.44	27	4.09	.43	3.67	.05
21	28	3.89	.55	27	3.61	.47	3.96	.05
25	31	3.85	.44	26	3.58	.63	3.70	.05

* Items 8 and 13 were excluded (see 4b.5.2).

The differences between the two groups on the remaining 14 items were demonstrated in Table 5.15. While none of these differences was statistically significant, the mean score for lecturers in the 'upper 27%' group was higher in all these 14 items. Four particular items appeared to stand out from the rest: item 14, stimulates thought on subject ($p < .07$); item 16: interested in helping students ($p < .07$); item 20: stimulates students ($p < .07$); and 24: suitable written feedback ($p < .08$). Subsequently, the mean score of

TP of lecturers in the upper 27 percent of the attitude distribution tended to be higher than in the lower 27 percent of the attitude distribution in all of the 23 items of TP.

Table 5.15: ANOVA Summary for Non-Significant Differences Between Lecturers in the Upper and Lower 27 Percent Attitude Toward Teaching and their Teaching Performance

TP Item	Upper 27 Percent			Lower 27 Percent			F Value	p Value
	N	Mean	SD	N	Mean	SD		
3	31	4.13	.31	27	4.07	.44	.29	.59
4	31	3.85	.41	27	3.72	.33	1.68	.20
5	31	3.57	.45	27	3.41	.40	1.98	.16
11	33	3.83	.48	32	3.65	.49	2.22	.14
12	33	3.82	.42	32	3.74	.36	.58	.45
14	33	3.55	.46	32	3.34	.48	3.30	.07
15	33	4.35	.39	32	4.25	.37	1.19	.28
16	33	4.10	.44	32	3.88	.55	3.18	.07
17	27	4.46	.41	27	4.29	.36	2.45	.12
19	27	3.99	.39	27	3.83	.42	2.09	.15
20	28	3.90	.53	27	3.64	.51	3.36	.07
22	30	3.75	.45	25	3.54	.63	2.15	.14
23	31	4.09	.37	26	4.05	.59	.10	.75
24	31	3.75	.50	26	3.48	.67	3.02	.08

In summary, a positive relationship was established between lecturers’ attitude toward effective teaching and lecturers’ teaching performance, according to four analyses. These analyses were the combination of an overall positive and significant correlation coefficient ($r= 0.18, p < .04$) between lecturers’ attitude and their TP (Figure 5.1), positive correlation between five dimensions of teaching and TP (Figure 5.3), significant

differences in nine items between mean score of TP of academic staff in the lower 27 percent attitude toward ET (Table 5.14), and finally the consistent and similar direction in the remaining 14 items (Table 5.15 and Figure 5.3). These results led the researcher to conclude that the mean scores of lecturers' attitude towards ET correlate positively with their mean of teaching performance scores.

5.2.2 Phase Two

From the academics' *general* perceptive, having a positive attitude toward teaching was considered by all 25 interviewees as the most powerful of the eight attributes influencing lecturers' teaching performance (Table 5.39). All but one of the 25 (96%) interviewees believed that having a positive attitude to teaching was the most influential factor from their *personal* experience (Table 5.40). Comments in the interviews included the following range of views:

The most influential thing is having a positive attitude toward teaching. I've always loved it, I've always wanted to do it. (23)

If you don't like teaching, you cannot do it. If you're just doing it for money, it is not enough. A good lecturer must like this job. (10)

I always enjoy teaching and it does not matter whether it's first year students or postgraduate. (3)

Having a positive attitude is the first step of teaching. If you think that you are not going to have a positive attitude to teaching, you should not ask for an academic job. (11)

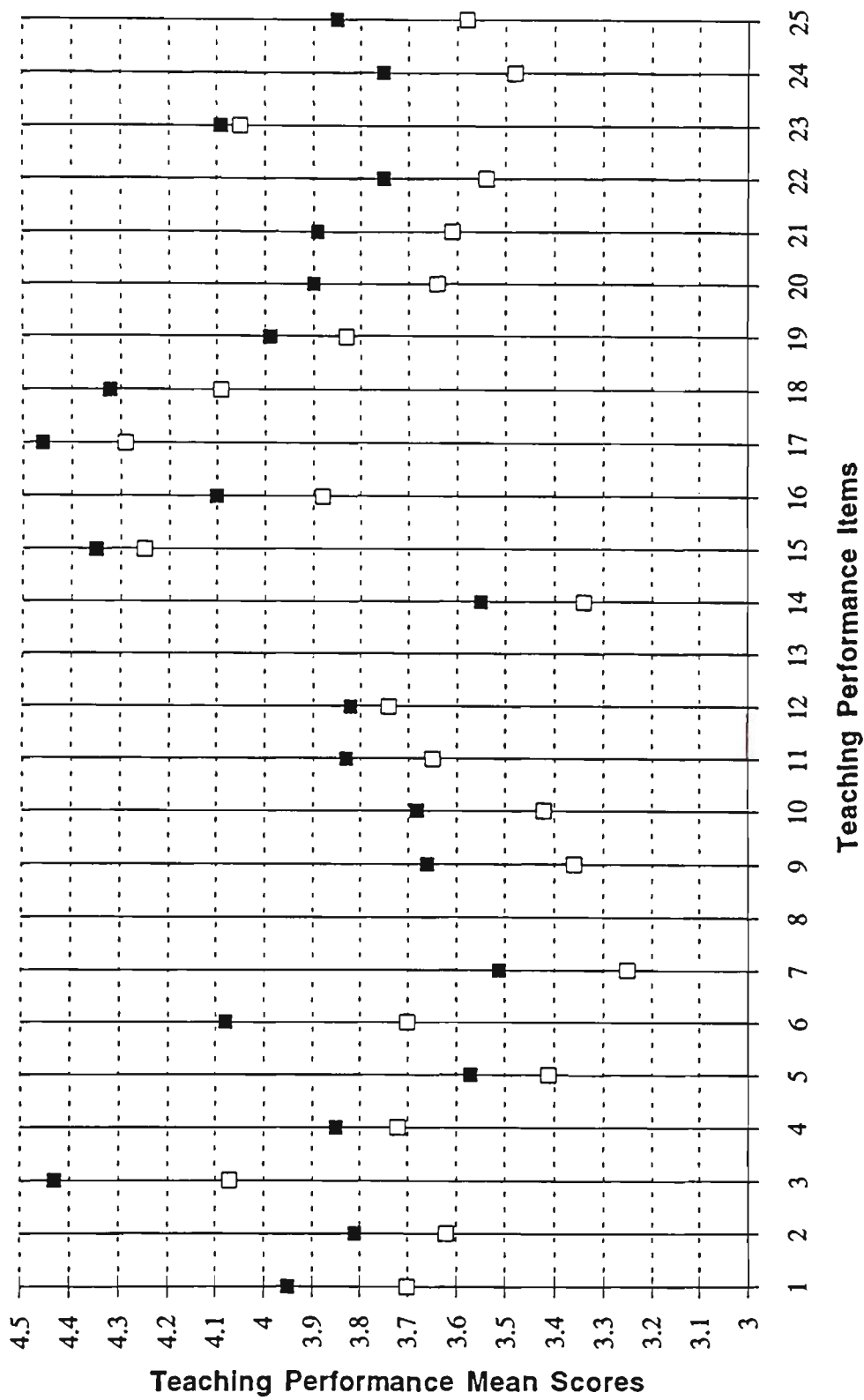


Figure 5.3: Teaching performance mean score of lecturers with 'upper' and 'lower' 27 percent attitude toward effective teaching

In spite of the importance of having a positive attitude toward teaching one senior lecturer from the Faculty of Education, and formerly from the teachers' college with more than 25 years of experience at all levels of schooling, criticised the low priority often given to teaching by institutions in their selection committees. He added "I feel that this interest in academics as teachers is relatively new in Australia" (3). He claimed that, when he was a university student and when he started to teach in the university, the quality of teaching was not considered by the institution to be important.

The interview data suggested that having a positive attitude toward teaching helps lecturers to: (1) create enthusiasm and student interest, (2) establish better planning of teaching, and (3) enhance rapport with the students. A discussion of these three outcomes of having a positive attitude follows.

1) Create enthusiasm and student interest: The lecturers interviewed pointed out that having enthusiasm for and interest in teaching increased students' enthusiasm, and this in turn encouraged the students to work. The ultimate benefit of this process is likely to be more effective student learning. The following extracts from some of the interviewees illustrate the point:

If you have a positive attitude, then you impart enthusiasm to students. . . . If you are not imparting a positive attitude toward the material, they are not going to consider it as important. (15)

Being positive about what I am doing and having enthusiasm is important. Students often react to the enthusiasm rather than the content. (17)

In my experience whenever I have been keen on a subject and wanted to teach well, I had a lot of enthusiasm about that. The more enthusiastic I have got about a subject, the easier it is to be a good teacher. (5)

Part of the teaching process is imparting information and getting the students to appreciate a body of knowledge in a critically analytic way, and that appreciation might not happen unless a lecturer is enthusiastic. The role of an enthusiastic lecturer is more important when a subject is difficult and students are asked to go beyond just memorising the information they are given, and are encouraged to be independent learners. Two interviewees stated that “when you show enthusiasm for your teaching subjects, the students generally can be led into more questions. They ask more questions” (13).

When lecturers are not enthusiastic about their subject material, the view was that they could not expect the students to be enthusiastic. One interviewee said, “I think, if you do not care about what you are doing, if you are not enthusiastic, then you can send your class to sleep quickly” (19). A challenge was made by another interviewee who said “even if you are not interested, you have to make it interesting, because if you do not make it interesting, the students do not like it” (8). A stronger position was that, if a lecturer is not enthusiastic, he or she should not be teaching (18). It was suggested that, to be enthusiastic, lecturers must be very positive in their teaching.

2) Establish better planning of teaching: It was frequently explained that if lecturers want to do the best they can in teaching, then they need to plan. If

lecturers are positive about teaching they begin to try and to experiment with their teaching styles, rather than just maintaining lecturing and tutoring routines. Planning needs to be thorough. According to an academic from the Department of Mathematics "if you've got a positive attitude toward teaching, then you are going to put an effort into it. You are going to plan for it. You are going to prepare well" (6). This matter was referred to by two interviewees, with doctorates, from the Faculty of Arts as follow:

If you are keen on your teaching, it encourages you to think about methods that you are going to use in teaching. (23)

If you do not have a positive attitude toward teaching, you would not plan the material adequately. (18)

Without planning it was argued that lecturers cannot make the material relevant to the topic and the students' needs. One lecturer suggested "the challenge in teaching, to me, is making what can be very dry material, interesting; also in subject planning, setting assessment tasks and the subject objectives" (8).

3) Enhance rapport with students: Generally respondents agreed that it is important for a lecturer to be accessible to students and that having good rapport with the students facilitates effective communication and encourages them to apply themselves to their work. One of the interviewees who is a teacher educator with 23 years teaching experience (1) explained that having a good rapport with the students does not necessarily mean being over-familiar with them, but being attentive and interactive. An associate professor from Informatics stated that;

from what I have seen, the best lecturer is the one who is interested in the students and takes the time to think about his or her courses and think about the students. (16)

It was explained by an associate professor from Arts with 38 years experience in several universities that in terms of traditional face-to-face classroom teaching and learning are social activities (as distinct from distance education) and that is why interaction is important (24). He further explained that having rapport is more important when lecturers teach average rather than talented students. Three of the interviewees from the Faculties of Informatics, Arts and Engineering supported the position that interaction and rapport are facilitated when lecturers have a positive attitude toward teaching. They said:

If you've got a positive attitude toward teaching, then you are going to put an effort into it. You are going to care about the students. (6)

If you've got a positive attitude you establish rapport; you are enthusiastic and that pays off. (19)

Always I have found having a positive attitude to what I am doing helps me in making a link between students and myself. (25)

One associate professor in Science with 12 years' teaching experience had two strong comments to make: "you can teach anything if you have that rapport with the students"; and "if you do not have a positive attitude toward teaching, you must not teach, because your rapport with the students will be poor" (18).

This sub-section can be summarised in terms of the views of two lecturers from the Faculties of Informatics and Engineering:

Attitude will fix everything that you do; it comes across to the students. If they see you are trying, are willing and available to help them, ensure things are clear and you want to see them learn, then they will give a good response. They are more likely to work for you [your subject] rather than for somebody who doesn't help them at all. (6)

If you haven't got a positive attitude towards teaching, no matter how competent you are academically, you would not love to teach; that is the bottom line. You ought to love what you teach [subject]. You ought to love the act of teaching, convey your experience and knowledge to the next generation. If you don't like it, teaching would be the most difficult job ever. So having a positive attitude is absolutely essential. (25)

Having a positive attitude toward teaching facilitates meeting the lecturers' responsibilities for teaching, said one associate professor from Informatics with 13 years of teaching experience (16). However, he warned that as a result of increasing loads for both teaching and postgraduate supervision, lecturers often do these things at a cost to their research, which often suffers.

Although having a positive attitude toward teaching was perceived by the majority of interviewees as a very important attribute, an associate professor with 24 years teaching experience in different levels of schooling reported, "that alone would not necessarily make you a good lecturer unless there are other opportunities that include professional development, mentoring and peer review" (2). A similar position was expressed by a lecturer from Education who liked teaching very much. He said "it seems to me if you've got the attitude, but you have not the capability, the attitude alone is not powerful" (22).

5.3 Teaching Qualifications and Teaching Performance

5.3.1 Phase One

This sub-section explores the differences between the TP of academics with and without TQ. Initially academic staff were classified into four groups by self reports of their acquired teaching qualifications. The categories were: 1) no qualifications; 2) ITT, lecturers who participated in the Introduction to Tertiary Teaching course; 3) undergraduate (UG) award in education; and 4) postgraduate (PG) award in education. For each category, the teaching performance of academic staff was calculated by mean scores derived from a Likert scale containing 23 items, developed by CSD. Then, an ANOVA was applied and the results are presented in Table 5.16.

The data in the Table 5.16 indicate an overall significant difference at $p < .04$ between the mean score of the teaching performance of staff who had acquired teaching qualifications and those who had not. However, by examining the mean score of teaching performance of the four groups, unexpected results were seen within the ITT category.

Table 5.16: ANOVA Summary and Means Table for Teaching Qualifications (Four Groups) and TP (N = 130)

Teaching Qualifications Groups		Teaching Performance	
	N	Mean	SD
Nil	63	3.66	.39
ITT	14	3.56	.38
U/G	27	3.81	.33
P/G	26	3.82	.39
Overall F-Value = 2.77		p-Value = <.04	

For the ITT group, mean scores on teaching performance were lower than the Nil group (3.56 vs. 3.66). By referring to the database of this study, it was found that 13 out of 17 academic staff in the study who have ITT, acquired their teaching certificate in 1994, while the latest students' evaluations of teaching were carried out in 1993. In other words, at the time of the student evaluation of teaching in 1991-1993, the ITT group did not hold teaching qualifications. In light of these findings, the ITT group can be considered as belonging to the Nil group.

Furthermore, no significant difference was established between the mean scores of teaching performance of academic staff who have undergraduate and those who have postgraduate certificates in teaching (3.82 and 3.81). Therefore, for ease of data analysis these two categories were considered as one, and the data pooled.

In the light of the two reclassifications, teaching performance of the two groups with and without TQ was analysed again by using ANOVA. A significant difference was established at $p < .006$ between the mean score of TP of the two groups of academics, showing that the TP mean score of the with-TQ group is significantly higher than the without-TQ group (Table 5.17).

By considering the results of the two analyses that categorised academic staff into four (Table 5.16) and two (Table 5.17) groups, significant differences at $p < .04$ and $p < .006$ were found between lecturers' TQ and their mean score of TP. Thus the mean score of teaching performance of lecturers who had acquired TQ was statistically higher than those who had not.

Table 5.17: ANOVA Summary and Means Table for Teaching Qualifications (Two Groups) and TP (N = 130)

Teaching Qualifications		Teaching Performance	
Groups	N	Mean	SD
With Qualification	53	3.81	.36
Without Qualification	77	3.63	.39
F-Value = 7.85		p-Value = <.006	

As a way of further exploring the TP of the two groups, with and without TQ, their mean scores on each of 23 items of TP were analysed using ANOVA. The outcomes (Table 5.18) highlight statistically significant differences in nine items (6, 7, 9, 10, 11, 12, 14, 24 and 25) out of 23, in each case, the mean score of TP for the with TQ group was higher than the without TQ group.

Table 5.18: ANOVA Summary for Academics With and Without Teaching Qualifications on Teaching Performance Items

TP Item	With TQ			Without TQ			F-Value	p-Value
	N	Mean	SD	N	Mean	SD		
6	44	3.98	.47	64	3.78	.42	5.68	.01
7	49	3.54	.53	71	3.26	.43	9.49	.002
9	49	3.6	.45	65	3.42	.44	4.71	.03
10	49	3.66	.5	71	3.45	.41	6.26	.01
11	49	3.84	.48	71	3.61	.52	6.26	.01
12	49	3.86	.37	71	3.71	.37	4.86	.02
14	49	3.53	.48	71	3.37	.44	3.64	.05
24	41	3.72	.55	54	3.42	.75	4.54	.03
25	41	3.81	.51	54	3.52	.67	5.38	.02

Six questions out of nine with significantly different means refer to the quality of lecturing of academic staff. The remaining three items refer to 'assessment' (items 24 and 25) and 'organisation' (item six). The biggest difference between the two groups is shown in item seven. This item asks students whether they feel enthusiastic about attending lectures. The differences in six questions related to 'lecturing' are significant and there is a consistent and similar trend in the remaining two. Also, differences are significant in two of the 'assessment' items and consistent and in the same direction in the remaining two. Therefore it can be said that the TP mean scores of academic staff with TQ are significantly higher than those without TQ in the two components of lecturing and assessment.

Although the mean differences for the other 14 items were not significantly different, it can be seen from Table 5.19 that the with-TQ group means were higher than the without-TQ group means for all items except item three.

Inspection of these results indicates that lecturers from both groups were rated strongly for their understanding of the subject matter of their courses (item 15, M=4.34 & M=4.26) and the clarity with which they provided information for students about assessment (item 3, 4.08 & 4.13). They also were seen as being reasonable when grading student work (item 23, 4.11 & 3.97) and being interested in providing adequate assistance for students (item 16, 4.05 & 3.93).

Table 5.19: ANOVA Summary for Academics With and Without Teaching Qualifications on Teaching Performance Items

TP Item	With TQ			Without TQ			F	p
	N	Mean	SD	N	Mean	SD	Value	Value
1	43	3.86	.45	64	3.75	.31	2.29	.13
2	43	3.74	.40	64	3.66	.32	1.48	.22
3	43	4.08	.40	64	4.13	.30	.40	.52
4	44	3.83	.43	64	3.71	.38	2.56	.11
5	43	3.55	.46	64	3.52	.37	.12	.72
15	49	4.34	.39	71	4.26	.37	1.20	.27
16	49	4.05	.48	71	3.93	.47	1.78	.18
17	42	4.34	.41	57	4.29	.43	.37	.54
18	42	4.18	.49	57	4.12	.46	.37	.54
19	42	3.9	.42	57	3.8	.42	1.38	.24
20	42	3.8	.53	58	3.65	.50	2.13	.14
21	42	3.77	.56	58	3.57	.56	3.19	.07
22	41	3.78	.50	52	3.69	.57	.67	.41
23	41	4.11	.47	56	3.97	.65	1.41	.23

The results in this sub-section demonstrate that the teaching performance of academic staff who had acquired TQ is significantly higher than those who had not. The support for these results is the significant differences between mean of items overall (Tables 5.16 and 5.17) and the means of each of nine out of 23 items (Table 5.18), and a consistent trend in the remaining 13 items, except item three (Table 5.19 and Figure 5.4). On the basis of the above, it might therefore be suggested that academic staff can improve their teaching performance by acquiring teaching qualifications. It is noted, however, that

the correlations do not necessarily imply causation between teaching qualification and teaching performance.

Insert

Figure 5.4: Comparison between TP mean score of academics with and without teaching qualifications

5.3.2 Phase Two

When the responses, expressing *general* and *personal* views, were ranked in terms of the number of respondents and the sum of scores, acquiring teaching qualifications (TQ) was ranked as the third most influential attribute (Table 5.41). However, considerable difference was found between the lecturers' general and personal views. While TQ in general was perceived by 20 (80%) of the respondents as one of the four attributes most influential on TP, 15 (60%) of the respondents selected it as an influential attribute for their *personal* TP (Tables 5.39 and 5.40). One interpretation is that eight of the interviewees had no TQ and therefore could not judge about its influence on their own TP.

The 17 interviewees who commented on this attribute pointed out that having a TQ influenced TP in the following three areas: (1) learning how to teach, (2) improving communication ability, and (3) creating confidence.

1) Learning how to teach: Ten lecturers out of 17 from various Faculties who commented on this attribute, suggested that having a TQ is necessary and useful for university teaching . In general, however, it was acknowledged that knowing a subject is no guarantee of effective teaching. Specifically, for teaching in university, it was stated by one female lecturer from Arts who had acquired TQ, that "just because you are a specialist in the field, it does not mean you are capable of teaching" (15). Furthermore, although being enthusiastic about teaching was considered as a matter that helps to improve the quality of teaching, it is still not enough (3). A senior lecturer with 23 years of teaching in the Faculty of Education said "I think some sort of TQs are probably useful. . . I do not know how those who do not have TQ

manage their teaching. So, there would need to be some kind of program to help them learn to teach, because I do not believe teachers are natural born” (3). This response might in part reflect the almost exclusive priority placed upon teaching in the former teachers’ college in which many lecturers in the Faculty of Education were employed.

Three academic staff acknowledged that acquiring TQ helped them to learn how to plan and how to teach. One of them who was professor and Head of his Department said “I always thought that I benefited from having a teaching certificate” (5). Another Law lecturer who had done many teaching courses said “I have learned a lot from being aware of how people learn and how people teach” (20). Some of the points representative of the interviewees were:

The [university] teachers need pedagogy to be able to adjust the teaching skills to the learning needs. Being able to use different methods of learning. Being able to assess the students’ needs, in terms of the way they learn. (12)

[By acquiring TQ] you would be familiar enough with some of the stylistic ways of delivery of material you have, e.g. how you plan to make the information hang together. (13)

People who have a qualification, have had more opportunity to practise different methods of teaching, and that is an advantage. (1)

A Head of Department who had TQ acknowledged that the University of Wollongong is now more aware of the importance of supporting lecturers to develop their skills for teaching (2). This position was supported by one lecturer without TQ from Engineering and one lecturer with TQ from Arts as follow:

In spite of the budget cut, if the university does not help the young teachers to master their teaching techniques [through appropriate teaching-improvement programs], I think then you will get a disaster. (11)

Everybody should have a teacher-training qualification. This is very important. I think this is where universities really have to be quite strict. (15)

In spite of the above advantages, three lecturers from Informatics, Engineering and Science who were supportive of acquiring TQ, explicitly mentioned that spending one year to obtain a formal degree for acquiring TQ is not necessary. Short, continuous and practical courses were suggested. However, there was no consensus about the length and method of getting TQ. This matter needs further examination.

2) Improving communication ability: Two lecturers from Arts with TQ and one from Engineering without TQ indicated that, by acquiring TQ, academic staff get ideas about how to communicate with students or improve their communication skills. The lecturer from Arts mentioned that by acquiring TQ, lecturers for example “would be familiar with how you address the audience through body language and through eye engagement and make humour” (13).

The Lecturer from Engineering raised the issue that “nowadays this university is facing a group of students with very different cultural and academic backgrounds”. He said working within this context is very difficult and suggested that lecturers should gain communication skills in order to cope with this diversity (25).

3) Creates confidence: A female lecturer with TQ in Arts with 35 years of teaching experience at different levels of schooling explained that if lecturers have TQ they get something extra from research and theoretical qualifications and more confidence in approaching the students (19). She said this is because lecturers with TQ know the skills and craft of teaching. For example, they know how to work from overhead projectors or write on the blackboard. One physicist suggested that by acquiring TQ lecturers know “what experiences are believed to work in a certain situation, which basically gives you confidence” (18). This was also supported by an Engineering lecturer who said being qualified in teaching means that “you have become a teacher who confidently delivers the stuff for the students in a way that students can comprehensively digest: not just the good students but even the average students in the class” (11).

Despite supporting the necessity of acquiring TQ, the interviewees pointed out that the following concerns about TQ should be considered:

1) Learning how to teach by experimentation: Four lecturers who acknowledged the usefulness of TQ, explicitly or implicitly pointed out that, by attending teaching courses, beginners can seek advice for teaching, but lecturers can improve their teaching by experimentation in real situations. One lecturer from Informatics with nine years’ teaching experience said “I don’t believe that if you pass more teaching courses and training you will be a better teacher. . . I have learned all of the things by experiment” (10). A similar point was raised by a female lecturer from Arts who said “there are very good staff members that don’t have a teaching qualification; [they] discovered all things by themselves” (15). Another associate professor from Informatics with 28 years’ teaching referred to some excellent lecturers who

do not have TQ. He said "having thought about your teaching is what is important rather than working through [acquiring a teaching] qualification" (17).

2) Suitable personality is needed for teaching: Two lecturers from Education, two from Informatics and one from Commerce pointed out that, although having TQ assists lecturers to improve their teaching, they also have to have a potential to apply a variety of teaching strategies. Since ability to communicate is one of the most important factors in teaching, one of the Education lecturers said "some people, just because of their personalities, can relate to other people and do a good job" (1). One of the lecturers said "some people will never be very good teachers. They could be perfect researchers" (10). Similar positions were stated by others:

I always felt that the best teacher is one whose personality is suited to teaching. It seems that some people are naturally good teachers because of the way that they interact with people. (5)

If somebody is a quiet person, does not like to discuss, and would prefer to sit down in his/her office and do research, then he or she is not going to be a very good teacher, necessarily. Personally you have to be half born a teacher, at least. Then you need some training to get the knowledge of teaching. (6)

Moreover, a lecturer in Education said "some people are natural born teachers" (12). To support this position, one of the Engineering lecturers said that "ability to teach can come naturally for some people, for bright and intelligent people who have the potential to become teachers" (11). As anecdotal evidence, one of the Education lecturers with 16 years' teaching in university explained that there are some lecturers who do not necessarily

have a formal TQ who do very well in their teaching, and there are other lecturers who have TQ who sometimes do not do a very good job.

3) TQ does not necessarily increase teaching capability: This was reflected by four interviewees. A female lecturer from Education said it is not necessarily the case that “the more TQ that you have, generally speaking, [the more] you would expect to be a better teacher” (1). One female lecturer from Science who participated in the ITT said “I really don’t think that enhanced my qualifications very much” (14). However, she acknowledged that she has been involved in teaching from when she was a graduate student. She added that these courses “for some people might be extremely important”.

Some respondents were more emphatic. Two lecturers from Arts suggested that the possession of a TQ does not make a person a good teacher. As a reason for this, one of them said “I found some people who are qualified [formally] as teachers but are lousy teachers” (23). Another Science lecturer said “I am not sure there is a great body of theoretical information about teaching that would be practically useful in a teaching environment. It is nice to know but not necessarily useful” (14).

Summary: From the majority of the interviewees the opinion is inferred that a teaching qualification is essential for effective university teaching. Acquiring a teaching qualification equips lecturers to learn how to teach and how to communicate with students. It also assists lecturers to be confident. However, three complementary concerns were raised by a minority of respondents who suggested that some excellent lecturers learned how to teach by experimentation and by reflection on their teaching. All of those

who acquire TQ are not excellent lecturers, and having TQ is only one factor contributing to being a good lecturer. To obtain more benefit from TQ, it should be linked to other factors like interest, experiment and reflection upon teaching. The summary conclusion reflected by a lecturer from Education with 28 years’ teaching was that “TQ and interest in teaching go together, to know what to do, and to help develop a concern for the students and a love of learning” (22).

5.4 Language Background and Teaching Performance

5.4.1 Phase One

This sub-section investigates the differences between lecturers’ teaching performance and their language background. Based on the self report, academics were classified as English-Speaking-Background (ESB) or as Non-English-Speaking-Background (NESB). The ESB group included those academic staff whose first language was English, while the NESB group covered all of whose first language was not English. When the TP mean scores of the two groups were analysed using ANOVA, a statistically significant difference at $p<.0008$ was established between the overall mean score of the two groups concluding that the TP mean score of ESB group was significantly higher than NESB (Table 5.20).

Table 5.20: ANOVA Summary and Mean Table for Lecturers’ Language Background and their Teaching Performance (N = 130)

Language	N	Teaching Performance	
		Mean	SD
ESB	113	3.75	.34
NESB	17	3.42	.53
F-Value = 11.87		p-Value <.0008	

In order to extend the examination, an ANOVA was carried out to analyse the TP mean score of the two groups in each of the 23 items of the survey. The results (Table 5.21) indicate that the difference between the TP mean score of the two groups was statistically significant in 19 items with consistent trends in four remaining items (4, 16, 20, 22).

Table 5.21: ANOVA Summary and Mean Table for Language Background and Teaching Performance in Each Item

TP Item	ESB			NESB			F Value	p Value
	N	Mean	SD	N	Mean	SD		
1	96	3.83	.35	11	3.49	.49	8.49	.004
2	96	3.72	.35	11	3.47	.34	4.87	.02
3	96	4.13	.34	11	3.90	.35	4.45	.03
5	96	3.57	.40	11	3.26	.44	5.66	.01
6	97	3.90	.45	11	3.57	.37	5.35	.02
7	107	3.41	.49	13	3.08	.47	5.33	.02
9	101	3.54	.42	13	3.19	.55	7.44	.007
10	107	3.57	.45	13	3.27	.50	4.95	.02
11	107	3.76	.47	13	3.25	.66	12.47	.0006
12	107	3.8	.35	13	3.54	.51	5.75	.01
14	107	3.47	.45	13	3.20	.51	4.09	.04
15	107	4.33	.35	13	3.96	.51	11.96	.0008
17	84	4.37	.38	15	3.99	.47	11.81	.0009
18	84	4.20	.45	15	3.85	.51	7.14	.008
19	84	3.89	.44	15	3.61	.24	5.78	.01
21	85	3.72	.55	15	3.29	.52	7.93	.005
23	86	4.09	.49	11	3.56	1.00	8.45	.004
24	85	3.62	.66	10	2.93	.61	10.03	.002
25	85	3.72	.58	10	2.99	.63	14.27	.0003

The three highest differences were in item 25, ‘quality of lecturer’s feedback’; item 11, ‘clear presentation of material’ and item 15, ‘lecturer’s understanding the subject’. Conversely the four items (4, 16, 20, 22) which

demonstrated no significant differences between the two groups were related to those components of teaching which required fewer communication skills. In other words, these four items reflected those components of teaching that were effective without the need for teachers to have a strong language proficiency.

The analysis indicated that mean TP scores of academic staff whose first language is English were higher than the scores of those academic staff who were from NESB in all of the 23 items (Figure 5.5). The TP mean score of the ESB group ranged from 3.41 to 4.37, while for the NESB group it ranged from 2.93 to 3.99. On average, the TP mean scores of the ESB group was 0.36 higher than the scores of the NESB group. In summary, overall mean TP scores of the ESB group were significantly higher than NESB lecturers. This was for 19 items of the 23 items with a consistent trend in the remaining four items on the TP questionnaire.

5.4.2 Phase Two

When the interviewees were asked to rank the level of the effects of the four most influential lecturer attributes on their TP, eight (32%) selected language background (LB) (Table 5.39). But when they expressed this in terms of their personal experience, LB was influential on the TP of five (20%) academics (Table 5.40). One interpretation of the lower level of personal-experience responses is that 88% of the interviewees were from English-speaking-backgrounds (ESB) and therefore could not really judge the influence of LB on their own TP. From both the general and a personal perspective, language background was ranked the fifth most influential attribute, out of the eight attributes.

Insert

Figure 5.5: Teaching performance mean scores of lecturers in relation to their language background

Although this attribute was not selected as one of the four most influential attributes, 15 of the interviewees acknowledged the importance of this attribute on TP. Their comments on the nature of the influence of this attribute in TP were classified into the following three areas: (1) accent and vocabulary difficulties, (2) different norms in teaching, and (3) different cultural backgrounds.

1) Accent and vocabulary difficulties: Ten lecturers commented on this matter from different perspectives and acknowledged that some of the non-English-speaking-background (NESB) staff have some communication and accent problems in English. Since these lecturers are speaking English with a variety of accents, it was reported that students complain that they cannot understand some of their lecturers. Four interviewees explained that they themselves witnessed in different cases a very knowledgeable lecturer who had a strong accent and was not able to deliver the lecture content successfully. They concluded that for someone who is not sufficiently competent with the English language, or has a strong accent which is quite difficult to listen to and understand, there is a barrier to effective learning. Two of these lecturers from Arts and Informatics explained:

we have many NESB staff on our campus and some of them have very broad accents which are difficult for students to understand. If the lecturer is difficult to understand orally and does not have other skills to explain, like overheads or body language or whatever, then students will tend to block them out, be less interested and learn less. (19)

If the person cannot speak clearly, then the students do not learn, they give up as well. It is not being racist. We have had some incidents with some lecturers who did a terrible job because their English was not good enough. (6)

One associate professor, who had been in a managerial position in the University and associated with NESB lecturers, explained that in the main, NESB lecturers and students learn to use English in the written form. He further explained that "overseas students and staff can write reasonably well, [but] some of the NESB lecturers have very very bad accents" (24). In addition, some of the NESB lecturers are not able to use sophisticated or complex language (13). A similar point was raised by a female lecturer from Science, in saying that "people who are coming with a very different cultural background and who do not have a colloquial facility with the second language are at a disadvantage, initially" (14). One lecturer from Education emphasised the role of language background in communication ability and said "it is really the centre of the whole business of communication. Language problems, whether the lecturer is speaking English, and the students' first language is not English or vice versa, can have a very large impact on communication" (22).

2) Different norms in teaching: Three interviewees suggested that NESB lecturers need to learn the academic culture and expectations of a university in this country. For example, one female lecturer in Arts said "in our classes we do not give them [students] the answers, we ask them to discover them for themselves. The process of self discovery is a cultural difference" (15). In terms of norms of teaching one lecturer from Creative Arts explained that each country has different teaching styles. He said that "some Asian students want to be given information, they want to be told certain things at certain times, they have more difficulties with independent learning" (13).

By giving these examples the interviewees acknowledged the necessity of lecturers being familiar with the teaching and learning culture of their host country. A female academic from Science wanted to support and give reasons for this position by saying that “if I put myself in a position where I was going to China, for example, to teach, I would be terrified, partly because I don’t know what the norms for teaching are, what the students expect, [and what is] the degree of familiarity that you can have with students” (14).

3) Different cultural backgrounds: Five interviewees described language background as not only a communication issue but also involving the lecturer’s cultural understanding of a country. For example one female lecturer said “in another culture I would not necessarily be able to use humour. That is an element in teaching too” (14). Another lecturer gave an example about the relationship between students and lecturer in manners and the cultural differences, e.g. reserve or in showing enthusiasm.

As an example, one Law lecturer said that he was invited to observe the teaching performance of one of the NESB lecturers who had trouble teaching; “he could not use body language, especially eye contact”. He further added “when I said [to the NESB lecturer], ‘when you are talking to students you actually look down at the floor’, this person said this is the way that I was brought up, that is cultural not language. . . Culture differences can affect the communication, more than the language” (8). Similarly, another lecturer from Education with 23 years of teaching experience suggested that:

I imagine somebody who is coming from outside Australia as an academic would have to adapt culturally to Australian institutions.

The more the culture that you come from is unlike your traditional Anglo-Saxon culture, the more difficult it would be; e.g. European people can adapt easier than African people. (3)

However, some of the lecturers had different explanations to offer about language background as follows:

Seven interviewees pointed out that being from a NESB is not a critical issue in TP, at least for some of the NESB lecturers. LB is important in teaching only if it presents a problem in communication. One senior lecturer in Law who previously criticised the quality of teaching of some of the NESB lecturers, recalled that "I taught with some NESB lecturers. . . Some of them are wonderful teachers. language background does not matter" (8). This was also witnessed by a lecturer from Education saying that "I have had dealings with NESB lecturers; many [of them] are excellent teachers" (12). She further explained that some of them are bilingual or multilingual.

One professor from Commerce who was a Head of Department said "we have got a lot of NESB lecturers and that really has never been an issue here. I had never thought here that would be a serious disadvantage [being NESB]" (5). Another Head of Department from Arts supported this position by describing the TP of two NESB lecturers who teach in his Department. However, he qualified his position by saying that

The only thing that I found is that they need a little bit more encouragement to begin with, because they are uncertain, because of language and cultural things. But once they've got started, they found they had no trouble with the students. The students responded to them extraordinary well. (23)

A similar case was explained by one associate professor in Science who was Head of his Department at the time. He explained that when students complained about the weak presentation of one of the NESB lecturers, he asked them to listen carefully to the lecturer. After three weeks students had no difficulty with the lecturer. However, he acknowledged that language background “probably does have some influence. I do not think actually it is a huge issue” (17).

The issue of language ability was further clarified by two NESB lecturers from Informatics and Engineering. They said the influence of language in TP depends on the subject and the Faculty. The Informatics Lecturer said “in engineering-based subjects, language is not so important, because we speak a certain technical slang. We use a subset of language. You don’t need to use it as the English Department or Education Department” (10). Similarly, the Engineering lecturer said “we are not teaching English, we teach technology. A prime objective is technological literacy. . . But, you cannot communicate with the students if you’ve got problems with the language” (25). This issue was also supported by a NESB associate professor from Arts by saying that “from the very first tutorial, Arts students are expected to argue and communicate orally. In Engineering until very recently the focus is on writing and mathematical stuff” (24).

Another NESB senior lecturer from Engineering explained that postgraduate students are not so worried about the language ability of lecturers. They “go more for what the teaching content is; they do not really care if the lecturer speaks perfect English or not” (11). Similarly, one ESB professor from Law said “if they are good academics, people try to understand them, however bad a communicator. Of course

communication is important" (7). It was explained that in these situations students can develop other methods of coping with lecture material, like additional reading.

Adding to the above explanations, one female ESB lecturer from Law, while acknowledging that some NESB lecturers are hard to listen to, said

We live in a multicultural world now. You have to realise that language is varied. I think that is something we have to accept that being a part of a multicultural country, the tolerance factor. Students have to listen more carefully. (20)

Another issue for language ability was raised by a NESB lecturer who witnessed ESB lecturers who were deemed poor communicators. He said "It is wrong to assume, in my opinion, that a lecturer who was born with English-speaking parents, always communicates better" (11). This position was supported by an ESB lecturer from Education who said "I could name native speakers who are excellent and some who are not. So, I do not think that language background, *per se* is a problem, For some people it is" (12). Another lecturer from Education said "some people who have English as their first language, do not necessarily communicate very well with students either" (1). This matter was further clarified by a NESB lecturer from Engineering who referred to a huge diversity of cultural backgrounds of university students. He concluded that nowadays in universities such as Wollongong, both NESB and ESB lecturers have difficulties in dealing with this diversity.

It is interesting that the three ESB participants from the Faculty of Law (one lecturer, one senior lecturer and one professor) commented that language

background nowadays is not a very important issue but suggested that Australian society should consider that. Moreover, the professor acknowledged that having lecturers from different language backgrounds in a department can be a real benefit. She explained that:

other cultures would give you different ideas and different approaches. For me that is interesting and it is good to have such a mix in the Faculty. . . We have had a limited cultural mix in the Law Faculty until now, which is a shame. But it has started to happen. (7)

In support of the contribution of NESB lecturers, one female lecturer from Education said if there are NESB lecturers "the university [appointments committees] felt that they are appropriate people to be teachers" (1). Similarly, one ESB associate professor who has worked as a lecturer in different countries said "if you are coming from English as a second language, certainly in the Illawarra and Sydney [where there are many NESB university students] you have a better understanding of [NESB] students' difficulties in comprehension" (18). This position was strongly supported by a NESB Lecturer who said "I believe people with different cultures may have a better chance to communicate with NESB students. It is not always true but they have got a better chance" (25).

Further to the above judgements which suggest that NESB lecturers are able to teach in Australian universities, one NESB lecturer from Engineering explained that we have considerable freedom in communication. He said

whenever you have a problem in communicating a very technical complicated matter, you have computer simulation, you may write a few equations. But apparently a person who teaches history has not got this type of language. So, those disciplines rely heavily or more [than Engineering] on language. (25)

However, it was suggested by two lecturers that NESB lecturers “have to be well prepared to be good teachers” (3). Similarly, another lecturer said that they

have to really be organised and have a very clear lesson plan. They have to use a lot more teaching aids like slides, overheads and videos. If they don’t use teaching aids, then if their students have to rely on their ability to communicate effectively in the second language, it makes it difficult. (15)

Summary: There appears to be a fairly wide consensus regarding interviewees’ perceptions of language background being a potential problem. Being able to communicate effectively was considered by all of the respondents as an influential factor in teaching. It was also acknowledged by about half of the respondents that some of the NESB have some difficulties in communication. Accent was considered the biggest problem in oral communication, though there might be some difficulties with idiom. However, it was indicated that being from ESB does not necessarily mean having effective communication abilities. Unfamiliarity with teaching norms and the culture of the host country were named as two other difficulties for some of NESB lecturers.

However, it was reported that some of the NESB lecturers are excellent lecturers and some are bilingual. It was also suggested that teaching in Engineering-based subjects is easier than teaching in Arts or Social Science for NESB lecturers. By being well prepared and using teaching aids and computers, NESB lecturers can improve the quality of their teaching and compensate in part for their weaknesses in oral communication. Finally, it was suggested by a number of ESB interviewees to welcome NESB staff as a

part of Australian multi-cultural society and recommend to the students that they listen carefully and use other methods of dealing with lecturers from NESB, like undertaking additional reading.

5.5 Gender and Teaching Performance

5.5.1 Phase One

This sub-section investigates the differences between the teaching performance of male and female university lecturers. Altogether 124 (71%) males and 51 (29%) females participated in the study. The difference in the percentage of participating males and females reflected the overall distribution in the University.

When overall TP mean scores for male and female academics were examined using ANOVA, a significant difference at $p < .03$, in favour of females was established as indicated in Table 5.22.

Table 5.22: ANOVA Summary and Mean Table for Teaching Performance of Female and Male Academic Staff

Gender	N	Teaching Performance	
		Mean	SD
Female	37	3.81	.34
Male	93	3.66	.39
F-Value = 4.42		p-Value <.03	

The above analysis was carried out for each of the 23 questionnaire items of TP for males and females. The results (Table 5.23) show that the TP of female and male academic staff, was significantly different in eight items, with the TP of females being higher than males. The three greatest differences were in item 24 ‘suitable written feedback on tasks’, item five ‘assessment proportions reflect work’ and item six ‘student understanding of content’.

Table 5.23: ANOVA Summary and Mean Table of TP Female and Male Academic Staff in Items with Significant Differences

Item	Female			Male			F- Value	p- Value
	N	Mean	SD	N	Mean	SD		
4	27	3.90	.41	81	3.71	.39	4.41	.03
5	25	3.74	.36	82	3.47	.41	8.78	.003
6	27	4.09	.42	81	3.79	.44	10.11	.001
10	31	3.70	.50	89	3.48	.43	5.10	.02
14	31	3.57	.44	89	3.39	.49	3.65	.05
21	31	3.82	.52	69	3.58	.57	3.87	.05
24	23	3.88	.32	72	3.44	.73	7.77	.006
25	23	3.91	.30	72	3.56	.67	5.73	.01

TP mean-score differences in the remaining 13 items were not statistically significant but reflected the stronger performance of female academics (Table 5.24). In these 13 items, the females’ mean scores were on average 0.13 higher than the males’ mean scores.

Table 5.24: ANOVA Summary and Mean Table for TP of Female and Male Academic Staff in Items with Non-significant Differences

Item	Female			Male			F-Value	p-Value
	N	Mean	SD	N	Mean	SD		
1	25	3.87	.43	82	3.77	.36	1.55	.21
2	25	3.80	.39	82	3.66	.34	3.30	.07
3	25	4.16	.32	82	4.09	.35	.85	.35
7	31	3.49	.54	89	3.33	.47	2.48	.11
9	30	3.63	.36	84	3.45	.47	3.38	.06
11	31	3.73	.58	89	3.70	.50	.11	.74
12	31	3.83	.38	89	3.75	.37	.83	.36
15	31	4.33	.45	89	4.28	.36	.46	.49
16	31	4.06	.46	89	3.95	.48	1.16	.28
17	31	4.38	.45	68	4.28	.40	1.28	.26
18	31	4.28	.39	68	4.09	.50	3.51	.06
19	31	3.93	.42	68	3.81	.43	1.74	.19
20	31	3.85	.50	69	3.65	.51	3.25	.07

It was interesting to note a high level of mean TP score in the sample. All of the 23 mean scores, diagrammatically presented in Figure 5.6, show that the female and male mean scores were more than 3.30 with mean scores of more than four in five items (3, 15, 17, 18, 23). However, average mean scores of females in all 23 items was 3.9 (SD = 0.24) and ranged from 3.49 to 4.38. For males, the overall TP mean score was 3.74 (SD = 0.27), and ranged from 3.33 to 4.28. On average females mean scores in all 23 items were 0.16 higher than for male academics.

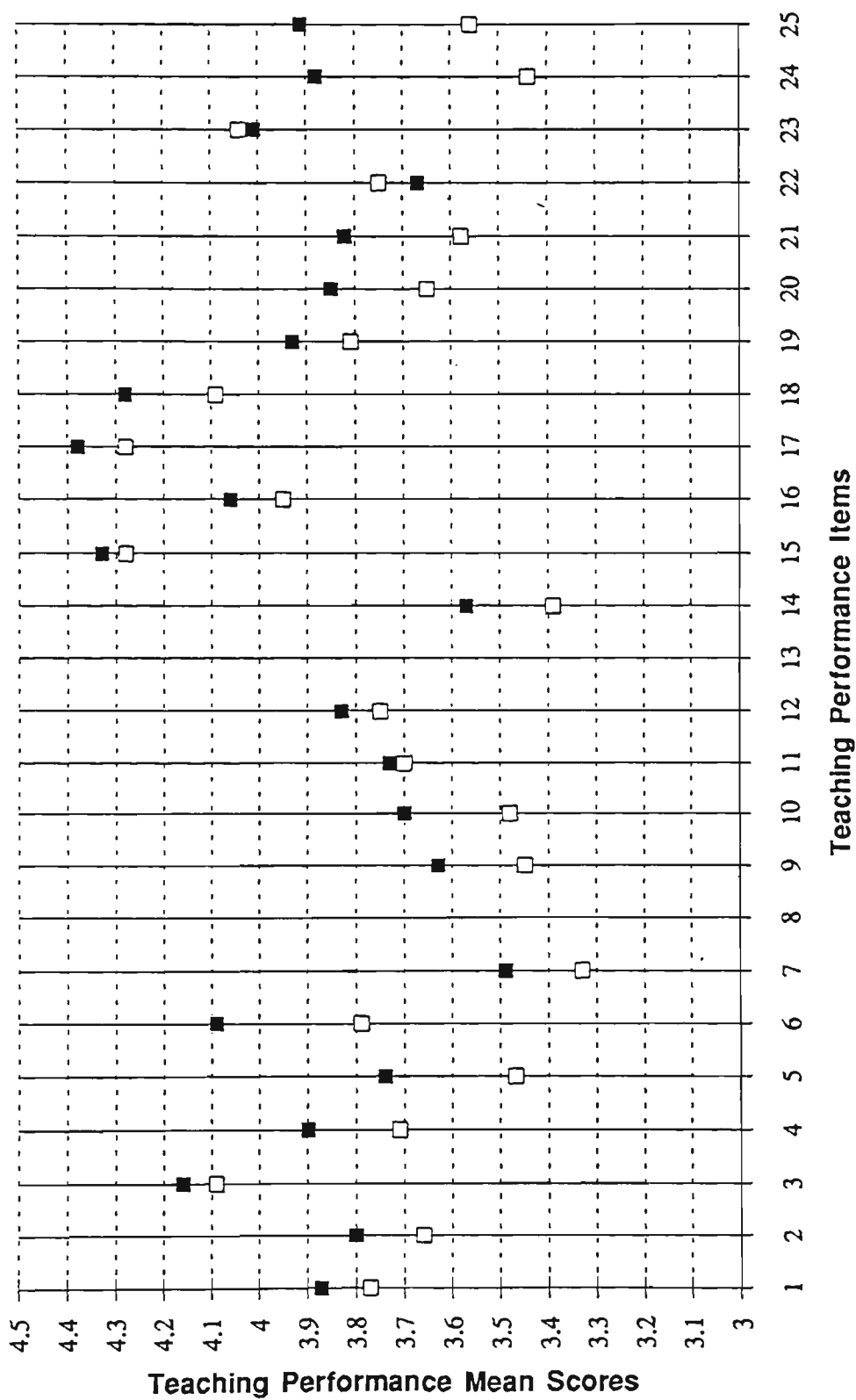


Figure 5.6: Teaching performance mean scores of female and male academic staff

As demonstrated in Table 5.22, the overall TP mean scores of females were significantly higher than males. In detail, female mean scores were higher than male mean scores in 21 items out of 23, exceptions being items 22 and 23. Of those 21 items where female mean scores were higher than male, the differences between the two groups were significant in eight items. Therefore, it can be concluded that the teaching performance mean score of female lecturers was higher than males during the three year period (1991-1993) among academic staff participating in the study of University of Wollongong.

5.5.2 Phase Two

From both general and personal view points of the academic staff interviewed, gender was not one of the four most influential attributes in a lecturers' TP, as it was ranked seventh (Tables 5.39 and 5.40) in both rankings. Only three respondents indicated gender was influential in their own teaching and one person as a general judgement. For example, one of the NESB lecturers from Engineering explicitly said that being male was an advantage for him. However, he mentioned that it does not matter for lots of male academics. One female only (from the Faculty of Arts) selected the gender attribute as her third priority, in both her personal and general views about the attributes perceived to be influential on TP.

Those respondents who commented about gender pointed out that, for university teaching, gender really does not make much difference. The interviewees said, as far as teaching goes, they know very good female lecturers as well as very good male lecturers. From their comments it can be

concluded that gender is insignificant as an attribute influential on TP. One male Head of Department who had been involved in the evaluation process in the university, stated that "I have never been able to see, based on practical experience, whether men or women were better teachers. I cannot say there are any differences between men and women in tertiary teaching" (5). Similar points were raised by two males lecturers from Engineering who argued "it is not important, honestly. I strongly believe that being a good teacher has nothing to do with the gender" (25). and "overall, I found it is not relevant to TP. . . It is completely immaterial" (11).

On a personal level, one of the female lecturers suggested that "if a lecturer is made fully aware of his or her responsibility as a teacher, then it does not matter whether the lecturer is male or female" (15).

While there was significant agreement about the lack of differences between males and females in university teaching, the following four issues were raised by the interviewees who suggested that there are some differences in terms of teaching performance.

1) One of the female lecturers with a doctorate from Arts raised the issue that, in Australian culture, "I find for myself that being a woman, I am considered more approachable by students than some of my male colleagues" (19). She was not sure about other cultures, but strongly emphasised her position in the Australian culture. She described her 15 years of teaching experience in the university and 20 years in other levels of schooling and went on to explain she often engaged in counselling and talking with students. She added that "I have students coming to me to ask advice to sort out academic problems and with their personal lives". There

was limited evidence to support this view with only one male lecturer from Education saying "I have had some students who I think would have preferred a female teacher" (22).

2) A female lecturer from Arts explained that women appear more willing to give time to students than some of her male colleagues, who tend to be career-tracking and concentrate more on their own research and writing (19). She explained "I think being available, being able to be interrupted, is something that women are trained to see as parts of their lives more so than men. For example, if father is working you do not interrupt; but if mother is working that does not matter". Although she believed that lecturers have to be available for students, she argued that spending more time for students for consultation, and being available, acts against one, leaving one with less time for research.

3) One of the male lecturers who believed that there is no difference between male and female when it comes to teaching, explained that nowadays it seems that working as a lecturer is not easy: "it is getting more demanding, and mainly males are in a better position to cope with more demanding jobs than females" (25). He argued that it is normally because males get more support from their wives, but females normally do not have this type of support. As evidence he said "I am away from the time-consuming things which take place at home. I've got three kids and I don't have to get home at 5 pm. I may sit here [in the department], I may do a little bit more work until 7 pm, because I am male; but if I was a female professor [I could not do that]" (25).

4) Another issue, which was raised by one of the female lecturers who has also been a Dean of a Faculty, was that some of the overseas students, coming from a strong male culture, have a greater regard for a male authority figure. She said "I am finding increasingly that some overseas students do not have the same regard for women as they do for a [male] authority figure" (7). One of the consequences of this issue may be the down-grading of female academics' teaching evaluations by those overseas students. However, another lecturer who has had managerial responsibilities in the university for a long time, referred to the above matter and said "we investigated a couple of cases and could not find any significant differences" (24). He did not mention the scope and the method of the investigation.

In summary, most of the lecturers believe that gender difference was not an influential attribute in the TP of lecturers. However, a few alternative judgements were offered by a few lecturers in favour of being male or female in terms of TP. When the concerns and the examples given are studied, it seemed that the differences identified between female and male academics to some extent reflected cultural background. Two of the interviewees said in terms of some cultural differences, males have opportunities to better prepare for teaching or are considered more competent by some students. In other situations females are perceived to be more approachable. In places like the University of Wollongong, where the number of international students is growing, this issue should be further examined.

5.6 Academic Rank and Teaching Performance

5.6.1 Phase One

This sub-section investigates the differences between the teaching performance of lecturers by academic rank. All of the participating academic staff were categorised into five university ranks: Associate Lecturer, Lecturer, Senior Lecturer, Associate Professor and Professor.

When ANOVA was applied, no significant difference was established between overall TP of academic staff with different ranks (Table 5.25). However, small differences were identified with mean scores increasing with rank up to the level of associate professor. The exception was the fifth rank ‘professor’ with the lowest TP score of 3.55 (Table 5.25).

Table 5.25: ANOVA Summary and Mean Table of Teaching Performance for Academic Staff by Rank

Rank	N	Teaching Performance	
		Mean	SD
Associate Lecturer	11	3.62	.59
Lecturer	48	3.68	.37
Senior Lecturer	40	3.75	.34
Associate Professor	18	3.81	.31
Professor	12	3.55	.45

Overall F-Value = 1.18 p-Value = .32

Although the overall F-value of teaching performance of lecturers' academic rank was not significant, the researcher was interested to pursue further analysis of the mean-score differences of the five groups of academic rank. These analyses were applied by Fisher's Protected Least Significant Difference (PLSD), a post-hoc statistical test. This test enabled the researcher to analyse the mean scores for the difference between all pairs of groups (Haycock et al., 1992), in this case different academic rank.

PLSD test indicated that no significant differences were established between overall TP mean score of the all pair-wise comparisons (Table 5.26).

Table 5.26: Differences Between Teaching Performance Mean Score by Academic Rank

Rank	Mean difference	Critical difference	P-Value
Asso. Lecturer Vs. Lecturer	-.06	.25	.63
Asso. Lecturer Vs. Sen. Lecturer	-.13	.26	.30
Asso. Lecturer Vs. Asso. Professor	-.20	.29	.18
Asso. Lecturer Vs. Professor	.06	.32	.68
Lecturer Vs. Sen. Lecturer	-.07	.16	.38
Lecturer Vs. Asso. Professor	-.13	.21	.20
Lecturer Vs. Professor	.13	.25	.30
Sen. Lecturer Vs. Asso. Professor	-.06	.22	.57
Sen. Lecturer Vs. Professor	.20	.25	.11
Asso. Professor Vs. Professor	.26	.28	.06

The above two approaches were then repeated across the 23 items of TP. No overall significant difference was indicated in TP in any of the 23 items between academic staff with different ranks. However, as shown in Table 5.27, a significant difference at $p < .05$ was established between the TP mean score of some pairs-wise comparisons in four (2, 6, 12, 24) out of 23 items.

Table 5.27: Differences Between Mean Teaching Performance Scores by Academic Rank for Items

Rank	TP Mean Score			
	#2	#6	#12	#24
Asso. Lecturer Vs. Lecturer				
Asso. Lecturer Vs. Sen. Lecturer		4.28 Vs. 3.77		
Asso. Lecturer Vs. Asso. Professor		4.28 Vs. 3.69		
Asso. Lecturer Vs. Professor	3.97 Vs. 3.57			
Lecturer Vs. Sen. Lecturer				
Lecturer Vs. Asso. Professor				3.70 Vs. 3.26
Lecturer Vs. Professor				3.70 Vs. 3.20
Sen. Lecturer Vs. Asso. Professor				
Sen. Lecturer Vs. Professor			3.82 Vs 3.57	
Asso. Professor Vs. Professor			3.88 Vs. 3.57	

From the analysis of overall TP scores (Tables 5.25 and 5.26), and the mean score analysis of TP in each of the 23 items (Table 5.27), it was concluded that there were no significant differences between mean TP scores of academics by their academic rank.

5.6.2 Phase Two

When all attributes were ranked according to academics' responses, academic rank was the last. Only one associate professor from the Faculty of Health selected it as her fourth priority. Remarkable agreement was shown among the interviewees that the level of academic rank does not influence lecturers' TP (Table 5.41).

An associate professor from Science said "when I look around, academic rank does not mean better teaching" (18), further arguing that there was no strong relationship between academic rank and improved teaching. When the interviewees were asked to explain why academic rank might not be important, responses were categorised thus: (1) academic rank is based on research not teaching, (2) high-ranked academics are expected to be managers, and (3) alleged weakness in using teaching technology and presentation.

1) Academic rank is based on research not teaching: From the eight staff who commented on this issue all indicated that university promotion is based upon research and publications, not teaching. They argued that promotion is usually accomplished without a great deal of regard to teaching excellence. There appeared to be no correspondence between academic rank and TP. This position was argued from the following range of interview comments:

Most people in university get up to a higher rank by research publications, and usually they do that by ignoring their teaching. (5)

Academic staff will be ranked by research or other criteria and the teaching is not very often included as part of the ranking process. (12)

The higher the rank you get, the more research is expected of you and therefore the less contact you have with the students and the less opportunity you have to develop rapport with them. (1)

In spite of the above opinions, the policy of the University of Wollongong, the context of this study, states that promotion is based on "teaching; research/scholarship; management and professional activity" (Personnel Services, 1996, p. 4).

According to an associate professor in Informatics (16) everybody in the University is expected to do research and teach and all are expected to be competent at both. However, research and teaching can be in conflict. It means if lecturers concentrate on research this could negatively affect their teaching. This point was strongly supported by another associate professor with 38 years of university teaching experience who suggested that "most academics argue, and I think selfishly, that there is a mix between a good teacher and a good researcher" (24) [i.e. research enhances teaching, and vice versa]. However, he added "our investigation does not show that at all, with some rare exceptions".

2) High-ranked academics are expected to be managers: From those interviewees who commented about academic rank, two associate professors and one lecturer pointed out that when lecturers become professors they are expected to undertake administration in the university. Even if their teaching is really good to start with, they argued professors subsequently have less time to devote to their teaching. Consequently, they tend to reproduce their lectures from previous years in order to save time.

One of the interviewees (1) lamented the fact that academics who are promoted and who are very good teachers, are responsible for more administration and, therefore, their teaching skills are to some extent lost to the faculty as some of their teaching responsibilities are replaced by administration. One of the associate professors with 38 years of university teaching experience, who has been in a variety of administrative positions including being a Head of Department, said:

I have known several occasions where someone who was a good teacher, becomes a Head of Department and his or her teaching drops off. Such a person has high administrative loads and does not do the planning for teaching. Such a Head has not got time for establishing rapport with students and gets tired, and loses enthusiasm. . . I only know one full professor who is an excellent teacher, researcher and effective Head of Department. (24)

3) Alleged weakness in using teaching technology and teaching presentation: One of the senior lecturers in Engineering with nine years' teaching experience (11) who seemed an enthusiastic lecturer in his field, mentioned that some of the senior academics with Ph.D.s had no idea what computers could do in their field. He said that the lack of appropriate knowledge in computer science is one of the barriers for senior academics being good lecturers. Some students have more knowledge in the use of computers than their lecturers or supervisors. Then he added "I think those with new blood are more associated with the new developments" (11).

Another lecturer with a doctorate from the Faculty of Education remarked that senior academics probably know the subject matter better than junior academics but "whether they can do [present] it is another matter" (22). The lack of ability of some senior academics to communicate with students was

raised explicitly by one of the Heads of Department with 28 years' experience in university teaching. He said "You may have someone who has a very good theoretical knowledge and may be an excellent researcher but may be less able to communicate that to students who are doing first-year compulsory courses" (21). He was very supportive of ways to improve the quality of teaching in his Department.

Although it was understood from all of the interviews that academic rank was not a significant predictor of teaching performance, the following two concerns were identified:

1) Concerns about the alleged weaknesses of senior academics in teaching did not necessarily mean that senior academics are not able to be good lecturers. Eight interviewees said that other matters such as involvement in research and administrative jobs were often barriers for senior academics to allow them to spend appropriate time on their teaching.

2) The interviewees did not generally want to suggest that all of the senior academics were poor lecturers and junior academics were excellent teachers. Excellent and poor are obviously found in both groups. Two associate professors and two lecturers noted that TP depends on the person, 'not where they are'. One who was a Head of Department said "on its own I do not think academic rank will necessarily help discriminate between lecturers' TP" (2). The influence of the attributes went both ways; "some senior academics are shocking, some junior academics are shocking. It depends on your personal attributes as far as teaching goes" (20). Another lecturer from Education said "you can find professors who are excellent teachers and you can find assistant lecturers who are excellent teachers" (22).

In summary, the interviewees argued that higher university rank does not necessarily mean better teaching performance. This finding flowed from both general and personal views. An Engineer lecturer concluded that being a professor “does not mean, as far as the students are concerned, the subject is more interesting” (25). Similarly, a professor who is also Head of Department concluded that quite frequently the people of higher rank in the university change their priorities, from teaching to research (5). As one consequence of this, he added “I would not be surprised if student ratings of teachers in higher ranks are lower than others in lower ranks”. This opinion was supported in the first phase of the present study.

5.7 Level of Academic Degrees and Teaching Performance

5.7.1 Phase One

This sub-section investigates the differences between the teaching performance of lecturers by the level of their academic degree in their professional discipline. The participating academic staff were categorised into three academic levels: Doctoral, Master and Other (Postgraduate Diploma or Bachelors Degree). The number of lecturers who were categorised in the third category (other) was very small, in comparison with the two other categories (Table 5.28).

When ANOVA was applied, no significant difference was established between overall TP of academic staff by the three levels of academic degree (Table 5.28).

Table 5.28: ANOVA Summary and Mean Table for Teaching Performance of Academic Staff by Level of Academic Degree

Academic Degree	N	Teaching Performance	
		Mean	SD
Doctoral	81	3.68	.36
Master	40	3.75	.43
Other	9	3.69	.37

Overall F-Value = .45 p-Value = .63

For further analysis, the mean-score differences between pairs of academic degree were examined using the Fisher test. This examination (Table 5.29) indicated that no significant differences were established between overall TP mean score in the pair-wise comparisons.

Table 5.29: Differences Between Teaching Performance Mean Score of Pairs by Level of Academic Degree

Academic Degree	Mean difference	Critical difference	p-Value
Doctoral Vs. Master	-.07	.15	.35
Doctoral Vs. Other	-.01	.27	.97
Master Vs. Other	.06	.28	.64

The above two approaches were then repeated across the 23 TP items, but the only significant difference was established in item six ‘understood content by student’, with the mean score of Doctoral level staff being less than the others.

A significant difference at $p < .05$ was established between the TP mean scores of Doctoral and Masters staff in three items only (6, 7, 10) out of 23 items (Table 5.30). These three items asked about ‘students’ understanding of content’, ‘enthusiastic about attending class’ and ‘presented interesting materials’.

Table 5.30: Differences Between Mean TP Scores of Pairs of Academic Degree in Items

Academic Degree	TP Mean Score		
	#6	#7	#10
Doctoral Vs. Master	3.77 Vs. 4.03	3.30 Vs. 3.53	3.48 Vs. 3.66
Doctoral Vs. Other			
Master Vs. Other			

Considering the overall TP results in Tables 5.28 and 5.29 and the mean scores of the 23 items TP in Table 5.30, it was concluded that, in the judgement of students, there were no significant differences between mean TP scores of academics by the level of their academic degree.

5.7.2 Phase Two

When the interviewees were asked to rank the four most influential attributes of lecturers among the eight attributes presented, 11 (44%) selected the academic degree as one of the four important attributes (Table 5.39). Although the first three important attributes were selected by 96, 84 and 80 percent of respondents respectively, academic degree was ranked as the fourth most important attribute by 44% of the interviewees. From the interviewees who selected academic degree as an influential attribute, five

held doctoral and six masters degrees. This was approximately consistent with the doctoral holders (N=14) and master holders (N=11) who participated in the study.

In addition, when the respondents were asked to rank the influence of having a doctoral degree in their *own* teaching performance, only seven out of 25 or 28% selected it (Table 5.40). From these seven, three had obtained a doctoral degree. The suggestion was that it could be influential for others but it was not for most of those interviewed.

Although academic degree was selected as one of the four most influential attributes, the number of respondents and the sum of scores given to it was not considerable, compared to the first three attributes (Table 5.41). The interviewees who commented on this attribute pointed out that having a doctoral degree influenced TP by: (1) expanding knowledge base and expertise, (2) co-ordinating research and teaching, and (3) developing empathy with the students' position. These three matters are now discussed.

1) Expanding knowledge base and expertise: Five of the interviewees from a variety of Faculties pointed out that, having gained a doctoral degree, lecturers had a broad perspective of a disciplinary area and with that breadth they could expand their knowledge and expertise, which in turn influenced their teaching. However, it was suggested that the level of a lecturer's degree is not always representative of his or her ability within a discipline. It was also pointed out that a higher degree often distinguishes university teachers from primary- and high-school teachers. One of the other benefits of having a Ph.D. degree was being able to "inspire students". The following

are similar points raised by two staff from the Faculties of Education and Arts:

It [the Ph.D.] may help you as far as your knowledge base goes. The higher the degree that you achieve, the more you work on the process, and synthesising may help you to help students. (1)

If you don't have a degree in the area that you teach, you do not have credibility. Just knowing about your field is part of your responsibility as a lecturer. (15)

However, a Head of Department argued "a certain amount of knowledge comes from the degree, but then to be a good lecturer, your familiarity with recent research probably becomes more important" (2).

2) Co-ordinating research and teaching: Four interviewees pointed out that good lecturers integrate their Ph.D. into their teaching. It makes teaching more interesting for the lecturer and offers students first-hand knowledge of research and critical analysis. In other words, having a doctoral degree gives more tools in teaching, e.g. being more familiar with research methodology. It was explained by one associate professor that as having a Ph.D. "involves the lecturers in research, then at university level they are better able to teach, than just being a teacher and reading books" (9). To be able to do research and integrate it into teaching was important than just teaching based on the material provided by others, said an Engineer lecturer with a Ph.D. (25).

3) Developing empathy with the students' position: A lecturer in Education who is currently researching for a Ph.D. acknowledged that having a Ph.D. is important. This lecturer explained that getting a doctorate means that "the

lecturer has gone through the process of being a student and should be aware of what is necessary from the students' points of view. It gives knowledge and a number of skills that will be needed as a lecturer" (12).

Acknowledging the usefulness of having a doctoral degree for university teachers, some of the interviewees raised the following three concerns:

1) Considering the advantages of having a Ph.D., one of the academic staff who had 23 years' teaching experience said, "I know some people who have a PhD and do not teach very well. It depends on the person I think" (1). This argument was also reflected by one doctor who was a specialist in theatre who emphasised the ability to teach.

Just because somebody is very knowledgeable and is an excellent researcher, it does not make him or her a teacher. I would say that in terms of selection of teachers in the university, perhaps the academic degree, their professional qualification, should not be as important as their demonstrated ability to impart knowledge. (4)

2) One of the doctoral-level staff with 35 years of teaching experience within the Arts Faculty explained that some of the older lecturers who do not have a Ph.D. are not necessarily under-qualified. She explained that some of them in the past "were so busy, doing their research in the 'real' world and with their teaching work, that getting a 'piece of paper' such as a Ph.D., was not so important. ... Nowadays it is becoming important" (19). This statement, however, might be a reflection of her regretting she did not possess a Ph.D. early in her career as she had only recently completed her doctorate.

3) An academic degree was not selected as one of the four most influential attributes by an older associate professor who had served in many managerial positions in the university and completed his Ph.D. 24 years ago. He explained that the Australian Ph.D. is based on the British model and is a very narrow degree. In some cases the Ph.D. is not relevant to the subject that lecturers subsequently teach at the undergraduate or postgraduate level. He added "generally speaking, the people with an American doctorate are probably better teachers, because of their broader knowledge base. . . . I am inclined to say that the broader Ph.D. has given them a more positive attitude toward teaching" (24). Another lecturer with doctorate in Informatics supported part of this position by saying that the "Ph.D. is in a narrow area and later on you become a staff member and you start teaching and you have absolutely no experience at the very beginning" (10). Another lecturer with a doctorate in Engineering noted that "it is important, but I believe being a good teacher has other things to do with it than having a PhD" (25).

From the comments raised by the academic staff, it can be concluded that having a doctoral degree influence lecturers' TP, in terms of familiarity with critical analysis, expanding their knowledge, familiarising them with research methodology, and understanding and obtaining experience as a doctoral-level student. Nowadays, a doctorate with either broad or narrow base, does demonstrate a high level of competence in original research and in critical analysis - essential ingredients in a university. However, holding a Ph.D. does not necessarily make one a good lecturer, or generate empathy. The degree of relevancy of the research conducted in a Ph.D. with the courses that a lecturer wants or has to teach after graduation, however, can

be important in the lecturers' TP, even though, by possessing a Ph.D, a lecturer is better able to learn new areas to teach, in a critical way.

5.8 University or College Experience and Teaching Performance

5.8.1 Phase One

This sub-section explores the relationship between years of formal college or university teaching experience and lecturers' teaching performance (TP). When the Pearson Product Moment correlation coefficient was calculated, no significant relationship ($r = 0.03$, $df = 128$) was established between the two variables. A scattergram of the analyses (Figure 5.7) demonstrates the distribution and variation of this relationship.

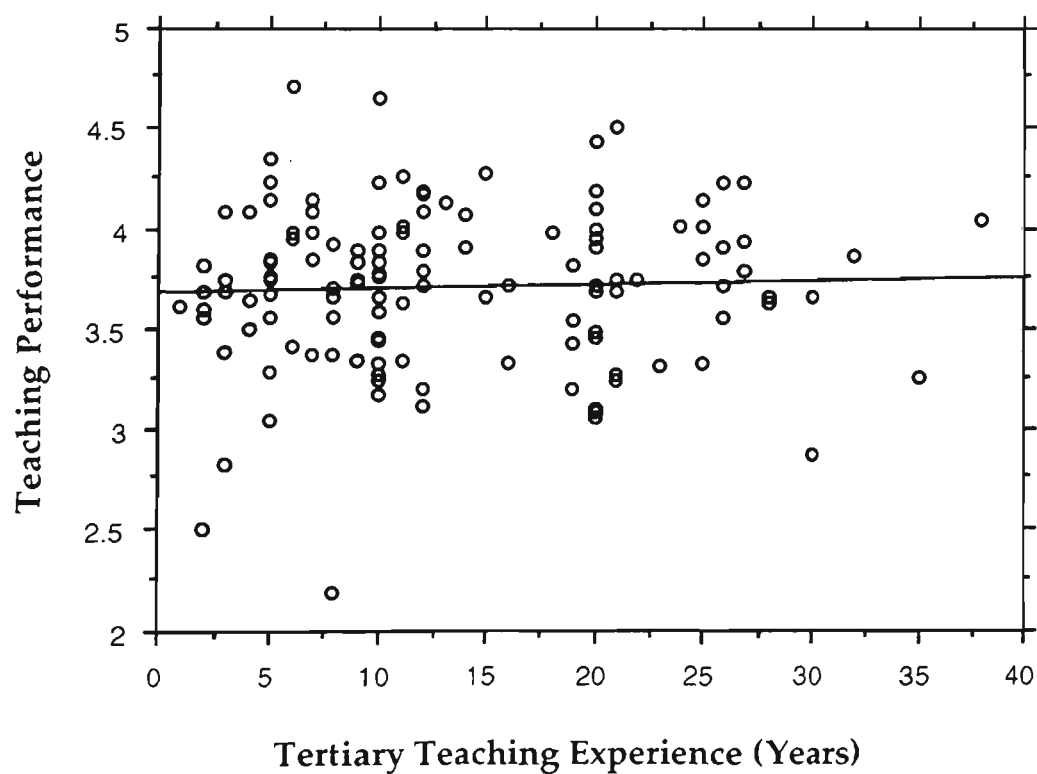


Figure 5.7: Distribution and variation of mean score of lecturers' teaching experience and their teaching performance

Since the increasing number of years of teaching experience may positively or negatively impact on TP, lecturers were divided into four groups according to their years of tertiary teaching experience for further analysis. These four groups were 1) from one to five year of teaching experience, 2) six to ten years 3) 11 to 15 years, and 4) more than 15 years of tertiary teaching experience. These categories accounted for 21%, 29%, 14% and 36% of the population respectively.

Figure 5.8 (error bars chart) demonstrates that mean TP scores increased up to 16 years of teaching experience. However, they decreased after more than 16 years experience, but only down to the second level (6 to 10 years).

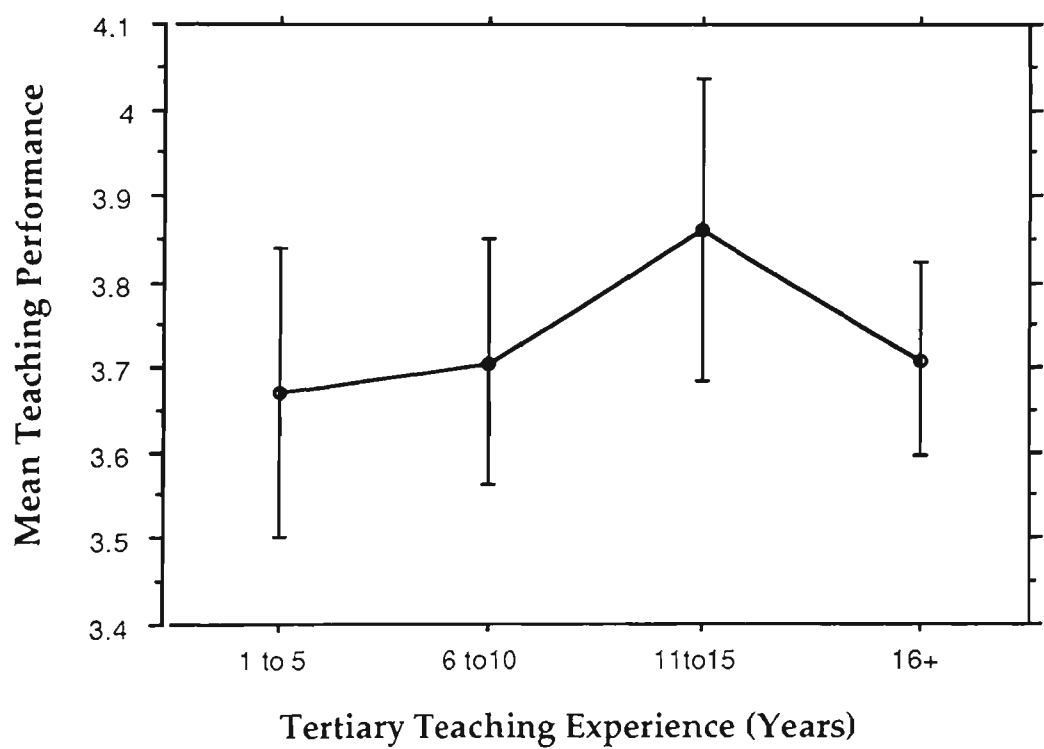


Figure 5.8: Years of teaching experience and teaching performance

Despite the above results, when overall mean TP differences were analysed by ANOVA, no significant differences were established (Table 5.31). Also,

when TP of different pairs of lecturers e.g. with 1 to 5 vs. 6 to 10 years of teaching experience were analysed using the Fisher statistical test, no significant differences were established.

Table 5.31: ANOVA Summary and Mean Table for Years of Teaching Experience and Teaching Performance			
Teaching Experience (in years)	N	Teaching Performance	
		Mean	SD
1-5	25	3.67	.40
6-10	38	3.71	.43
11-15	18	3.86	.34
16+...	47	3.71	.37
Overall F-Value = .79		p-Value = .50	

To find differences of mean scores of TP in each of the 23 items, for each of the four groups of lecturers, the Fisher test was applied. The results in Table 5.32 indicated that the only significant differences were on item six 'student's understanding of content' and item 23 'marking of work reasonable'.

In summary, there was no relationship between years of tertiary teaching experience and mean TP scores of lecturers (Figure 5.7) revealed by quantitative analysis. Additionally, using ANOVA and the Fisher test, no significant differences were established between the TP scores of lecturers regarding their teaching experience. As a result, it is concluded that no significant relationship was found between years of tertiary teaching

experience and lecturers’ teaching performance as measured by their mean score from student evaluation.

Table 5.32: Differences Between Years of Teaching Experience and Mean TP Scores

Teaching Experience	TP Mean Score	
	#6	#23
1-5 Vs. 6-10	4.00 Vs. 3.74	
1-5 Vs. 11-15		
1-5 Vs. 16-...	3.75 Vs. 4.13	
6-10 Vs. 11-15		
6-10 Vs. 16-...		
11-15 Vs. 16-...		

5.8.2 Phase Two

The length of tertiary teaching experience was perceived by 21 (84%) of the respondents as one of the four most influential attributes for a lecturers’ TP. In addition, 17 (68%) of the 25 interviewees stated that tertiary teaching experience positively influenced their own TP. When the responses for both questions, expressing general and personal views, were ranked by the number of respondents and the sum of score points analysed, teaching experience was ranked as the second most influential attribute (Tables 5.39 and 5.40).

Although the number of interviewees who selected this attribute in both questions was high and this was ranked as the second most influential

attribute in both questions, there was a difference between their general and personal views. From the general view, teaching experience was ranked second by 21 (84%) interviewees with 57 points. It was also ranked second from the personal perspective by 17 (68%) interviewees with 42 points. It should also be added that the priority weight given to teaching experience on the sum of scores was considerably lower than the priority given to having a positive attitude (Table 5.41) which was ranked as the most important attribute (57 and 42 vs. 95 and 96).

In general, the interviewees believed that most lecturers improve the quality of their teaching through experience. One of the interviewees from Law with 10 years experience in teaching stated that “the more you teach, the better you should be” (8). Similar positions were made by other interviewees from a range of Faculties who explicitly stated that:

I guess you do get better over time, even if you were not very good to start with. (3)

You do learn over time. New lecturers tend to make more mistakes than the older lecturers. (7)

Most of the interviewees who commented on this attribute, had some reservations. They did not say that teaching experience is absolutely influential. They pointed out that improvement in teaching will not automatically happen, with more years of teaching experience. In other words, teaching experience does not necessarily improve TP. Moreover, teaching experience can be a negative factor on TP (18). Three interviewees with 9, 23 and 27 years of teaching experience respectively commented that:

Year after year you will be better, if you want to be better. Some people don't want, they don't bother about that. (10)

It [improvement in teaching] will not happen automatically. People have to reflect on their own experience. (3)

It [teaching experience] could be a pleasure and could be a minus. It could be either way. It depends on the people. (7)

It can be generally argued that lecturers do improve through teaching experience, but it does not always necessarily happen; some lecturers do not improve. One Head of Department said "in my experience most people do improve by experience, but some people do not" (5). More than that, another lecturer at the professorial level with 38 years university teaching experience frankly said, "there is probably a bell curve in relation to teaching and years of teaching experience". This statement agrees with the results of first phase of the present study and some of the previous research.

The interviewer attempted to obtain staff views about how teaching experience can influence a lecturers' TP. The responses were categorised as follows: (1) confidence, (2) enhanced teaching skills; and (3) opportunity to reflect on teaching.

1) Teaching experience gives confidence: From the 18 interviewees who commented on this attribute, six mentioned that teaching experience had given them confidence. They explained that, after getting experience in teaching, they were not worried by the prospect of lecturing. They also found teaching was easier than in the past. Four reflected:

It gives you a lot of confidence in teaching, especially for teaching large classes. (11)

The more experience you have the more you can find ways of alleviating the nervousness. (13)

When I get older I can get rid of the notes. That does not mean that I have not prepared. (7)

After five years teaching you know where you started; you have confidence in what you can do. (18)

2) Teaching experience enhances teaching skills: Experience in teaching cultivates the ability to handle students in different teaching environments. As an example, one of the senior lecturers from Engineering with nine years teaching experience explained that, with experience, lecturers can learn how to deal with “first-year students who think that the university is not too different from a high school”. He went on to say, “when you are teaching fourth-year students, they are completely different, they are completely mature” (11). He gave another example about class size and said “when you have large classes, you must have a different way of teaching”. He pointed out that learning these ‘different’ techniques comes from experience. A similar conclusion was drawn by another Engineering lecturer who stated that “the more you teach, provided you do not give up, the more you get more experience in dealing with the students” (25).

A professor with 12 years of teaching experience in the Faculty of Science suggested that the first five years of teaching is given over to building confidence and skills, whilst the second five years basically involves trying new things and finding what has worked (18). A female lecturer with 14 years of university teaching experience (15) concluded that, “by experience, lecturers eventually might find some techniques and methods that are effective”. Similar judgements were:

I am much better at controlling the classes now than when I first started. I know what works and what does not work within my discipline. (16)

I am much more willing to take a risk - for example in establishing a new assessment procedure. (8)

My experience helped to consolidate the things I have learned in getting my qualification. (22)

You can draw upon previous experiences of being in a lecture situation which might help you to maintain momentum. You can only get it through experience. (13)

3) Teaching experience provides an opportunity to reflect on teaching: Some of the interviewees explained that experience provided them with an opportunity to reflect on their abilities in teaching to find out their weaknesses and their strengths. One of the interviewees from Informatics with 13 years of experience attempted to explain how reflection improved his teaching, stating that at the end of each semester or year, "I should ask: O.K. what did I do right last year, what went wrong last year, and how can I improve this" (16). When asked why some lecturers do not improve by teaching experience, a professor with 28 years of teaching stated that "maybe they don't reflect on their failure or strengths. They don't try to improve their teaching abilities" (5). He also added that "maybe their personality holds them back or prevents them getting on with teaching".

One of the lecturers from Law said "in my own personal experience (of six years), I have got a totally different view of teaching from what I had three years ago, even last year" (20). She suggested that academic staff have to constantly re-appraise their teaching. Students were named as one good source that can provide feedback for lecturers while they are teaching. She added, "I think after you have been teaching for a number of years, you can reflect on really what were your successes and your failures; what students liked, what they did not like" (20).

Another female lecturer from Education with 10 years' experience in teaching acknowledged the importance of being reflective and analytical about oneself, students and their needs. Then she implicitly suggested using an 'action-research' process through the comment "if you do all of these analyses and then act on the results that you've discovered, you become a better teacher" (12). It was interesting to note that female lecturers emphasised the importance of reflection more than the male lecturers - reflecting the students' gender-difference ratings in Phase One of the study (Tables 5.22 and 5.23).

Although acquiring more teaching experience was accepted as one attribute that affects the academics' TP, the following three concerns were raised by respondents: (1) experience should be included with something else, (2) sometimes experience is boring, and (3) experience does not always make a good lecturer.

1) Experience should be included with something else: Five of the interviewees indicated a condition to their judgements, and said that teaching experience is useful but something else, like a qualification in teaching or having a positive attitude to teaching, helps lecturers to acquire effective teaching methods and techniques more quickly. For example one lecturer from Arts reflected that, if an academic staff member has no qualification in teaching, students can suffer while he or she is learning by experience (15). Two interviewees from Arts and one from Education, respectively, with relatively extensive teaching experience in the university (12, 14 and 28 years), pointed out that:

There are people who have lots of teaching experience who learned nothing from it. . . It depends a lot on your approach. But if you've got

enthusiasm and a positive attitude toward teaching, you pick up on what was wrong, you reflect on it, you look at what has worked and what hasn't worked, and try to work out why. (23)

If you have teaching experience without qualifications, then you have never been challenged to think about teaching in different contexts and in a different pedagogy. (15)

I am a bit unsure about teaching experience. I am saying that you would expect, if people have teaching qualifications and positive attitude, then experience should be helpful. They should get better and better. (22)

2) Sometimes experience is boring: It was concluded from four of the interviewees that some lecturers were discouraged after teaching the same material for a number of years. One of the lecturers with nine years' teaching experience from Science stated that "it gets to be pretty dull if you're talking about the same overhead or the same power-point display every year. It could be a nightmare experience for the teacher" (14). One female Law professor with 27 years of teaching in university stated that "older persons can be boring" (7). Similar points were raised by another female lecturer with 14 years teaching experience from the Faculty of Arts who stated that "I think a lot of people who have been in the profession and teaching for years are very stale and very tired" (15).

To find solutions for the above, she commented that "you have to continue to challenge yourself and find new methods and continue to develop your teaching repertoire. If you don't do that, then you get stale". A similar point was raised by another female lecturer from Science with nine years experience who stated that "your level of expertise decreases after a certain

period of time unless you change your techniques and learn something new" (14).

3) Teaching experience does not always make a good lecturer: Although the importance of teaching experience in improving teaching was acknowledged by almost all of the interviewees who commented on this attribute, five of them explicitly said they knew some lecturers with many years of teaching experience who were not good lecturers. Two lecturers from Arts and Law with more than 10 years of tertiary teaching noted that:

I know some people who taught for 30 years and have not learned anything from it. (19)

I have known teachers who are actually bad teachers and get worse, because the years of teaching experience do not necessarily make them good teachers. (8)

When the interviewer attempted to identify why teaching experience does not work for some lecturers, the point was clarified by one of the experienced Engineering lecturers who said that gaining 'constructive feedback' from teaching experience provides opportunities to learn from experience. He added, "If you do not have a positive attitude toward teaching you do not gain experience" (25). A similar range of points was raised by three lecturers, each from the Faculties of Education, Informatics and Arts:

People can be lecturers for years and never become good teachers. ... Because they do not bother to reflect on their own practice. They do not bother to check and see whether the students are actually learning things. (12)

In tertiary teaching, people more often don't want change when they get started. People will start in a certain pattern and just teach in the same way for year upon year, upon year. They do not care. (6)

Because the older you get the further you are away from the culture of 18-years-old, e.g. the metaphor we use to describe something is often different from the metaphors that 18-years-olds are using. (24)

In summary, teaching experience was perceived by the majority of the interviewees as one of the lecturer attributes that was likely to influence TP. In general, interviewees concluded that teaching experience can give them confidence and provide an opportunity to reflect on their teaching to improve their strengths and remove their weaknesses.

However, it was explicitly argued that the above advantages will not happen automatically and constantly. The lecturers have to have an interest and willingness to reflect and learn from their teaching experience. Reflection on their teaching, having teaching qualifications and having a positive attitude toward teaching were suggested as co-conditions, with teaching experience, that facilitate learning.

5.9 Academic Discipline and Teaching Performance

5.9.1 Phase One: It was explained in 4b.1.1 that all nine Faculties of the University of Wollongong were classified in this study into five groups. This division was based on their similarity in nature, the previous divisions in this university, the scores of student ratings obtained and the advice of senior academics in the Faculty of Education. Because of confidentiality issues, the academics were not asked for the means of their

Departments, and therefore, an analysis based on Department was not possible in this study.

The overall teaching-performance mean score of all of the involved academic staff was obtained by calculating the result of 23 items of student ratings questionnaire (Appendix G). ANOVA analysis indicated that a significant difference at $p<.0003$ was established between the TP mean scores of academic staff in the five faculty groups (Table 5.33).

Table 5.33: ANOVA Summary and Mean Table for TP of Academic Staff in Five Groupings of Faculties

Faculty Groups	N	Teaching Performance	
		Mean	SD
Arts and Creative Arts	20	4.01	.38
Education	18	3.77	.40
Science and Health	34	3.73	.34
Commerce and Law	27	3.61	.31
Engineering and Informatics	28	3.53	.40
Overall F-Value = 5.78		P-Value <.0003	

Consistent results with the above Table were elicited from an analysis of the TP mean scores of all academic staff throughout the University, which was obtained from student ratings during 1991-93 (Table 4.2 in Methodology). The mean score of the TP of the two sets of analyses are shown in Figure 5.9.

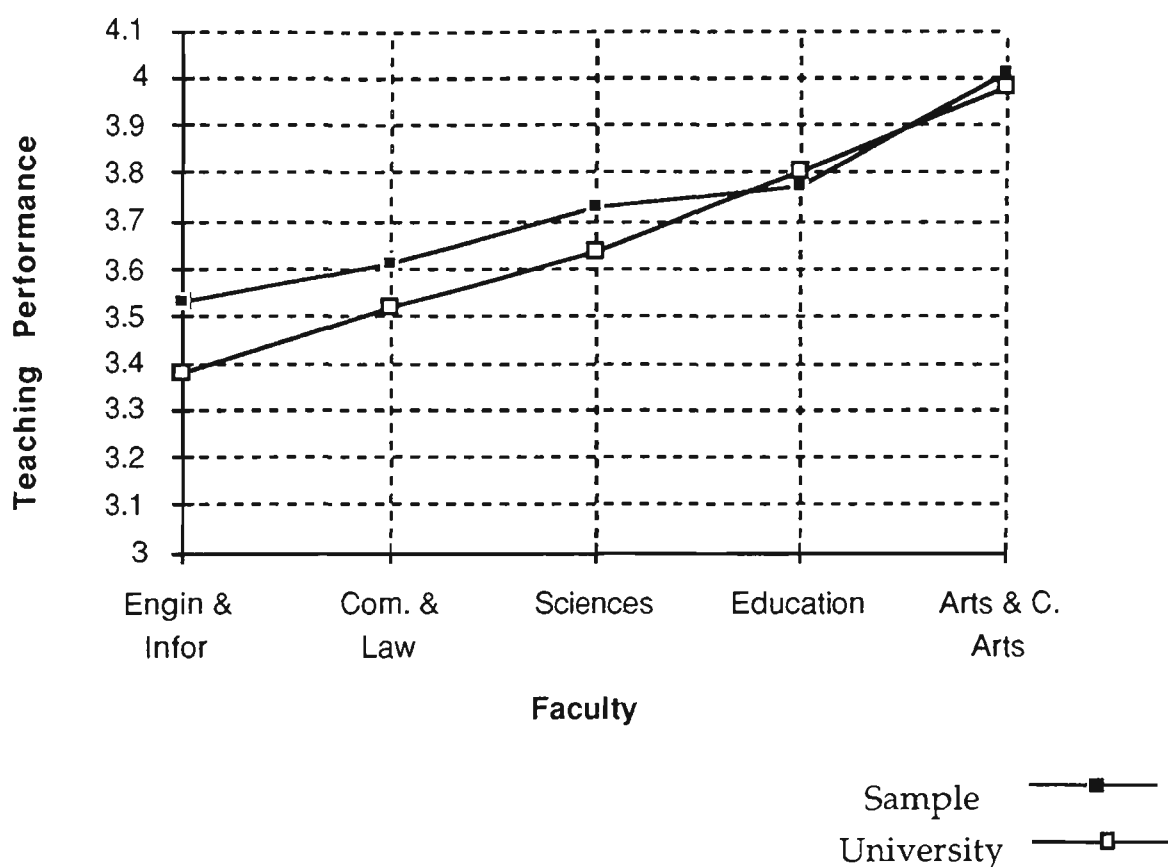


Figure 5.9: Comparison between TP mean score of academic staff participated in the study and all of the university by Faculty grouping

It was found from the analysis presented in Table 5.33 that the overall mean scores of TP between faculties are significantly different. To obtain more information, the mean scores of TP of the five groups were tested by the Fisher statistic test. This test shows the mean difference, critical difference, and p-value for the difference between all pairs of faculties. This analysis (Table 5. 34) indicated a significant difference between the TP of academic staff in the Arts and Creative Arts and all other Faculties, in favour of the former. Teaching performance of academic staff in the Faculties of Education and Science was significantly higher than the Faculty of Engineering.

Table 5.34: Differences Between Teaching Performance of Faculties

Faculties	Mean difference	Critical difference	p-Value
Arts and C. Arts vs. Commerce and Law	.40	.21	.0003
Arts and C. Arts vs. Education	.24	.23	.04
Arts and C. Arts vs. Engineering and Infor.	.48	.21	.0001
Arts and C. Arts vs. Science and Health	.28	.20	.007
Education vs. Commerce and Law	.16	.22	.15
Education vs. Engineering and Informatics	.24	.22	.03
Education vs. Science and Health	.04	.21	.69
Science and Health vs. Commerce and Law	.12	.18	.21
Science and Health vs. Engine. and Infor.	.20	.18	.03
Commerce and Law vs. Engine. and Infor.	.08	.19	.42

In addition to the above analysis on overall TP mean score (the calculation of means of all 23 items) of academic staff in different faculties, the ANOVA and Fisher statistical tests were repeated for each of the 23 items to obtain further information. The ANOVA analysis indicated that the difference between TP of mean scores of academics in different faculties was significant in 18 items out of 23. The five exemptions were items 18, 19, 20, 22 and 23. The first three items were about the competence of lecturers in running tutorials. Item 22 was about returning the submitted assessment to students, and item 23 asked about the result of marking - whether it was reasonable or not.

To get more detailed information about the mean scores of TP of academic staff in each of the pair-wise faculties, on the 23 items, a Fisher post-hoc statistical test was conducted. The analysis indicated that the TP of academics in Faculties of Arts and Creative Arts was significantly higher

than in other faculties in 21 items (Table 5.35). These differences were shown in 20 cases with Faculties of Commerce and Law, in 10 cases with Faculties of Science and Health, and in nine cases with the Faculty of Education.

The Faculty of Education in eight cases had significantly higher TP mean scores than other faculties, with the exception of the Arts and Creative Arts. The Faculty of Science in six cases had significantly higher TP than Commerce and Law, and Engineering. Commerce and Law had a significantly higher TP only in one item (item 10) than the Faculty of Engineering.

From the results of the Fisher test (Table 5.35) it can be seen that the five groups of faculties which each had significantly higher TP score, compared with other groups of faculties were respectively: Arts and Creative Arts, the Faculty of Education, Science and Health, Commerce and Law, and Engineering and Informatics. This ranking is consistent with the overall teaching-performance mean score of academics who participated in this study and all of the academics in the University of Wollongong (Table 5.33 and Figure 5.9).

From the analysis conducted in this sub-section it is found that the five groups of faculties in the University of Wollongong were ranked according to the mean score of the teaching performance in the following order: (1) Arts and Creative Arts, (2) Education, (3) Sciences and Health, (4) Commerce and Law, and (5) Engineering and Informatics. However, only the difference between the means of Arts and Creative Arts and all of the others were significant.

Table 5.35: Differences Between Teaching Performance Mean Scores of Academic Staff in Different Faculties

Paired Faculties	#1	#2	#3	#4	#5	#6	#7	#9	#10	#11	#12
Arts and C. Arts vs. Com. and Law	4.03 v 3.67	3.97 v 3.60	4.35 v 4.01	4.00 v 3.62	3.94 v 3.37	4.23 v 3.77	3.71 v 3.27	3.79 v 3.37	3.94 v 3.36	3.99 v 3.54	3.99 v 3.63
Arts and C. Arts vs. Education		3.97 v 3.69	4.35 v 3.83		3.94 v 3.45		3.71 v 3.32		3.94 v 3.49		3.99 v 3.73
Arts and C. Arts vs. Engin. and Infor.	4.03 v 3.65	3.97 v3.56	4.35 v 4.08	4.00 v 3.66	3.94 v 3.42	4.23 v 3.63	3.71 v 3.25	3.79 v 3.33	3.94 v 3.34	3.99 v 3.61	3.99 v 3.73
Arts and C. Arts vs. Science and Health		3.97 v 3.69			3.94 v 3.55	4.23 v 3.79	3.71 v 3.34	3.79 v 3.51	3.94 v 3.58	3.99 v 3.68	
Education vs. Commerce and Law						4.05 v 3.77					
Education vs. Engin. and Infor.			3.83 v 4.08			4.05 v 3.63					
Education vs. Science and Health			3.83 v 4.19			4.05 v 3.79					
Science and Health vs. Com. and Law			4.19 v 4.01								
Science and Health vs. Eng. and Infor.											
Commerce and Law vs. Eng. and Infor.									3.58 v 3.34		

Table 5.35: (Continued)

Paired Faculties	#14	#15	#16	#17	#18	#20	#21	#23	#24	#25
Arts and C. Arts vs. Com. and Law	3.77 v 3.25	4.56 v 4.13	4.27 v 3. 83	4.54 v 4.23		3.96 v 3.62	4.00 v 3.47	4.37 v 3.87	4.06 v 3.40	4.15 v 3.47
Arts and C. Arts vs. Education	3.77 v 3.39	4.56 v 4.25	4.27 v 3.88							
Arts and C. Arts vs. Engin. and Infor.	3.77 v 3.29	4.56 v 4.15	4.27 v 3.91	4.54 v 4.12	4.33 v 4.01	3.96 v 3.57	4.00 v 3.52		4.06 v 3.08	4.15 v 3.24
Arts and C. Arts vs. Science and Health	3.77 v 3.49						4.00 v 3.62			4.15 v 3.74
Education vs. Commerce and Law										
Education vs. Engin. and Infor.				4.41 v 4.12					3.75 v 3.08	3.80 v 3.24
Education vs. Science and Health										
Science and Health vs. Com. and Law	3.49 v 3.25		4.37 v 4.13							
Science and Health vs. Eng. and Infor.			4.37 v 4.15	4.36 v 4.12					3.66 v 3.08	3.74 v 3.24
Commerce and Law vs. Eng. and Infor.										

5.9.2 Phase Two

In both the *general* perceptions and *personal* perspectives of interviewees, faculty membership was not regarded as one of the four influential factors affecting teaching performance (Table 5.39 and 5.40). It was selected by five respondents and was ranked sixth. In expressing general and personal views, low priority ($\Sigma 9$ and $\Sigma 8$) was given to this attribute (Tables 5.39 and 5.40). A low priority was given to this attribute ($\Sigma 9$) in comparison to the sum of scores of the first-ranked attribute, 'positive attitude toward teaching' ($\Sigma 95$). However, there was some debate in the interviews about this attribute. The contrasting views are discussed in this sub-section.

The views of those who suggested that membership of a particular faculty does influence the lecturers' TP were categorised into the following three headings: (1) placing high value on teaching, (2) more experience and better rapport with students, and (3) cultural differences regarding teaching in faculties. The other seven interviewees judged that there is no difference between TP of lectures in different faculties.

1) Placing high value on teaching: Five interviewees acknowledged that some faculties place greater value on teaching than others. One associate lecturer from Arts said some faculties "emphasise teaching as a craft, others see [it] simply as [information] feeding" (23). A Science lecturer implicitly acknowledged that if faculties place a particular high or low value on teaching, then the TP in these faculties would be different (14). Two female lecturers from Education and Law wanted to support the above position. The Education lecturer said

I am happy to be a member of Faculty of Education because it has very supportive network for teaching. That makes a very big difference to your teaching. If you have a network of people that you can relate to, you can ask for help. If you've got a problem with your teaching or whatever, you can share. (1)

Many of the Education Faculty staff were in the teachers' college, before it was amalgamated with the university. Traditionally college staff undertook little or no research, devoting most of their energies to teaching.

The Law lecturer explained the status of teaching in her faculty and said the "Law Faculty always has been interested in teaching . . . there is a journal of legal education. . . there always has been a huge literature on how to teach Law" (7).

Two lecturers from Education and Arts referred to student satisfaction demonstrated by student ratings as one indicator of the value of teaching in different faculties. They noted that some faculties (e.g., Arts) are recognised by some researchers as having high student ratings and some others (e.g., Engineering) as having low student ratings (Neumann & Neumann, 1983; Ramsden, 1991a; Ainley & Long, 1992). Similarly, one lecturer from Arts with 38 years' teaching alleged that, for some reason, some lecturers in some faculties have not enough time to undertake planning for their teaching and properly supervise their postgraduates (24). He said in these faculties the opportunity for "money-making outside the university is much greater than some other faculties" and maybe this is one reason for the allegation of giving low status to teaching in these faculties.

2) More experience and better rapport with students: Two lecturers from Education with more than 15 years of teaching experience acknowledged that three quarters of the lecturers in the Faculty have been school teachers, probably a greater proportion than in other faculties. As a result of this, and their profession being in 'education', they know a lot about teaching and learning. They suggested on the whole that the Faculty of Education probably has excellent lecturers. However, neither of them was absolute about their position. One of them said

If there are differences between faculties, I think those who are in the Faculty of Education might be better teachers. But I do not know the quality of teaching of any other faculties (in this University). So I am not really mounting that claim; it's just how it seems to me. (3)

Two interviewees from Arts suggested that being a part of the Faculties of Arts and Education means having better communications with students than in mathematics or computer science. The communication skills may not have been emphasised nearly as much in different faculties. In addition, one of them said in some faculties "the relationship with students may be at a more superficial and mechanical level" (19). The other lecturer with 38 years teaching in different departments said

If you listen to Arts people talking about teaching they will refer to students by name. But engineers do not distinguish between individual people. If a student feels that a lecturer is more interested in physics than in him, then he is going to derogate that lecturer. (24)

3) Cultural differences regarding teaching in faculties: One associate professor from Arts with many managerial duties in the university, strongly believed that there are cultural differences in faculties with respect to teaching. He said for example, that the view of teaching of Engineering

lecturers differed from the views of Humanities staff. Engineers believe in passing on information, whereas Arts lecturers believe in changing the student's mind, he said. He further explained

If you ask an engineer what he does, he might say: 'I teach engineering', and Arts people might say: 'I teach students'. There is much more awareness among the lecturers in Arts that their job is to interact with students. They treat the students as individuals. [On the other side] people in Engineering are talking more unconsciously about passing on the discipline. There is no rapport with the students; rapport is with the discipline. (24)

This lecturer, who also had a Master's degree in Science, further criticised the teaching methods used in Science and Engineering by saying that "what I see, certainly until very recently, is that a lot of the attitudes toward teaching Science and Engineering are the same as when I was doing science in 1958, and it was bad teaching".

One lecturer who had studied this matter and was aware of TP ratings of different Faculties supported the above position. He believed that there are some differences between faculties, and emphasised that there must be some reason for the differences. However, he warned that the possible reasons suggested for differences between faculties are based on anecdotal evidence and guess work. He warned that one should be "very careful of stereotyping. You have got excellent teachers in Engineering who care about teaching and students" (24). He concluded that "we simply don't know the reason. It is very difficult to work out".

In spite of the above argument, seven interviewees who commented on this attribute stated that they did not think that being a member of a

particular faculty makes a huge influence on lecturer TP. The following are some of the concerns raised by this group:

Five of them explained that there are many good lecturers across the faculties in the University. They noted that lecturers who achieved the annual award of the Vice-Chancellor for excellence in teaching were from all faculties (though this might reflect administrative policy). They believed that being a good lecturer depends on the person, and that there are lecturers in all faculties who would like to learn how to teach and usually generate tremendous commitment to planning and presentation of their subjects. Individuals should try to be good lecturers, regardless of faculty. Three lecturers from Arts, Informatics and Education respectively, further argued that

It really comes down to the individual's teaching experience and qualifications and training. Of course you would expect the Education Faculty to have a better record, but I don't think it does, necessarily. Possibly, if you are a member of this Faculty you might be more aware of the importance of teaching. But I don't think it matters which faculty you are in. If you are an engineer and you thought a lot about how to teach, it doesn't matter that you are in Engineering. It is an individual issue. (15)

I don't think I would be a different teacher if I were in Arts or if I were in Science. My teaching performance would be the same. . . I don't see that the label has any thing to do with it. . . I do not think that is relevant. (17)

We would hope that in the Faculty of Education lecturers would be better teachers than those in other Faculties. But that is not necessarily the case either. I have seen some Education lecturers that I would not consider to be good teachers, but not so many. Then again, I have met some in other faculties that really are excellent teachers. (12)

Among the many criteria which can be used to judge TP between different faculties, student ratings seemed to be very important. However, one lecturer from Engineering criticised this criterion, saying that it is difficult to compare academics in different faculties based on student ratings. He argued that "you're comparing two completely different cohorts of students, different expectations, different subjects and different methods of teaching. That is a risky way to assess. Within the faculty you can compare the individual lecturers" (11). One lecturer from Law supported this point and pointed out that some subjects are easier to teach. He said "Law lecturers always can find examples from the real world for teaching, but you cannot find them if you teach pure mathematics". However, he acknowledged that "I am not well enough educated to be able to make comparisons, but it is easy, I think, to teach Law" (8).

On the other hand, one lecturer from Arts explicitly, and one from Engineering implicitly, rejected the above point. The Arts lecturer said,

I do not believe that Engineering is any more intellectually difficult than Arts. I think that is an excuse that the Engineers use, because there are people teaching in Engineering who have won the teaching award. Some of the best teachers in this university are in Engineering and Commerce. One of the lecturers in Commerce who teaches quantitative method earned the teaching award. (24)

The Engineering lecturer acknowledged that being a member of Engineering makes the job of teaching difficult. However, he added "still you have a chance to combine a little bit of fun, a little bit of interest, a little bit of colourful things into it and make it interesting for 19-year-old students" (25).

In summary, being a member of a specific faculty was not in general considered by the interviewees as one of the four most influential attributes on teaching performance. However, some of the interviewees claimed that some faculties place a high value in their culture on teaching, and lecturers in those faculties have better rapport with their students. Some academics argued that knowledge about teaching and learning is different between faculties. Thus, the norms of teaching and the levels of rapport with students are probably different. A number of staff argued that the quality of teaching depends more on the individual, rather than the faculty. They mentioned that in their experience there are excellent lecturers in all faculties. Some suggested that teaching in some faculties is easier than in others. Indeed, student ratings suggested TP in Arts and Creative Arts was higher than in other Faculties.

5.10 Overview of Lecturer Attributes and Teaching Performance

5.10.1 Phase One

This sub-section investigates which of the eight lecturers' attributes (see 4b.1.1) has a significant impact on the quality of lecturers' teaching performance. An attempt is made to explore the impact of these attributes simultaneously on TP, by applying a Multiple Linear Regression Analysis.

In the previous eight sections the correlation and the ANOVA have been used to undertake a correctional and comparative analysis of eight independent variables in relation to teaching performance as the dependent variable. The need for a more sophisticated statistical method led the researcher to use a Multiple Linear Regression Analysis. The advantage of

this method, over the other applied statistical techniques used in this study, is that it shows the combined effects of a set of independent variables and the separate effects of each independent variable while controlling for the others (Kerlinger, 1986). This technique also estimates the magnitude and statistical significance of relationships between the various independent and dependent variables (Borg & Gall, 1989).

Correlation analysis was initially used to check the problem called *multicollinearity* which occurs when independent variables are highly intercorrelated (Afifi & Clark, 1990; Hair, et al., 1995). It was found from this analysis (Table 5. 36) that the highest correlation coefficient between the independent variables was 0.44 (lecturers with TQ and being a member of Faculty of Education) and -0.37 (teaching experience with academic staff in rank of lecturer). That is, a large number of lecturers from the Faculty of Education who participated in the study, had acquired TQ, because the academic discipline of Education is clearly associated with pedagogy. The reason for the correlation between rank and years of teaching experience is clearly that the first largely assumes the second. Since the existence of a correlation higher than 0.80 (Haycock, et al., 1992) or 0.95 (Afifi & Clark, 1990) between the independent variables can pose problems for the delineation of the unique effects of independent variables and destabilise computed estimates of the regression coefficient, it was confirmed that there was no such a problem in this study. Table 5.36 also shows the variance shared in the confounding of the independent variables, expressed in these intercorelations.

Table 5.36: Correlation Matrix of the Variables (N = 126)

Variables	1	2	3	4	5.1	5.2	5.3	5.4	6.1	6.2	7	8.1	8.2	8.3	8.4	TP
1. Language background (English = 1, NESB = 0)	1															
2. Teaching qualifications (With TQ = 1, Nil = 0)	.06	1														
3. Attitude toward teaching (Five point scale)	-.01	.24	1													
4. Gender (Male = 1, Female = 0)	-.009	-.16	-.14	1												
5. Academic Rank (As. Lecturer = 0)																
5.1 Professor	.12	-.11	.03	.14	1											
5.2 Associate professor	.08	-.16	-.09	.10	-.13	1										
5.3 Senior lecturer	.02	.02	-.08	.08	-.21	-.26	1									
5.4 Lecturer	-.05	.16	.05	-.12	-.26	-.33	-.51	1								
6. Academic Degree (PG Dip. or Bachelor = 0)																
6.1 Doctoral	-.14	-.31	-.03	.32	.14	.13	.18	-.28	1							
6.2 Master	.09	.33	-.004	-.22	-.11	-.13	-.14	.33	-.87	1						
7. University Teaching Experience (Years)	.06	.06	.13	.26	.24	.21	.19	-.37	.17	-.08	1					
8. Faculty membership (Engineering = 0)																
8.1 Faculty of Education	.15	.44	.20	-.05	-.05	-.17	.14	.09	-.10	.11	.16	1				
8.2 Faculties of Arts and Creative Arts	.03	.07	-.02	-.07	-.14	.13	-.14	.05	-.02	.03	.04	-.18	1			
8.3 Faculties of Commerce and Law	-.12	-.15	-.02	.01	.17	-.04	-.16	.12	-.25	.20	-.12	-.21	-.22	1		
8.4 Faculties of Science and Health	.11	-.05	-.03	-.11	-.01	.06	.05	-.10	.09	-.06	-.11	-.24	-.26	-.30	1	
Teaching Performance (Dependent Variable)	.34	.24	.18	-.17	-.10	.14	.05	-.04	-.09	.10	.09	.05	.32	-.14	.02	1

A correlation > .17 is significant at p.<.05
A correlation > .23 is significant at p.<.01
A correlation > .29 is significant at p.<.001

Furthermore, as an initial analysis for doing multiple regression analysis, the correlation between lecturers' attributes (independent variables) and their teaching performance (dependent variable) was examined. The results (Table 5.36) indicate that the lecturers' language background and academics in faculties of Arts and Creative Arts had the highest correlation with teaching performance ($r=.34$, $p <.001$ and $r=.32$, $p <.001$). While teaching qualification also correlated with teaching performance at $r=.24$ ($p <.01$), attitudes toward teaching and gender both demonstrated a significant relationship with the dependent variable at $p <.05$. It should be noted that, where independent variables are non-continuous in nature, their relationship with a continuous dependent variable needs to be interpreted with caution (Prieto & Altmaier, 1994).

As each correlation coefficient shown in Table 5.36 represented one influence on the lecturers' teaching performance, multiple linear regression analysis was conducted to identify the net effect of each of the independent variables (while controlling the others) upon the dependent variable and to ascertain the explained variance for each of the eight independent variables.

In order to assist multiple linear regression analyses, the six non-continuous or categorical variables were re-coded to dummy variables (Norusis, 1990) as follows: gender (male = 1, female = 0), language background (ESB = 1, NESB = 0) and teaching qualifications (with TQ = 1, without TQ = 0).

Since the remaining three non-continuous (categorical) variables (academic rank, academic degree and academic discipline) had more than two

categories, a reference group was taken for each of them to which all other categories were compared (see 4b.8). Each variable was replaced by J-1 dichotomous dummy variables where J is the number of categories in the variable being replaced. Therefore, "a categorical variable with J categories required a set of J-1 dummy variables in order to capture all the distributional information contained in the original set of distinctions" (Hardy, 1993, p. 7). Binary (0, 1) coding was used for dummy variables. The presence of an attribute is indicated by a score of 1, and absence of the attribute by a score of 0.

As a consequence, on the bases of an expectation of lowest student ratings, the reference group for academic rank, faculty membership and academic degree were respectively associate lecturer, Faculty of Engineering and Other (Postgraduate Diploma or Bachelor). The expectation were fully met in Faculty of Engineering (Table 4.2) and approximately met in academic rank and academic degree (see Tables 5.25 and 5.28).

Since hierarchical regression was applied in this study, language background of lecturers (which demonstrated the highest correlation with teaching performance) was the first variable entered into the regression equation. It was followed by the other independent variables in order of the magnitude of their correlations with the dependent variable as advised by Norusis (1990).

The regression analysis indicated that the eight independent variables together accounted for 34% of the variance in the lecturers' teaching performance (Table 5.37). Faculty membership explained 13% of the variance, language background 9%, academic rank 3%, attitudes toward

teaching 4%, teaching qualifications 3%, gender 1% and teaching experience 1%. The level of an academic's degree did not contribute to the variance.

The remaining 66% of the unexplained variance can be accounted for by the other attributes of the lecturers, and other factors such as students' background and institutional context (Dunkin & Biddle, 1974; Biggs, 1988, 1989) which were beyond the scope of this study.

Table 5.37: Intermediate Coefficients of Multiple Determination for Stages of the Multiple Regression Toward Teaching Performance

Variables entered in order	R	R ²	Change in R ²	F Value	Sig. F
1. Faculty membership	.37	.13	.13	4.82	.001
2. Language background	.47	.22	.9	6.94	.0001
3. Academic rank	.50	.25	.03	4.36	.0001
4. Attitude toward teaching	.54	.29	.04	4.87	.0001
5. Teaching qualifications	.56	.32	.03	4.94	.0001
6. Gender	.58	.33	.01	4.82	.0001
7. University teaching experience	.58	.34	.01	4.46	.0001
8. Academic degree	.58	.34	.0	3.79	.0001

The multiple-regression analysis indicated a substantial positive correlation ($R^2 = 0.34$, $p < .0001$) between the eight independent variables and lecturers' teaching performance (Table 5.38). To identify the relative importance and the level of significance of the predictor variables, the regression (Beta) coefficient and t-value for each of those variables are presented in Table 5.38.

Table 5.38: Regression of Teaching Performance on the Eight Independent Variables (N = 126)

Multiple R	0.58	F-value	3.79
R Squared	0.34	p-value	.0001

Variables	Beta	t-Value	S. Level
Language background (English)	.38	3.59	.0005
Faculty (Arts and Creative Arts = 1, Engineering = 0)	.33	3.04	.003
Academic rank (As. Professor =1, As. Lecturer = 0)	.33	2.05	.04
Academic rank (Sen. Lecturer =1, As. Lecturer = 0)	.26	1.74	.08
Attitude toward teaching	.22	2.28	.02
Teaching qualifications (With TQ)	.15	1.90	.06
Gender (Male)	-.11	-1.40	.16
Academic rank (Lecturer = 1, As. Lecturer = 0)	.11	.81	.42
Academic rank (Professor = 1, As. Lecturer = 0)	.11	.60	.55
A. Degree (Master = 1, PG Dip. or Bachelor = 0)	.07	.48	.63
A. Degree (Doctoral = 1, PG Dip. or Bachelor = 0)	.06	.39	.69
Faculty (Education = 1, Engineering = 0)	-.05	-.44	.66
University teaching experience (Years)	-.03	-.82	.41
Faculty (Science and Health = 1, Engineering = 0)	.02	.25	.80
Faculty (Commerce and Law = 1, Engineering = 0)	.01	.12	.90

A significant relationship was established between the lecturers' language background ($p < .0005$) and attitudes toward teaching ($p < .02$) with teaching performance as the dependent variable. That is, being a first-language English speaker, and having positive attitudes toward teaching, significantly correlates with the lecturers' teaching performance. A relationship, though just short of statistical significance, ($p < .06$) was

suggested between teaching qualification and teaching performance. That is, lecturers with TQ are close to having significantly higher student ratings, compare with those lecturers without TQ, but this relationship cannot be asserted.

Among the three independent variables with more than two categories, a significant relationship ($p < .003$) was established between academics in the Faculties of Arts and Creative Arts with teaching performance. A significant relationship ($p < .04$) was also established between lecturers at the rank of associate professor with TP.

The Beta coefficient indicated that the TP mean score of academic staff who participated in the study and had English as their first language was significantly higher than Non-English-Speaking-Background academics. This was also supported by the finding that the teaching performance of academics in faculties of Arts and Creative Arts and lecturers at the rank of associate professor was significantly higher than the teaching performance of those academics in other faculties of the University of Wollongong and lecturers with other levels of academic rank. Furthermore, the Beta coefficient of attitudes toward teaching was 0.22, which suggests that positive changes in a lecturer's attitude towards tertiary teaching correlate positively with increases in teaching performance.

Therefore, the best predictors of lecturers' TP at the .05 level of significance in this study were English language background of lecturers, having positive attitudes toward teaching, being in the Faculties of Arts and Creative Arts and holding the rank of associate professor.

5.10.2 Phase Two

After having the purpose of the interview explained to them, the interviewees were asked to identify and rank four of the lecturers' attributes, listed below, which they considered as influencing most the quality of teaching performance of academic staff in *general*, in the University of Wollongong and subsequently in their *own* personal experience.

- Gender
- Academic rank
- Academic degree
- Teaching qualifications
- Language background of lecturers
- Membership of a particular faculty
- Years of tertiary teaching experience
- Having a positive attitude toward teaching (i.e. in Planning, Rapport and Enthusiasm)

Asking participants to rank the four most influential attributes did not imply that the other four were not influential. Only the magnitude of their influences on TP is examined here, based on the lecturers' points of view. The results are presented in the two following sub-sections.

General Perceptions: The results in Table 5.39 include the number and the percentage of academics who selected each of the attributes. The responses can be rank-ordered on the basis of the number of responses to each of the attributes, but it was more appropriate and realistic to rank the responses on the basis of the priority given to each attribute. To do this analysis, four points were allocated to the first priority response, three points to the second priority, two points to the third priority and one point to the fourth priority response. Based on this procedure, the eight attributes were ranked (Table

5.39). The interesting finding is that the results of ranking based on the points obtained and ranking based on the number of responses are the same.

The first three attributes selected as important by 24, 21 and 20 academics respectively, were, in order of priority: (1) having a positive attitude toward teaching, (2) the length of teaching experience and (3) holding a teaching qualification. Although the numbers of responses to the first three attributes are close together, the ranked scores indicated the different priorities allocated. While attitude was first in order with a total of 95 points, teaching experience and TQ were ordered second and third with 57 and 43 points respectively.

Table 5.39: Lecturer’s Ranking of Lecturers’ Characteristics Influencing Teaching Performance (N= 25)

Lecturers’ Characteristics	Response in Priorities				responses		Σ Points	Order
	1st	2nd	3rd	4th	N	%		
Positive attitude toward T.	23	1			24	96	95	1
Teaching experience		16	4	1	21	84	57	2
Teaching qualifications		5	13	2	20	80	43	3
Academic degree		3	1	7	11	44	18	4
Language background	1		3	4	8	32	14	5
Faculty membership		1	2	2	5	20	9	6
Gender			1		1	4	2	7
Academic rank				1	1	4	1	8

Although the numbers responding to the first three variables were high and close together (24, 21 and 20), the fourth attribute, academic rank, was fourth in order with rather less support (N=11 and 18 points). The difference

between the number of responses and scores allocated to the third and fourth attributes is greater by comparison with the difference between three and two or two and one. Gender and academic rank had the smallest influences on teaching performance of the eight attributes, in the opinion of the interviews.

Personal Perceptions: The interview continued by asking each interviewee to rank the four most influential attributes in his or her *own* TP as an academic staff member. The most and less influential attributes according to the interviewees are shown in Table 5.40.

It was anticipated that lecturers’ views about the whole academic staff would be different from the attributes academics saw as being influential on their own TP. For example, one interviewee explained that when the Head of his Department tried to improve the quality of teaching in the Department, it affected his TP; but this initiative might not be followed by many Heads of Department. He concluded that being a member of that Department was influential for him. Another interviewee explained that his wife is the house-holder who does all the cooking, shopping, providing facilities for children to enable him to spend more time on his professional work. As a result, being a male is an advantage for him but not necessarily for other academics.

All of the 25 interviewees indicated that their positive attitude toward teaching was the most influential attribute in their TP. Positive attitude was followed by teaching experience with 17 responses and TQ with 15 responses (Table 5.40). Although the numbers of responses and the sum of scores for the second and third attributes are all very close, there is a large difference

between the scores of the second and first attributes (42 vs. 96) and also between the third and fourth attributes (41 vs. 10). Again, gender was ranked seventh with three responses and academic rank was ordered last of the eight attributes with no responses. In summary, the results are mostly similar to those obtained in the data on lecturers’ general views.

Table 5.40: Lecturer’s Personal Ranking of Influential Characteristics Influencing Teaching Performance (N= 25)

Lecturers’ Characteristics	Response in Priorities				responses		Σ Points	Order
	1st	2nd	3rd	4th	N	%		
Positive attitude toward T.	21	4			25	100	96	1
Teaching experience		10	5	2	17	68	42	2
Teaching qualifications	4	5	4	2	15	60	41	3
Academic degree			3	4	7	28	10	4
-----	-----	-----	-----	-----	-----	-----	-----	-----
Faculty membership		2		2	4	16	8	5
Language background			3	2	5	20	8	5
Gender			2	1	3	12	5	6
Academic rank					0	0	0	7

In order to facilitate the comparison of the number of responses, the points obtained and the order of attributes for the two questions, the ‘general’ response points and personal results are shown together in Table 5.41 below. Although the numbers of responses to the attributes in the two questions are slightly different, the ranking of the first five attributes is exactly the same. The last three attributes were ranked slightly differently. Therefore, it is considered appropriate to analyse the results of both points of view together for each of the eight attributes.

Table 5.41: Influence of Lecturers' Characteristics on the Teaching Performance (N= 25)
(Comparison Between General Views and Personal Experience)

Lecturers' Characteristics	General view			Personal Experience		
	N	Σ Points	Order	N	Σ Points	Order
Positive attitude toward T.	24	95	1	25	96	1
Teaching experience	21	57	2	17	42	2
Teaching qualifications	20	43	3	15	41	3
Academic degree	11	18	4	7	10	4
-----	-----	-----	-----	-----	-----	-----
Language background	8	14	5	5	8	5
Faculty membership	5	9	6	4	8	5
Gender	1	2	7	3	5	6
Academic rank	1	1	8	0	0	7

When the staff ranked what they judged to be the four most influential attributes, from a general point of view and then in the light of their own careers, they were asked to explain why the attributes selected were important. They were also asked to explain why the other four attributes were not so influential. These reasons were reviewed several times and divided into themes under different categories.

In the theoretical background and review of literature of this study, the author has indicated why these attributes were important and why they should be further examined. However, there may be other influential attributes. To explore this point further, the interviewees were asked to indicate any other influential attributes that were not mentioned in the list given by the researcher and to explain why these additional attributes were

influential. The responses to this question are presented in section 5.11 below.

5.11 Other Influential Attributes in Teaching Performance

In the eight previous sections, the comments of interviewees on each of the eight attributes were discussed. However, it is acknowledged that there might well be other influential attributes. Therefore, respondents were openly asked to add any suggestion, and explain why they were influential. Altogether 18 academics out of 25 responded to this request. Their comments were classified by the researcher into the following five areas: (1) need for professional experience, (2) gaining background in research, (3) inventiveness in teaching, (4) being a learner in order to be current, and (5) having a broad cultural awareness.

1) Need for professional experience: This characteristic was perceived as important by six interviewees, especially for lecturers who teach postgraduate students. It was described by respondents as the opportunity to have some practical field experience in the discipline that lecturers are teaching. They suggested that this experience should not only be acquired before starting to teach, but also be fostered during the teaching career. This is because lecturers have to keep themselves fresh and up to date in both theory and practical applications in their fields.

These interviewees suggested, for example, that Commerce lecturers have to work, or at least have connections, with financial institutions, and Education lecturers with schools. One lecturer in Computer Science commented that “when you teach a subject, you need to be a very good

professional, especially if you are teaching in more technically orientated departments" (10). Carefully combining the practical work with lectures was mentioned as an important factor in Engineering by another associate professor who was specialist in Computer Science (16). Similar points were raised by one associate professor from Science and one female lecturer in Arts:

It is not a good idea to leave university with a degree, Master's or Ph.D., and then go straight away to tertiary teaching. You need to work a number of years, either in industry or in research, to find out what you can try to do with the knowledge you have gained, in the professional world. So you know what is important, when you come back and set up rapport with the students. Not everything that you hold is relevant to teaching at the end of a Ph.D. course. (18)

If you have no experience of the 'real' world, you do not have too much to offer as a real educator. There is a difference between faculties in this matter, e.g. lecturers in the Faculty of Arts need more life experience than in Mathematics. (19)

Although the interviewee did not explain the reason for her position, it seems some fields e.g. mathematics are dealing with more abstract issues than other fields.

2) Gaining background in research: Six academic staff recommended that, to be a good lecturer, it is necessary to be actively engaged in research in the field of teaching. It was acknowledged that a lecturer who was involved in research is a more effective teacher. It also was recommended, for graduate students who want to be university teachers, that they need to establish research or have experience in research, before starting their job as lecturers. It was explained by an associate professor from Science that "if you are involved in research, then at university level you are better able to teach,

than just being a teacher and reading books" (9). It was argued by one Engineering lecturer and one lecturer from Science that

It is a definite misconception that teaching and research are completely different. I think the ideal way for a university academic to survive and for the students to get the best from academics, is to combine teaching and research together and work them together as one unit. (11)

In the field that I am in, having a background in research has been extremely important. . . You can develop some depth in a specific area and expose the students to the process of thinking in research. (14)

3) Inventiveness in teaching: Nine of the lecturers who responded to this question, introduced other influential attributes. The researcher found that they can be classified under the concept of 'inventiveness', though the positions were not exactly similar.

It was recommended that offering examples from real situations and the ability to apply real-world knowledge is very useful and necessary skill in teaching. Applying a variety of methods of teaching and being logical and flexible in the presentation of material were perceived as important issues that facilitate student learning. One lecturer from Education explained her strategy in teaching and said.

We might go on an excursion, invite other people to talk with the students, have demonstrations, workshops and video material. I think a variety of strategies is probably helpful in trying to make your teaching inventive. (1)

One NESB senior lecturer from Engineering gave an example how computers related in teaching materials in Engineering more than in the past, and commented:

Teachers have to be flexible in moving around, depending on the demand from industry and depending on the changes in modern technology. [Lecturers] must be able to change courses or to introduce a new course or revise existing courses or even to completely abandon or get rid of all the courses which may not be necessary for the modern generation. (11)

Another issue which was raised by a senior lecturer from Creative Arts was that lecturers should be involved much more in getting the students into a position where they are enthusiastic and independent learners. He explained that "a lot of people see teaching as passing on information. . . I do not think that is correct" (4). This conception of teaching, in which some lecturers assume that teaching is passing on information, was strongly criticised by an Education lecturer; but she warned about being too extreme. She said "it is bad to say to students 'you go away and find out'. That is fine for encouraging the students to be independent, but they need help in many respects" (12).

One senior lecturer from Creative Arts who is a specialist in theatre strongly suggested that "a good teacher does a performance in theatrical forms. . . Teaching is an actor's job. You may not see that as a part of teacher training, but it is essential if a teacher is to be able to get across his message" (4). This position was also supported by a Law lecturer who called this ability "a very valuable talent". She explained "being theatrical could be part of rapport" (20). She clarified "I do not mean by doing absurd things" but being able to entertain the students to some extent.

4) Being a learner in order to be current: It was suggested by four academics that to be a good lecturer one always has to learn, for example learning by

doing research with postgraduates and in discussion with colleagues. It was suggested by a lecturer from Education that lecturers have to try “to be current and know what the latest developments are in their areas. I found it is important to be current, in both practice and theory” (1). It was also suggested that lecturers have to be able to see changes in their fields and then apply them in their teaching. For example, one associate professor who is Head of her Department said “one thing that assisted me to become a better teacher, came out of technology” (2). She explained that lecturers have to be able to present class material by using the latest technology which is usually provided in the lecture theatres.

5) Having a broad cultural awareness: One associate professor from Science and one lecturer from Education strongly suggested that working in countries which were not one’s home country, made one a better lecturer, especially for teaching overseas students. It was for example explained that “if you are coming with a pure English-speaking background without having lived in any other countries [non English-speaking], then you find it difficult to establish rapport with the students and understand their problems” (18).

He further explained that, when lecturers work in other countries, they may have to redefine what is acceptable behaviour. By working in other countries lecturers are reminded of the value multi-cultural communities in the university. In support of this proposition, one female lecturer from Education said “my travel to other countries and mixing with people of those countries has been a tremendous help to me [in teaching overseas students]” (12).

In summary, when the interviewees were asked to identify any other influential lecturer's attributes in teaching performance, which was not mentioned by the researcher, the following issues were raised. Six interviewees pointed out that academics need to have practical experience and to undertake research in their field before starting to teach and during their careers as a university teacher. These activities help lecturers to be up to date in recent developments in their field. It was also suggested by nine interviews that lecturers have to be innovative and use a variety of techniques, facilities and initiatives to stimulate students to be actively engaged in the process of learning.

Chapter Six: Discussion

The first of the four sections in this chapter presents a summary of findings for the nine research questions and discusses these findings in terms of the theoretical background of the study and previous research. Section Two discusses limitations of the present study to be considered in interpreting the findings. Section Three outlines some of the implications of the study, and suggestions for future research are raised in the final section.

6.1 Summary of Results and Discussion of Findings on Research Questions

This section provides a summary of the main findings of the two phases of the study for the nine research questions explained in Chapter Five. Some issues relating to each research question are then discussed. In Phase One, an ex-post-facto design was conducted to investigate the relationship between lecturers' attributes and their teaching performance. In Phase Two, semi-structured interviews were undertaken with 25 academics who participated in Phase One, to elicit their views about those lecturers' attributes which they considered influential in university teaching.

The discussion focuses on two streams of data about university teaching. The first stream is students' perception through their evaluation of lecturers' teaching performance; and the second is perception of the influences on teaching performance, initially from the perspective of all academics and subsequently from their own personal experiences.

Question One: Attitude toward effective teaching and teaching performance:

Phase One: There was a significant correlation ($r = 0.18$, $p < .04$) between mean scores of lecturers' attitudes toward teaching and their teaching performance (Figure 5.1, page 229). Moreover, analyses indicated a significant correlation between the mean scores of the two dimensions (out of five) of effective teaching and TP (Figure 5.2, page 230). Though the correlations of the remaining three were positive, they were not statistically significant. For further analysis, the participants in the study were divided into two groups: those scoring in the upper 27 percent and those in the lower 27 percent, as recommended by researchers (see 5.2.1), on attitude toward effective teaching. The mean teaching-performance score of the upper 27 percent attitude group was higher than of the lower 27 percent group in all of the 23 teaching-performance items. Differences of mean score of the two groups were significant for nine items and consistent in direction for all items, though short of significance for the remaining 14 items (Tables 5.14 and 5.15, and Figure 5.3). The mean of the ratings of teaching performance of upper 27 percent group was higher than of the lower group in all 23 items.

In the regression analysis, lecturers' attitudes toward teaching significantly correlated with teaching performance and accounted for four percent of the 34 percent of explained variance (Table 5.37). Lecturers scoring higher on attitude toward teaching obtained significantly higher scores in the student ratings on their teaching performance, than lecturers scoring lower on attitude.

Phase Two: A positive attitude toward teaching was perceived by all of the 25 interviewees as the attribute most influential on their TP (Table 5.41). They pointed out that a positive attitude promotes lecturers' enthusiasm which stimulates motivation for teaching and establishes enhanced rapport with students. A positive attitude toward teaching is perceived to be more effective when combined with capability in subject matter and knowing how to teach, and these matters altogether are considered to enhance the students' learning.

The findings of the present study suggest that, though causation is not necessarily implied, it is possible that if lecturers' attitude toward effective teaching can be stimulated through teaching-development programs and other incentive programs, there could be an enhancement in their teaching performance, consistent with other research, e.g. Gillett and Bell (1996). The results also confirm the claims of Conners, et al. (1990) and Wyatt and Pickle (1993) that having a positive attitude toward the various components of effective teaching can affect teaching performance. Attitude toward teaching was considered within the Biggs (1988; 1989) and Dunkin and Biddle (1974) models of teaching as a variable importantly influential on TP. The influence on TP of having a positive attitude toward teaching was also mentioned by Dunkin (1995), who argued that a positive attitude toward teaching and the effectiveness of teaching are related to each other.

Considering the importance of the relationship between attitude and action, it should be noted that attitude is not equivalent to performance. According to Bramley (1991) "changing people's attitude to something may well change what they say or do but [action] will not necessarily follow" (p.

52). It should be emphasised that, although lecturers' attitudes have a very important role in their performance, the problem under scrutiny is much broader than either attitude or performance. It centres on the relationships between the two and their impact on learners in the university setting. Furthermore, it should be considered that positive attitudes and the enhancement of performance require both the teacher and the organisation to adapt to new knowledge and skills (Whitaker, 1993).

It is interesting to ask why such a 100-percent agreement was found among the interviewees about the influence of having a positive attitude toward teaching. The data considered clearly suggested that having a positive attitude toward teaching is a vital influence on TP. Although having other attributes such as a teaching qualification and teaching experience are influential on the quality of teaching, it seems that creation or reinforcement of lecturer's commitment to teaching is a pivotal attribute. Commitment might be perceived as an engine which uses other equipment to carry out the job of teaching effectively. Having a positive attitude toward teaching is an indicator of that commitment to teaching. It can be considered as a necessary (but not sufficient) component in effective university teaching.

This phenomenon can be a guideline for planning teaching-development programs in universities. As well as running courses for improving tertiary teaching skills, it would seem advantageous to implement a number of strategies included teaching-release time for professional development, promotion incentives and conference attendance to motivate lecturers' attitudes toward their teaching. After an examination

of the lecturers' attitudes toward different components of teaching, possibly through a questionnaire or interview, universities could design teaching-development programs directed toward those components of teaching which are found to require attention. According to Ramsden (1992), this type of investigation is necessary if any significant improvement in the quality of university teaching is to be achieved. In fact, many contemporary programs seek to develop 'reflective practitioners' rather than merely skilled lecturers. They target conceptions, platforms and attitudes through lecturers' reflections on their current practices rather than concentrating solely on skills development (Kember & Gow, 1992; 1994; Sergiovanni & Starratt, 1993). This links with the view expressed by a number of lecturers in Phase Two of the present study.

Given the significant positive correlation revealed between having a positive attitude toward teaching and high student ratings in Phase One and the perceived importance of the lecturers' attitude toward teaching in Phase Two of this study, why, during the selection of academic staff, do universities appear to pay so little attention to it? Applicants are asked about their academic degrees, academic ranks, teaching experience and in some universities of TQ like the University of Wollongong (University of Wollongong, 1993b); but there is no standard procedure to explore their disposition toward teaching. Although the examination of attitude is difficult, it should not be ignored by universities. For example, the lecturers' attitude toward teaching can be explored in the course of the interview, asking about the applicants' interest in teaching. Further, some specific attitude scale might be developed and used. In addition to using this kind of scale for staff selection, attitude analysis can be used as a kind of needs analysis for the purpose of staff development. If, for example,

some academics are recognised as having many of the necessary attributes for being a lecturer but do not have a positive attitude toward teaching, their attitude may be improved through encouragement and incentives.

The above procedures cannot conclusively demonstrate that a lecturer's stated enthusiasm for teaching will translate into effective teaching. The findings of the above procedures can be only an indicator of lecturers' attitudes. In addition, having a positive attitude toward teaching is only one attribute in being a good lecturer. Finally, it should be considered that teaching is one of the main responsibilities of academic staff, though research is another, equally important responsibility. On the other side, possibly, there are some lecturers who love teaching but have a less than positive interest in research. Obviously, based on the role and mission of the university and the emphasis the community of scholars places on both teaching and research, these considerations should be balanced.

It is also acknowledged that the examination of lecturers' attitude does not guarantee that the selected person, who demonstrates a suitable personality and training for teaching, will maintain his or her attitude. Over time, the attitude to a part of a lecturer's work may change.

In general, it seems reasonable that, if certain attributes are closely related to being an effective lecturer, then it should be possible to educate lecturers on how to adopt those attributes. However, Fuhrmann and Grasha (1983) argued that "it might be reasonable to show someone how to become better organised and clearer in presenting information, but we wonder if enthusiasm can be learned as easily" (p. 286). This statement supports the idea that, in addition to running programs to deliver teaching techniques

to academics, some other strategies are needed to change or modify their attitudes toward other aspects of being a good teacher, such as enthusiasm to students and subject matter. Moreover, Piper (1988) suggested that "changing attitudes and perceptions is perhaps more important than learning classroom skills, or management technique" (p. 238). However, changing an attitude, especially an academic's attitude, is very difficult. Furthermore, lecturers' attitude is related to many factors which are not completely in the hands of universities. Constraints which may influence the lecturer's attitude toward teaching include a lack of financial support for tertiary education in Australia, faculty culture and their own personality and personal aspirations, as well as the way in which administrators and other colleagues interact with them.

Question Two: Teaching qualifications and teaching performance:

Phase One: The analysis of variance indicated that the overall teaching-performance mean score of lecturers with teaching qualifications was significantly higher ($p < .006$) than that of lecturers without teaching qualifications (Table 5.17). When this analysis was repeated for each of the 23 items of teaching performance, significant differences were found in nine items and there was a consistent trend in the same direction in the other 13 items (Tables 5.18 and 5.19). The teaching-performance mean score of lecturers with TQ were higher than of lecturers without TQ in all 23 items. It is possible, of course, since this result is correlational only, that academics who were already higher in TP were mainly the ones who sought TQ.

Teaching qualifications, a variable considered within the Biggs and Dunkin models, accounted for three percent out of the 34 percent of explained variance in the regression analysis in this study (Table 5.37). The beta coefficient indicated that the mean teaching-performance score of academics with teaching qualifications was higher than the teaching-performance scores of academics without teaching qualifications (Table 5.38), although this was just short of being statistically significant ($p < .06$). While the mean score for teaching performance of lecturers with TQ was significantly higher than lecturers without TQ in the ANOVA analysis, it was not significantly higher in the regression analysis. This difference between the two results might be due to the ability to control for the effect of other independent variables on the dependent variable in the regression analysis (Kerlinger, 1986). To support this possibility, when faculty membership was not included as one of the independent variables in the regression analysis, TQ was a significant variable ($p < .04$).

Phase Two: Having TQ was considered one of the important influences on TP. This finding was supported by 20 interviewees (16 with TQ) out of 25, and ranked as the third most influential attribute (Tables 5.39 and 5.40). The participants felt that in acquiring TQ they learned how to teach and improve their communication abilities. They also felt that the creation of confidence in teaching was considered as another benefit of TQ. This result, however, might be a reflection of the investment that some lecturers with teaching qualifications make in their TQ.

However, while it was mentioned that acquiring TQ does not necessarily produce an effective lecturer, it was pointed out in some interviews that some lecturers can learn how to teach by trial and error in the classroom.

If those lecturers with TQ have an interest in teaching, focus and reflect on their teaching and have the necessary expertise in their discipline, they have potential to be effective lecturers.

As reported above, academic staff who had teaching qualifications rated higher on teaching performance than those who did not (Tables 5.16, 5.18 and 5.38) in the student evaluation data. This outcome might suggest that academic staff can improve their overall teaching performance by acquiring the skills, understanding and insights which are the outcome of having acquired teaching qualifications. Further consideration of the results suggests that significant gains for staff might be made in the areas of teaching and assessing student performance. In teaching, lecturers with qualifications were more capable in generating student enthusiasm for the subject taught, making classes more interesting, presenting material in a logical and interesting manner and stimulating reflective thought on topics covered in classes. Those who had qualifications also seemed to be better able to promote student understanding of concepts. In assessment, lecturers with qualifications were, for example, more skillful in providing suitable performance measures and helpful feedback on student assignments.

Academic staff are quite often appointed primarily on the basis of their demonstrated knowledge, understanding and a research record in their discipline (Griffith, 1993; Moses, 1993). If academic staff also demonstrate concern for students, a desire to facilitate learning and the ability to mark students' work fairly and competently, they would appear to have a sound foundation for an effective teaching role. These teaching capabilities provide a solid starting point in the pursuit of excellence in teaching, but

they could be supplemented by additional skills which may be generated in the acquisition of teaching qualifications.

It was suggested by the participants in this study that acquiring TQ is desirable for lecturers, and this judgement is consistent with other research (Biggs, 1988; Gow, 1992; Elton, 1993; Centra, 1993). However, each academic learns how to teach in a specific way which is not necessarily similar to that of other lecturers. For example, some learn by reflecting on their teaching experience along with guidance from colleagues, instead of attending teaching improvement courses. Therefore, there is no one uniform way for acquiring TQ that should be recommended to all academics. Lecturers should be motivated, and then options might be offered to them. Moreover, if a lecturer describes himself or herself as a qualified lecturer in teaching and believes that he or she does not need to acquire TQ, appropriate methods should be applied to consider this claim. For example, if members of an appropriate committee, through observing a lecturer's teaching and examining his or her student ratings and teaching material, recognise that he or she is effective in teaching, such a lecturer should not necessarily have to acquire TQ. In any event, it should again be noted that acquiring TQ is not equivalent to being an effective lecturer.

The results of the present study support the hypothesis that the teaching performance of academic staff with teaching qualifications tends to be higher than for those who do not have qualifications. This outcome suggests that academic staff might improve their teaching performance by acquiring teaching qualifications and becoming competent in the understandings and practices which are the focus of pedagogical professional development (Elton & Partington, 1991; Gow, 1992; Centra,

1993; McKeachie, 1994; Gillett & Bell, 1996). However, many other variables may have impacted on the teaching-performance variable. For example, subject-matter expertise has been identified (but not in this study) as a significant variable, "a necessary but not a sufficient condition for outstanding teaching" (Murray, 1980a, p. 13).

The outcome of the two phases of the study regarding TQ suggests that academic staff might improve their teaching performance by acquiring teaching qualifications. As pointed out above, it is possible that lecturers who sought teaching qualifications were more eager to improve their teaching performance in the first place and this eagerness may have affected their TP. Although this may be the case, the effect of lecturers' attitude toward teaching was controlled by using multiple-regression analysis. Furthermore, the results are consistent with other research (Biggs, 1988; 1989; Centra, 1993; Griffith, 1993). University administrative committees, in general, might focus more closely on planning and implementing teaching-development activities and strategies and incentives to encourage academic staff to participate in teaching development programs. For example, requirements for appropriate teaching qualifications might be set, and incentives for staff to attend programs established. Although the proportion of total variance explained by teaching qualification in the first phase of the study was small and felt short of significance ($p < .06$), in the second phase of the study, holding TQ was suggested by 20 (80%) of the academics as one of the important attributes influencing TP even though 16 (80%) of these interviewees themselves had TQ, and therefore might have felt some investment in TQ.

Although acquiring general principles of pedagogy is useful for teaching in all levels of schooling, it appears that having a diploma or degree in primary or secondary education is not as appropriate as a teaching qualification for teaching adults in university. This is because the students, the methods of teaching and the culture of a university are different from those in the compulsory levels of schooling. The advantage of having a diploma in primary or secondary teaching is that there is a mixture between theories of pedagogy and practice in school. However, lecturers with a diploma in primary or secondary teaching may have no experience of university teaching and they may not have learned the applications of learning theories of adults. Therefore, the necessity of having a qualification in university teaching, which is an integration of theory and practice in adult learning, is desirable in order to increase the quality of teaching. The correlation between TQ and TP might be greater if the criteria of TQ were refined, for example by distinguishing academic staff who studied education subjects relating to young and older children or adults.

Raaheim (1991) reported several occasions where a significant relationship between acquiring teaching qualifications and the quality of teaching was not established. It may be that the particular courses were of poor quality; perhaps they were taken many years ago; the academic staff did not assimilate the course material; or they failed to apply their newly learned skills to their teaching or their TQs were inappropriate (e.g. primary or secondary). These possibilities could become the subject of further research.

Question Three: Language background and teaching performance:

Phase One : The ANOVA results from the student ratings showed that a highly significant difference ($p < .001$) was established between the overall teaching-performance mean score of ESB lecturers, and that of NESB lecturers, in favour of the ESB group (Table 5.20). When the mean teaching-performance scores of the two groups were compared for each of the 23 items, significant differences were found in 19 items (Table 5.21) with a consistent trend in the four remaining items in the same direction (Figure 5.5). The mean teaching-performance scores of the ESB group, overall and for all of the 23 items, was higher than for the NESB group. The language background of lecturers appeared to be the second strongest predictor of lecturers' teaching performance among the eight variables included in the regression analysis in the present study, accounting for nine percent of the variance, out of the 34 percent accounted for.

In view of the above results, it is interesting that language background was not considered in the models of teaching developed by Dunkin and Biddle (1974) and Biggs (1988; 1989). This omission may have been based on an assumption that there was homogeneity between the first language of both teacher and student. In the period of the earlier writers (Dunkin and Biddle) there was a stronger English-speaking-background representation in both the student and academic-staff populations of Australian university communities. However, in the context of the present study, where English is the official language for teaching, 15 per cent of the lecturer sample identified themselves as being from a NESB, though the proportion of this group whose oral communication might have been a concern for students is unknown.

Phase Two: Language background was not considered by the interviewees as one of the four attributes most influential on TP: it was ranked fifth, out of eight (Table 5.39). However, the academics interviewed reported that some NESB lecturers have accent and vocabulary difficulties. In addition, the norms of teaching and the cultural background of some NESB lecturers are different from expectations in Australia - the host country in this research. Despite these difficulties, it is possible that some ESB lecturers might have been influenced by a wish to support their NESB colleagues, especially considering that they had said in the interview that communication skills are very important in lecturing (see 5.4.2). It does not mean that all NESB lecturers have such difficulties, or that ESB lecturers have no difficulties and are all excellent communicators.

It was noted, however, that language abilities in some Engineering fields, in which proportionally more NESB lecturers teach compared with other fields, academics argued that is not a significant influence on TP. It was argued by some Engineering lecturers that tools of communication, such as computers, and being well prepared for teaching, help the lecturers to teach effectively. However, student ratings in Phase One indicated that the TP mean score of NESB lecturers in the Faculty of Engineering and Informatics was lower than for ESB lecturers ($M=3.66$, $N=22$ vs. $M=3.08$, $N=6$) - a significant difference. It is not clear though, whether this difference might be a result of only English ability or other factors like bad presentation or rapport. Accepting that normally ESB lecturers have better English language ability than those from NESB, it was recommended by some of the interviewees that multicultural societies should try to be tolerant about such matters, though in extreme cases foreign accents might disadvantage students. Perhaps mature university students should be able

to learn from lecturers despite their inevitable idiosyncrasies, at least to some extent. On the other hand, students might reasonably expect that university lecturers should be easily understood.

It is concluded from both streams of data that the lecturer's communication skills play a vital role in effective teaching, consistent with other research (Allen & Shaw, 1990; Nussbaum, 1992; Johnson, 1994). Communication competence is dependent on many factors such as language background, as well as lecturers' personality, ability to apply immediacy in interpersonal relationships, and specific communication skills. If language background is a significant contributor to communication competence, the communication abilities of ESB lecturers might be one of the reasons for their higher teaching-performance scores compared with NESB lecturers. However, other likely reasons should be considered. These include the lecturers' capabilities in their discipline, the possibility of bias in some student perceptions of NESB lecturers, differences between lecturers and students with respect to the methods of teaching and learning, cultural differences in behaviour and the expectations each has of the other.

The findings of the ex-post-facto research in this study suggest significant differences between the student ratings of lecturers for whom English is their first language and those for whom it is not. This probably because the findings were based on the students' views. Differences would not necessarily have been revealed if other measures of teaching performance, such as observation by practitioners or peer evaluation, had been used. When a lecturer wants to teach in any institution, his or her ability to teach and communicate with students is sometimes observed (but seldom formally checked) by other senior academics. Often it is assumed that his

or her ability in teaching and communication is expected to be similar to that of other lecturers, or at least close to their standard. However, students' views may be influenced by anxiety in trying to understand the lecturers. In addition, students may think that it is unfair to expect them to cope with a lecturer's peculiar accent as well as having to master the material itself; or maybe some students, particularly those of lower ability, dislike being given lectures by those who are not 100 percent proficient in the language.

To some extent, in contrast with the above results, it was concluded from staff interviews that some of the NESB lecturers are good communicators and some are not. Some of the respondents said lecturers from NESB had poor communication skills and others reported NESB lecturers as being good communicators. This was the case for some ESB lecturers as well. It should be noted that the university requirements for ability in language (English) appears to differ across faculties. For example, Humanities lecturers appear to need more capability in English compared with Faculty of Engineering lecturers, because the former often teach literature, language, poetry and other subjects closely tied with English language.

While the language of a NESB person may not be as fluent as a native English speaker, it was argued by some academic staff that if a society adopts a multicultural policy, the society and the university community have to show some tolerance and provide job opportunities for all people including NESB lecturers, though not at the expense of quality. One of the advantages of such a society is that they can draw on the expertise and resources of other nationalities. Those staff will also be familiar with other cultures and learning styles. This familiarity, it was argued, provides

an opportunity for staff and students to adapt themselves to other cultural customs and behaviour.

It was indicated in Phase One that the percentages of NESB lecturers in the Faculties of Engineering and Commerce were greater than the percentages of NESB lecturers in the Faculties of Education and Arts (Table 5.13). In addition, it was found (Neumann & Neumann, 1983; Ramsden, 1991a; Ainley & Long, 1992) that lecturers in Engineering and Sciences were consistently rated lower in TP by students than lecturers in Arts and Education, in accord with the results of the present study. In view of these findings, it may be argued that academic discipline was potentially a confounding influence on the results about the teaching performance of NESB lecturers. This criticism, however, would be minimised in the present study, because the influence of academic discipline was controlled by using the multiple-regression analysis.

The other criticism about the results of teaching performance of NESB lecturers in Phase One is that the findings depend on a small number of NESB lecturers (Table 5.20) and are therefore not reliable. The Table reported teaching-performance mean scores of 113 ESB and 17 NESB academics. These data were the bases of the ANOVA comparisons, and subsequently the regression analyses. Although the researcher acknowledges this criticism, it is however, reported that ANOVA was used to analyse the comparison, instead of the t-test which it is more sensitive to the sizes of the samples (Ary et al., 1985). Further, it seems difficult to find a university in which the number of ESB and NESB lecturers is approximately in balance, at least in a country like Australia in which English is the common language. Since the proportion of NESB staff in the

university is not recorded, it is assumed the percentage of NESB academics (15%) who participated in this study (Table 5.13) approximately reflects the total staff proportion, based on the close representativeness of the other characteristic (see 4b.3).

Despite the above arguments, it is acknowledged that judgements about teaching performance, and indeed the making of comparisons between the two groups of ESB and NESB lecturers is a sensitive matter. Further research is needed before a convincing conclusion can be made. Considering the students' and the academics' views, and the different perceptions about the quality of teaching of NESB lecturers, the following suggestions are offered regarding the communication abilities of lecturers from NESB:

- 1) The communication ability of applicants (NESB and ESB) for teaching in university should be taken into account by the relevant committees within the university, while considering the language requirements of the subject and the field.
- 2) The university could be said to have a responsibility, particularly for NESB staff, to create opportunities for individual lecturers to improve their language and communication competence in order to enhance their teaching performance. This suggestion was implicitly supported by McCroskey, et al. (1995) who stated that lecturers in all disciplines "must be concerned with developing communication skills to enhance both their teaching and positive relationships with their students" (p. 281). Other research (Feldman, 1976; Lowman, 1991; Johnson, 1994) has justified the necessity of considering the language and communication abilities of academics in staff-selection and teaching improvement programs.

3) Most lecturers, especially those who have difficulty with spoken language, should focus on preparation and use other facilities like overhead projectors, slides and computers to support the presentation of their lecture material using both oral and visual text.

4) Students should be encouraged to adjust their listening skills to NESB lecturers. For example, students might have to listen more carefully to their lecturers, to become familiar with their accents and also use other kinds of communication (e.g. written material) to compensate - though, of course, not to the point of disadvantaging themselves when they might already be having difficulties with a particular subject or field. Indeed, some students might object to being lectured by NESB lecturers with an inadequate command of English.

Since the ideas raised by lecturers are somewhat in contrast to the ratings given by students regarding the teaching effectiveness of NESB lecturers, it seems further investigation is needed in this matter. For example, students should be openly asked why they gave low ratings to NESB lecturers, compared to ESB lecturers. Also equally the interviewees should be asked whether they felt obliged to support their NESB colleagues. Possibly, race and having a discriminatory attitude toward NESB lecturers might have created a negative attitude to some students and affected their ratings. Or perhaps the students were unwilling or unable to listen more carefully to a lecturer whose accent is not quite clear enough but still understandable. Possibly listening to people who speak with a non-standard accent is frustrating. Again, lower ability students might be especially disadvantaged by some accents of NESB lecturers. It would be

interesting to investigate in further research how NESB students rate the quality of instruction from NESB and ESB lecturers.

Studies of lecturers' race and student ratings is another possible topic of future study. According to Centra (1993) "no studies have been reported that investigate systematic racial bias in student rating" (p. 76). This issue could be investigated with reference to multicultural societies such as Australia where race and language of many foreign tertiary students are different from the ethnic mix and language of the host country.

It was not necessarily the case that the teaching performance of all ESB lecturers was better than that of all NESB lecturers. As an example, one of the four lecturers in the context of this study who was selected to receive Vice-Chancellor's excellence in teaching awards in 1996 was a NESB lecturer (University of Wollongong, 1996). Some of the NESB lecturers are effectively bilingual or they studied in an English-speaking country when they were young. Therefore, the quality of language abilities of these groups is assumed to be the same as for other ESB lecturers. On the other side, according to the interview data, there are some lecturers among ESB lecturers whose language abilities are not adequate. Although this assumption (that the language ability of ESB lecturers is better than for NESB lecturers) was found in the interview to be usually supported, future studies could further investigate this issue. For example the language ability of all of the lecturers could be observed by qualified observers and then compared with their student ratings. Although previous researchers have pointed out that student ratings of teaching are a valid and reliable source of information, it should be noted again that these data are not the only indicators for assessing teaching performance.

Researchers could use focus-group discussions, interviews and peer and supervisor evaluations.

In turn, a language difficulty could also occur wherever an English-speaking lecturer teaches content (not English) in a manner which is difficult to understand by a NESB student. One impediment to effective communication is 'cognitive overload'. Sweller (1993) reports that processing capacity for information is maximised when demands for the processing mechanism are minimised, since there is a limit to available processing capacity at any one time. Thus, if a student or lecturer is working in an unfamiliar second language, a large amount of his or her available capacity will be allocated to dealing with the mechanics of managing the second language, leaving less processing capacity for dealing with the lecture material or concept under discussion. The same principle appears to ESB students being taught by NESB lecturers with an inadequate command of English. Consequently, where the first languages of the lecturer and of the student are different, the lecturers may be able to enhance their teaching performance by improving their language and communication abilities. Institutions may need to facilitate these developments through special in-service interventions.

Question Four: Gender and teaching performance:

Significant differences were identified between the overall mean teaching-performance score of female and male academic staff ($p < .03$) in favour of females (Table 5.25). In 23 teaching-performance items, female staff performed significantly better in eight items (Table 5.26). Teaching-

performance scores of female academics were higher than for male academics in another 13 items (Table 5.27), but not significantly.

Similarly, a significant correlation coefficient ($p < .05$), in favour of females, was apparent when correlation analysis was applied between gender and the dependent variable (Table 5.36). In the multiple regression analysis, however, gender did not indicate a significant association with teaching performance (Table 5.38). These differences in results can be explained by the differences in the independent-variable controls within the two techniques and the fairly low correlation from the data. In multiple-regression, the effects of each independent variable are examined while controlling for the others, but there is no control in the other statistical correlation techniques. In addition, the higher teaching performance of female lecturers, compared with male lecturers, may be related to the subjects they teach. Mathematics and science lecturers typically get lower ratings and they are more likely to be male (McKeachie, 1997). This is consistent with the context of the present study in which 85% of academics in the Faculty of Science and 94% in the Faculty of Engineering were male (University of Wollongong, 1994e).

Phase Two: A majority of participants judged that gender was not an attribute influencing TP. They argued that there were no differences between the quality of teaching of men and women lecturers. In expressing the general view, only one lecturer introduced gender as one of the four most influential attributes (Table 5.39). In expressing a personal view, three lecturers (two female and one male) acknowledged that being female or male helped them to teach better. Perhaps the interviewees

might have been persuaded that it is politic to minimise any gender differences in teaching.

Although the mean scores of teaching performance of females were significantly higher than for males in the first phase of the study (ANOVA), the magnitude of these differences was small and was not significant in the regression analysis. Most academics in the second phase judged that gender is not influential on TP. These mixed findings are consistent with the literature as discussed in 3c.2. Some studies found that female lecturers are rated higher than males, while some others found males rated higher (Wigington, Tollefson & Rodriguez, 1989; Goodwin & Stevens, 1993). In other studies again, relatively few or no differences were found in the evaluations of male and female academics on the basis of gender alone (Bennett, 1982; Basow & Distenfeld, 1985).

Given the lack of consensus in the literature, further examination is warranted of the effects of lecturers' gender on the teaching ratings that students make of them, while controlling the other perceived variables. The need for further research to explore the impact, if any, of gender in different teaching settings was also suggested by Basow and Silberg (1987) and Dunkin (1990a).

Question Five: Academic rank and teaching performance:

Phase One: No significant differences were found between level of lecturers' academic rank and overall teaching-performance mean scores (Table 5.28). Student ratings of teaching performance improved with increasing academic rank up to associate professor, the exception being full

professors, for whom the ratings fell slightly. In the regression analysis, only student ratings of associate professors were significantly ($p < .04$) higher than associate lecturers (Table 5.38), there being no significant difference between any of the other ranks.

Phase Two: Academic rank was considered by all staff interviewees as a non-influential attribute on teaching performance. To explain this they commented that promotion in university is heavily based on research and consequently lecturers consider research more important than teaching. This view, however, is not consistent with the university policy for promotion (Personnel Services, 1996) which states that both teaching and research are considered. The interviewees also argued that high-ranked academics are expected to do managerial work as well as research and teaching. Some interviewees suggested that administrative duties consume much time, and consequently senior academics' teaching suffers.

The result of this section of the study is consistent with research findings concerning academics' rank and TP; that is, higher-ranking academics do not necessarily have a higher TP (Feldman, 1983; Tollefson, Chen, & Kleinsasser, 1989; Marsh & Hocevar, 1991b). This phenomenon in itself is not necessarily a disadvantage, because the emphasis of some university departments is focused on research, rather than teaching. In such contexts it was argued, more research is desirable, even at the expense of obtaining lower student ratings. In this situation, the university has to accept that focusing on research by academic staff might decrease their quality of teaching. Senior academics are expected to do more supervisory and administrative jobs in some university faculties more than others. Therefore, it is argued that they are consequently distracted from teaching,

and lower student ratings of professors (Table 5.25) could be an indicator of this issue.

While there are minimum weightings set for research and teaching in the promotion criteria at Wollongong University (Personnel Services, 1996), it might be asked whether it is necessary that academic staff with any particular academic rank have to undertake both teaching and research. With the current expansion of knowledge and technology, it might be useful for university students and academic staff themselves to expect that some of them be excellent in teaching and others in research, though the one not to the exclusion of the other. Surely, excellence in both is preferable; but it is not always possible. This matter raises the question of the role of universities in our societies: whether all universities have to be heavily engaged in research and teaching, or some in research and others in teaching. At least several national Committees (Harvard, 1946; Murray, 1957; Robbins, 1963) as well as researchers, for example Centra (1993), in recent decades have identified both teaching and research as fundamental to universities, as distinct from other institutions. The reports of the mentioned committees point out that research and teaching are equally important. Increasingly, however, ability to teach is being given more attention in many universities (Wright & O'Neil, 1994b; Ramsden, et al., 1995; Dunkin, 1995; Brew & Boud, 1996).

Both interviewees and survey results suggested that academic rank has no significant influence on the quality of teaching. Since teaching and research are theoretically equivalent responsibilities of academics, it is questionable why high-ranked academics are usually excellent in one of their responsibilities, research. Ideally, high-ranking academics should be

excellent in both, though the above considerations probably emphasise the critical role of research in universities.

One of the reasons for low teaching-performance scores for full professors, when compared with other academics, may be that students have higher expectations from academic staff with high rank than from others. While there is usually no further promotion reward for full professors within the universities, they may focus more on research than teaching in anticipation of getting more grants, reputation and status or joining the Executive. Professors, in general, tend to do more administrative work, which may account for low teaching-performance scores for professors. Wigington, et al. (1989) in research conducted in the USA pointed out that "persons holding the rank of assistant or associate professor (lecturer B in Australia) are typically new to their position or have made a strong commitment to teaching" (p. 341). They are also usually younger.

However, the lack of a significant relationship between rank and TP has been found to be somewhat equivocal by Marsh and Hocevar (1991b) and Feldman (1983), depending on the student perception of the lecturers' respect for students, helpfulness, availability, encouragement of class discussions; or, indeed, prior commitment to publishing (Fox, 1992).

Question Six: Level of academic degree and teaching performance:

Phase One: When differences between the mean teaching-performance scores of academics and their different levels of academic degree were compared, no *overall* significance was established and no differences were

identified in the 23 items (Tables 5.28 and 5.29). However, using the F-test, three items (6, 7 and 10) were found to reveal significant differences between academics with Doctoral degrees and academics with only Masters degrees (Table 5.30), in favour of the latter.

Phase Two: At least one third of the 25 participants supported the idea that there is a positive influence of academic degree on TP (Table 5.41). These staff explained that a graduate degree relevant to their fields expanded their knowledge base and expertise and taught them how to undertake research. It was however, acknowledged that the area of research of some staff with a Ph.D might be narrow and not directly related to the area of instruction. In addition, this point was supported by some interviewees who stated that they know lecturers with doctoral degrees who do not teach very well. But, on the other hand, any Ph.D. qualification will be likely to enhance a lecturer's performances on knowledge in a general research sense. In addition, a Ph.D. enhances the development of critical analysis, an essential element in university teaching.

It was hypothesised in the present study that academics who graduate at the doctoral level, teach significantly better than those who have only a Masters degree. It was inferred from the research (Miller, 1988; Centra & Bonesteel, 1990; Lowman, 1991) that a lecturer's being master in the subject which he or she teaches is one of the characteristic of effective lecturers. However, having a Ph.D. was not considered an important attribute in the quality of teaching from the students' perspective. In addition, it was ranked only the fourth most influential of the eight attributes by academics. As no substantial previous studies were identified in this area, hence further interpretation and generalisation is difficult.

One possible explanation is that 73% of academics in the University of Wollongong have British and Australian doctorates (University of Wollongong, 1994e) and these degrees tend to be based on focused studies. It was argued by some of the interviewees that British and Australian Ph.D. degrees are more helpful for research than teaching, whereas a North American doctoral degree is perceived by some academics to be more appropriate, at least for those who want to be lecturers and researchers as well, because they do more course work before working on their thesis. This proposition should be investigated in further research. Teaching and research are both necessary for being an academic. They should not be over- or under-valued, and several staff argued that they are inter-related.

Question Seven: University or College teaching experience and teaching performance:

Phase One: No significant correlation was established between years of tertiary teaching experience and the lecturers' teaching performance (Figure 5.7). However, small and consistent increases in teaching performance were identified up to 16 years of experience (Table 5.31). When academics were divided into four groups by the years of teaching experience, no overall significant differences were found between their teaching-performance mean scores and their length of tertiary teaching experience (Table 5.31), nor any in each of the 23 items. The nature of teaching experience is, however, considered later in the discussion of Question seven.

Phase Two: In contrast to the student data, experience in teaching was perceived by the majority of staff as the second most influential attribute on TP (Table 5.41). Academics reported that experience had given them confidence and had also enhanced their teaching skills. It was suggested that, if lecturers reflect on their teaching and analyse their weaknesses and strengths, this might help them to improve their teaching. Some academics commented that teaching experience does not necessarily and automatically improve TP. In some cases academics with long teaching experience might still be boring or otherwise poor lecturers.

Initial interpretation of these findings suggests there is a contrast between the students' and the lecturers' perceptions of the influence of experience on the quality of teaching. Academic staff ranked teaching experience as the second most influential attribute. However, there was a negative but insignificant correlation between student ratings, as an indicator of quality of TP, by the number of years of teaching experience of lecturers. The results of Phase One of this study are consistent with some research (Feldman, 1983; Marsh & Hocevar, 1991b; Cashin, 1995) which investigated the influence of experience on TP from the students' point of view. Interview results in the second phase are also consistent with the research conducted by Sherman (1987) based on the interview with academics and other research conducted by Prieto and Altmaier (1994).

The following might be an interpretation of the inconsistency between the staffs' and the students' points of view. An important point is that most of the interviewees' comments were conditional. They, for example, said teaching experience would be useful if lecturers reflected on their experience. The extent of this reflection was not indicated.

There was no evidence in the current data of what proportion of lecturers constructively reflect on their TP. In addition, it seems self-reflection, based on the individual's view, could fruitfully be combined with feedback from colleagues and pedagogical experts, if the lecturers are to learn effectively from experience.

A small number of staff said that they learnt how to teach by experience; a phenomenon also reported by Lally and Myhill (1994). Although this might be so for some lecturers, it was far from universal and perhaps not desirable, for the following reasons. First, much time is necessary to learn by error and experience. Secondly, learning through experience wastes resources, and students may suffer from naive lecturers as the latter learn by experience. Thirdly, learning by experience neglects referring to a theoretical base, without which lecturers might develop teaching strategies based on a number of poor role examples from their own experiences.

A number of academic staff indicated that they gained confidence after several years of teaching experience. Although this may seem a positive point, it may be that by obtaining confidence, the lecturers feel that they no longer need to seek feedback from students; or they no longer need to refresh themselves by studying and finding new material and methods for their teaching. They also said that boredom after teaching one subject several times, or after intense preoccupation with research and administrative jobs, is another impediment that may neutralise the positive effect of teaching experience on TP. Tiredness due to higher age, health conditions and heavy work load were identified as other possible impediments in this regard. A bored lecturer possibly is not enthusiastic about subject matter and, in turn, might not stimulate enthusiasm in the

students. Perhaps, students do not give high ratings to lecturers who appear to be bored, despite their expertise, knowledge and background in the particular field.

Furthermore, owing to increasingly heavy work loads (teaching, research and administration), even experienced lecturers might not have enough time to review their courses, give consultation time to students and give adequate feedback on students' assignments. It is not clear what proportion of experienced lecturers have time to review and develop their subjects. These responsibilities might possibly lead to students giving lower ratings to experienced lecturers.

Although experience appears to be an important component in the development of teaching ability "it is clear that experience alone does not always result in excellence; otherwise, all veteran teachers would be excellent. Other variables must account for the development of excellence" (Sherman, 1987, p. 72). It is a reasonable expectation that experience has positive effects on teaching performance. As mentioned previously, however, as years of teaching experience increase, some other factors such as greater involvement in research and increasing workloads, ill health or older age, which might imply greater fatigue, may impact negatively on teaching performance. Therefore, lower students' ratings of lecturers with long experience might be explained by other factors, which outweigh experience. Again, older lecturers often devote more time and experience to supervising graduate students, an element of teaching performance not considered in the present study.

It seems that the contrasting views of students and academics about the influence of experience on TP should be further investigated through searching interviews with students and asking about the TP of lecturers with differing lengths of teaching experience. Again, lecturers might be asked whether or not they reflect on their teaching and how they reflect. For example, it would be useful to investigate how lecturers know that an applied strategy was not appropriate in their teaching, or how they recognise that students have learning difficulties in their courses.

Although teaching experience, as an influencing factor in teaching performance, is frequently included in educational research, it has been found by itself to be hard to define and measure (Barnes, 1987). For example, while the extent of teaching experience of participants in the present study was considered as one equivalent experience, it is not clear that the value of experience in various non-university colleges, and university, is really equivalent, or that experience in one contributes to effective teaching in other. This question remains in some doubt. Barnes (1987) has indicated the matter of teaching experience is in need of further high-quality research. The results of further research in this area could be valuable for educational administrators, professional developers and lecturers, especially given the liberalising of the age of retirement in tertiary institutions.

Question Eight: Academic discipline and teaching performance:

Phase One: The overall ANOVA and Fisher analyses on each of the 23 student-rating items reported significant differences between the mean scores of teaching performance of academics in different faculty groups

(Tables 33, 34 and 35). The data revealed the following rank order of TP by Faculty: 1) Arts and Creative Arts, 2) Education, 3) Sciences and Health, 4) Commerce and Law, and 5) Engineering and Informatics. Regression analysis also indicated that the teaching-performance mean scores of academics of Arts and Creative Arts were significantly ($p < .003$) higher than for Engineering and Informatics.

Phase Two: Being a member of a particular faculty was not considered by academic staff to be one of the four most influential attributes on TP. Only five (20%) participants (one from the Faculty of Education, three from Arts and one from Creative Arts) claimed that faculty membership is influential (Table 5.39). The supporters of the relationship commented that some faculties place a higher value on teaching, and lecturers in some faculties, for example Education, should know more about teaching and learning compared with lecturers in other faculties. However, the opponents to this view said that they know good lecturers in all faculties, and being a good lecturer depends on the individual not the faculty.

Although the supportive environment to teaching of some faculties is important for improving TP, it seems the individual's commitment to teaching has a considerable effect on TP. If academics are individually capable and enthusiastic, a positive effect should be achieved regardless of the strength of support within the faculty.

Knowing about teaching and learning, holding TQ and having experience in teaching were considered as the attributes most influential upon TP. While staff in the Faculty of Education more frequently have these attributes, the question arises why the staff of Arts and Creative Arts were

rated higher than Faculty of Education by students in the present study - a finding consistent with some other research (Neumann & Neumann, 1983; Ramsden, 1991a; Ainley & Long, 1992). It is one indicator that there might be other bases for student-ratings differences than the reasons so far considered. In the Faculty of Education there may be a strong expectation for exemplary role modelling from staff by students, whose attention is drawn to pedagogical principles in many of their classes.

It is possible that teaching in some fields is easier than teaching in others (Cashin, 1990), and this might explain low student ratings in some items of the student-ratings questionnaire. However, it is surprising that lecturers in some faculties were rated low in all the 23 items, which are related to various components of teaching (Table 5.35). It might be expected that some faculties should have been ranked high in planning and presentation, for example, and other faculties in other components, for example, in enthusiasm. But the results in Table 5. 35 show that Arts and Creative Arts was ranked the highest in all 23 items of the student-ratings questionnaire, relating to different components of teaching.

In addition to the possible reasons for differences between the student ratings of different fields (see 3c.5), raised by Cashin (1990), Ainley and Long (1992) and Smeby (1996), the following three factors among others should be considered and examined in further research:

- 1) Relative complexity of content and the difficulty of providing teaching materials for effective presentation in some fields, could explain some differences.

2) Since some lecturers for example, from Bio-Medical, Engineering or Business Departments, undertake consultancies outside the university, they may spend less time on course planning. In addition, for this reason possibly some of the most knowledgeable people in those fields prefer to work outside the university sector, even permanently.

3) It seems that the positive relationship between students and lecturers in Humanities might be better developed than in other fields. This factor improves the interest and motivation of students which in turn improves student learning. When students are taught in a friendly environment, they are likely to rate their lecturers more highly. Perhaps the very nature of Humanities studies, by comparison with Science and Mathematics, encourages sensitivities to empathy and sympathy, and attracts empathetic and sympathetic staff and students.

These are possible reasons for the different mean scores of teaching performance between fields of study. While other research (Cashin, 1990; Ainley & Long, 1992; Smeby, 1996) reported such differences, it did not suggest definite reasons for field differences with respect to teaching performance. It is obvious that the disciplinary ratings constitute a general tendency and do not reflect the characteristics of all of the academic staff in the targeted disciplines. Furthermore, the results are largely a function of the students' points of view, and therefore further research from other sources is needed to allow generalisation. More importantly, it is necessary to confirm the existence of such differences, and, if they exist, to determine how the low ratings might be improved.

Question Nine: Lecturers' attributes and teaching performance:

Phase One: Multiple Linear Regression analysis was used to determine the combined effects of the eight independent variables, and the separate effects of each independent variable, when controlling for the others. This technique indicated a significant correlation between the eight lecturer attributes and teaching performance and accounted for 34 per cent of the variance (Tables 5.37 and 5.38). The remaining 66 per cent of the unexplained variance was attributed to other key variables such as student characteristics, institutional context and other lecturer attributes which were not considered in this study.

The beta coefficient indicated that mean teaching-performance score of English-speaking-background lecturers, academics in Arts and Creative Arts, and lecturers with rank of associate professor, was respectively significantly higher than for NESB lecturers, lecturers in other faculties and lecturers in various academic ranks (Table 5.38). The data suggested that positive changes in lecturer attitudes towards university teaching positively correlated with increases in teaching performance. The results also showed that the mean score of lecturers with teaching qualifications was close to being significantly higher ($p < .06$) than lecturers without teaching qualifications. It should be acknowledged that the results do not indicate causation because the data are only correlational, and because the lecturer attributes which were involved in the regression model, may have shared their variances with other lecturer attributes that were not included in the present model.

Phase Two: Academic staff who participated in the study suggested that having a positive attitude, having teaching experience and holding TQ are three most important attributes associated with their TP. Gender and academic rank were perceived as the two attributes least associated with TP among the eight examined (Table 5.39). Different views were offered about the remaining three attributes: academic degree, language background and faculty membership, as discussed in the previous chapter.

Although in a few individual cases, the rankings of *general* and *personal* perception were different, the final results indicated that the eight attributes from the two perceptions were ranked exactly the same for the first five attributes and with a slight difference for the remainder (Table 5.41).

It should be noted that, while academic staff were asked in the present study to determine which of the attributes were associated with teaching performance, teaching is only one of the four important responsibilities of university academics along with research, supervision and administration. The academic staff were not asked to determine which of the attributes presented were characteristic of the overall excellence of academic staff. This is possibly the reason why academic rank was placed last among the attributes associated with teaching performance. If academic staff were asked to determine which of the eight attributes typified the lecturers' academic life (undertaking research, teaching and administration duties), academic rank may have had a higher priority. It is also the case that, in any profession, the academic degree required for appointment may account for most of the pre-requisites to practise the

profession, while subsequent rank may be a less powerful indicator of professional competence.

The findings of this study support the Biggs (1988; 1989) model of teaching which identified attitude toward effective teaching and holding teaching qualifications as the two important lecturer attributes which characterise teaching performance. However, this model did not mention the role of other lecturer attributes in their teaching performance which were identified in this study. The above two variables, plus teaching experience and academics' seniority (more experience and higher degree), which were suggested by the interviewees as associated attributes, were identified by Dunkin and Biddle (1974). However, they did not mention the role of language background and faculty membership in teaching performance.

Other lecturer characteristics and the wider complex of factors influencing learning, may have an impact on lecturers' teaching performance. These and other characteristics such as student background, institutional culture, approach to teaching and students' approach to learning, were not included in the study. For example, in addition to the eight attributes mentioned, three other attributes associated with TP were suggested by the participants. They suggested that, to be an effective lecturer, having practical professional experience, gaining a background in research and having inventiveness in teaching enhanced the quality of teaching at university level.

Positive attitude towards teaching, having teaching experience, holding TQ and academic degree were selected by the 25 interviewees as the four attributes most associated with their TP. Among these four, attitude

toward teaching in the survey results showed a significant positive correlation with the quality of TP. Holding TQ did not have a significantly positive correlation with TP ($p < .06$). The length of teaching experience and academic degree did not demonstrate a significant relationship with TP of academics in the first phase of the study.

The findings of this study do not mean that every ESB lecturer will necessarily have a better teaching performance than every NESB lecturer. Neither do all lecturers with TQ, experienced lecturers or lecturers with a positive attitude toward teaching, necessarily have a better quality of teaching in comparison with, respectively, lecturers without TQ, young lecturers and lecturers who had reported a poor attitude toward teaching. However, in the appointment of new academic staff, university faculties and students would be well served by the employment of personnel who have a demonstrated commitment to teaching (i.e. had a positive attitude), are effective communicators in English and possibly have acquired a teaching qualification, provided the major criteria were met. There are many lecturer attributes which might be identified and considered as a guide to predicting a lecturers' effectiveness. Individuals and the university would be advised to take a holistic approach to the development of lecturers' attributes.

It should be noted, again, that the data relating to academics' attributes and teaching performance from phase one of the study are correlational, so that causation cannot be inferred. However, triangulation from the comments of interviewees might be taken, with caution, to imply the possibility of some causation. The interview data from Phase Two of this study are limited and caution is needed in their interpretation. Although

the interviews with academic staff provided a complement to the statistical findings of this study, other data are needed to be able to generalise beyond the current institutional context of the study.

6.2 Limitations of the Study

The following limitations became evident during this research. These limitations should be considered in further related studies.

1) It is recognised that the examination of attributes of 176 lecturers in one university, and undertaking interviews with 25 academics, does not constitute a statistically representative sample of the Australian universities. Furthermore, since the student ratings of teaching in the University of Wollongong were obtained through a unique questionnaire, which was not used in other universities, the sample had to be drawn only from this university. Consequently the results cannot be generalised to other institutions. Further research in other contexts is needed to examine the effects of lecturer attributes on teaching performance. Inter-institutional comparisons could be made reasonably if the same instrument were used and administration procedures were uniform. It should be noted that there are several disciplines, e.g. Medicine and Theology, which are not represented at Wollongong.

2) While much research supported the validity and appropriateness of student ratings in judging teaching performance, some concerns were also reported in the literature. In spite of the reported concerns, Tong and Bures (1987) and Clement and Stevens (1989) pointed out that student

ratings have been the most widely used instrument to evaluate teaching performance at tertiary level for tenure and promotion purposes. Perhaps this is a result of student ratings being relatively easy to administer and providing quantifiable results. In addition, other ways of evaluation, such as administrative and peer evaluation or portfolio review, can be difficult to implement and interpret, and might have a 'provider' bias by comparison with student ratings which focus on client perception and therefore might have a 'client' bias. Considering the acceptance of validity and reliability of student ratings from many studies and its acceptance throughout the world in 'practice', it was selected as a criterion to evaluate the teaching performance of lecturers in the first phase of the study.

It should, however, be noted that the result of teaching evaluations must be interpreted cautiously, especially when a single criterion is used. Although use of student ratings is widespread and supported by many researchers, its effectiveness depends upon many factors such as the appropriateness of the instrument, the processes of data gathering, scoring and analysing, the fairness of interpretation of the results and the possible manipulation of students, affecting the validity of their responses.

Although previous researchers have pointed out that using student ratings of teaching is a valid and reliable source of information (see 3d.4), it should be noted that these data are not the only indicators for assessing teaching performance. Besides using a student survey as an indicator, researchers could use other data-gathering techniques such as focus-group discussions, interviews and peer and supervisor evaluations. Thus, interviewing academic staff was selected as a complementary and

'provider' source of data to investigate the influence of lecturer's attributes on teaching performance.

3) The limitations of any survey study including judgement and self reporting, apply to this study. It is possible that academics' responses to the questionnaire in Phase One and to the interview in Phase Two might differ from their actual opinion or behaviour for several possible reasons, such as lack of trust or confidentiality or wish to support colleagues. In survey studies "the extent to which the answers were faked, or to which social desirability occurred, is unknown" (Goodwin & Stevens, 1993, p. 179).

4) When the first phase of the study was being conducted, it was realised later that another survey about lecturers' capability in English had also been distributed to the same response group. As both surveys originated from the Faculty of Education, the existence of two requests to complete surveys during the same time period may have exerted a negative influence on the response rate in the current study.

5) Although all of the academic staff at the University of Wollongong were invited to participate in this study, only the student ratings of volunteer participants, who gave their permission to the researcher to use their teaching evaluation data, were analysed. Thus, there is the probability that, while all were invited to participate in a teaching-related study, there was possibly a degree of self selection favouring those who had a positive attitude and considered themselves good lecturers. However, the researcher provided the same opportunity for all of the academic staff in the context of this study. The generalisability of the interview findings

may be limited because of the extent to which the perceptions and experiences of the obtained sample of 25 lecturers represent those of the larger group.

6. The small sample size for each group of lecturers with a teaching qualification (see appendix T), did not permit their teaching performance to be examined separately. Therefore all groups were combined and called 'lecturers with teaching qualification'. It would be interesting to investigate what kinds of teaching qualifications and what elements within a teaching-qualification program are correlated with the improvement of lecturers' teaching performance demonstrated in this study. Collapsing all categories of teaching qualifications did not allow the researcher to do further and in-depth analysis of this matter. However, it was demonstrated that no significant difference was established between the mean scores on teaching performance of academic staff who have only undergraduate degrees, and those who also have postgraduate degrees in teaching (Table 5.16).

7) While academic staff were interviewed in the beginning of 1997, Phase One survey data were gathered at the end of 1994. Within this 2.5 years between the two phases of the study, some influential variables might have changed. Furthermore, 'empirical mortality' is another problem. That is, some of the lecturers who were in the first phase of the study were not available in the follow-up study. Some of the lecturers who participated in the first phase had left for other places, or retired.

It is however acknowledged that most of the limitations of this study are related to the nature of educational and survey inquiry, and the question

of resolving them are constrained by the scope of this thesis. In the findings reported above, the student ratings complement the perceptions of staff in enhancing the reliability and validity of the findings.

Although these findings contribute significantly to answering the present research question, yet it is acknowledged that only 34 percent of the the variance is accounted for by the eight lecturers' attributes examined. Other variables should also be examined in future research, such as students' motivation and ability levels, and the university environment.

6.3 Implications of the Study

The outcomes of the study suggest implications for policy decisions concerning enhancing the quality of teaching in universities and colleges. Those attributes which students and academics considered to be related to teaching performance would advisedly be considered in planning teaching improvement, staff-development programs and the selection of academic staff. As Cannon and Widodo (1994) have noted, the examination of the quality of teaching and learning in universities is now a world-wide issue. They added that "governments are under great pressure to manage their national budgets to ensure that expenditure on higher education achieves demanding economic and social objectives" (p. 100). Therefore, for economic purposes, it is necessary to explore those attributes of lecturers that are associated with quality teaching, while at the same time avoiding compromising scholarship.

The findings of this study support the literature (e.g. Sergiovanni & Starratt, 1993; Caillods, 1989), which argues for improvements in university teaching. In further support of this position, Ramsden (1993a) argues that "there is no

prospect of enhancing the quality of higher education unless university [committees] and governments have faith in the potential of their teachers" (p. 45). Both these agencies need to appreciate that, to improve the quality of teaching in universities, the role of academic staff in the delivery and facilitation of quality learning is pivotal.

Enhancing those lecturer attributes which were considered in this study, consistent with the Biggs and Dunkin models of teaching and related research by others (Brown & Atkins, 1988; Gow, 1992; Candy, 1993), has become critical if the universities of the modern world are to achieve the teaching part of their mission. Although education has been influenced by technology, and although technological tools facilitate student learning, teachers continue to have an important role in education. It is because "technology does not substitute for teachers, [that] there is little likelihood that the classroom will be robotized" (McKeachie, 1990: 196). This general educational principle can be said to apply to teaching in universities.

The findings of this study will be useful for academics, students, staff development and policy makers in universities. This research is a reflection of students' and academics' perceptions about improvement in teaching. When, for example, more experienced lecturers receive low ratings, or when professors receive low student ratings, the staff and university should discuss these issues. On the other side, lecturers might deduce from the students' and their colleagues' points of view, which of their attributes might be usefully developed. In addition, they might realise in which circumstances those attributes are helpful. For example lecturers will know that, if they want to learn from teaching experience,

they have to reflect and think about their actions to improve their teaching quality.

As the two phases of this research demonstrated significant relationships between lecturers' attitudes toward teaching and their teaching performance, the issue of attitudes may well provide a realistic foundation for planning teaching-development programs. For example, one could argue that, as well as running courses for improving tertiary-teaching skills, it would be advantageous to implement strategies to improve lecturers' attitudes toward their teaching, even though changing lecturer attitudes is acknowledged as being very difficult. After examining the lecturers' attitudes toward different components of teaching, through a purposefully developed questionnaire or interview protocol, staff developers could direct teaching-development programs toward those components of effective teaching found to require development. According to Ramsden (1992, p. 117) "changing lecturers' understanding of teaching is a necessary condition for improving teaching in higher education". Many contemporary programs, for example, seek to develop 'reflective' rather than skills-based abilities. They target conceptions, platforms and attitudes through lecturers' reflection on their current practices.

The present findings, then, suggest that, if there is an improvement in lecturers' attitudes toward teaching, then their teaching performance might improve. This can be a guideline for planning teaching-development programs in universities. Such a conclusion is consistent with Trigwell and Prosser's finding (1994b), that "in the process of improving teaching through academic development, the intentions and

conceptions of teachers need as much attention as strategies if any improvement in student learning is anticipated" (p. 83).

If the explained positive relationships are supported by further studies, other implications of this study could directly relate to staff-selection processes. The universities that emphasise quality teaching could use appropriate attitudinal questionnaires, interviews or performance demonstrations which consider the principles and practices of effective teaching. Preference could be given to those applicants who display positive attitudes toward teaching and demonstrate acceptable strategies for teaching and learning, provided they also meet the other criteria of scholarship.

The results obtained are a good indicator of the usefulness of teaching-development activities at the tertiary level. The findings suggest that university committees and administrators could be advised to focus more closely on planning and implementing teaching-development activities and encouraging participation by academic staff in them. The results also indicate to university teachers the likely advantages of attending formal courses and staff-development programs for the refinement and enhancement of their teaching. The findings provide evidence to encourage the appropriate university committees to provide avenues and incentives for academic staff to pursue courses in teaching and to establish requirements and programs for appropriate teaching qualifications, particularly for new staff.

The findings of the present study, from students' responses (although not significantly) and interview of staff (more strongly) support this policy

initiative and are consistent with literature reported by Prieto and Altmaier (1994). Though further confirmation is needed, the present evidence suggests that masters' and doctoral graduates who want to teach at the university level might be advised to acquire reasonable teaching qualifications and tutorial experience before embarking on an academic career, or soon after doing so. An example of this course of action is the decision by Wollongong University to offer a course, Introduction to Tertiary Teaching (ITT), that is compulsory for new academic staff without teaching qualifications, and is recommended for existing academics.

One outcome of the research is that from the student ratings the language background of lecturers was the second strongest predictor of lecturers' teaching performance. Consequently, where the first languages of the lecturer and of the student are not similar, it could be argued that the institution has a responsibility, particularly for NESB staff, to consider language proficiency when making appointments, and to create opportunities for individual lecturers who are appointed to improve their language and communication abilities in order to enhance their teaching performance.

6.4 Suggestions for Future Studies

The findings of the present enquiry raise a number of questions which could be considered in future studies. The results of the study provide evidence about lecturer attributes which are perceived as having an important relationship with their teaching performance. Despite this relationship of lecturer attributes to lecturers' teaching performance,

relatively little research seems to have been conducted in this area. This lack of research is even more obvious in the relationships between lecturers' language background and their academic degrees on one hand, and teaching performance on the other. This area of concern provides fruitful grounds for further research.

In discussing the importance of teacher characteristics in the improvement of teaching, Biggs (1988; 1989) explained the need to take all of the presage, process and product variables into account. He argued that "taking only one factor at a time makes only additive use of an interactive system" (1988, p. 10). Education is a set of interacting ecosystems which include several components: teachers, teaching contexts, student learning processes, learning outcomes, institutions, staff developers, administrators, politicians and any other identifiable component that affects learning (Biggs, 1993). However, Brown and Atkins (1991) pointed to the need to deconstruct the teaching endeavour and effectively analyse its components in order to ensure improvements in the quality of teaching performance and student learning.

This research investigated those lecturer attributes which are associated with teaching performance. However, it is acknowledged that teaching is only one of the responsibilities of universities, research being another major responsibility. It is suggested that the lecturer attributes which influence the research productivity of academic staff should be investigated. Then, the university community, based on the priorities it places on teaching and research, can establish its level of attention directed to teaching attributes in its staff selection and staff promotion procedures. For example, if a university emphasises research productivity and working

with researchers, it might have somewhat different criteria in staff selection from a university which tends to emphasises teaching undergraduate students, even though all universities, by their nature, are committed to some research.

Although many researchers have tried through several approaches to identify the attributes for an effective lecturer, one criticism is that less attention has been paid to investigating how to acquire such attributes or traits once they are identified. Therefore, this topic is open for more investigation.

Why was holding a teaching qualification selected by 20 (80%) of academics interviewed as one of the important attributes associated with teaching performance (Table 5.39), and why do many lecturers with teaching qualifications receive higher ratings from students than lecturers without a teaching qualification? One answer may be that the lecturers with teaching qualifications have learnt the elements of effective teaching, and this has enhanced their practice. Another is that such lecturers were already more committed than others, before they took teaching qualifications. However, it would be worthwhile if researchers were to examine the detail of the programs of professional development which lecturers received, and look within these details for differences in their student ratings. It may thus be of interest for lecturers, administrators, researchers, and educational-development units to learn more about the essential elements of professional-development programs which improve instructional quality.

Because of the complexity of the teaching-learning process and the factors influencing outcomes, there is little agreement in the literature about the characteristics and extent of teaching qualifications needed for academic staff to be effective teachers. This issue of how many course hours of pre-service and in-service teacher training, what content and which methods of teaching improvement, are necessary for individuals with various backgrounds, experience and disciplines, should be further explored but is probably indeterminable. It is obvious that investigating such a complex matter requires the application of a systematic and holistic approach (Biggs, 1989; Martin & Ramsden, 1994).

Academics who did not have a link with teaching training at university level before starting to teach in a university, might not have appropriate qualifications for teaching in university. However, because few academic staff had a TQ related to higher education, those with primary or secondary TQ were considered to have TQ in this study (Table 5.16). In future studies, when it is possible, researchers might distinguish between these different focus levels of teaching qualifications.

In a similar vein, the examination of the teaching performance of academics in different faculties could also be fruitful. Because of confidentiality issues, the participants were not asked to name their departments; instead, they were asked to state to which faculties they belonged. Therefore the analysis carried out is based on faculties rather than departments. However, since departments are more homogeneous, it might be more appropriate to analyse and compare the teaching performance between departments rather than faculties. In terms of the variety of disciplines taught, some faculties are more homogeneous than

others. In the context of this study, for example, the Faculty of Education was more homogeneous than the Faculty of Science which included a variety of fields. It is acknowledged that, in addition to the issue of confidentiality, the small number of participants from each department meant that an analysis based on departments was not possible in this study.

In some professions, e.g. Medicine, if a practitioner wants to continue his or her professional registration, he or she has to attend professional seminars, twice or more often a year, and subscribe to journals in order to remain familiar with new developments. Similarly, ways might be explored to encourage university lecturers to improve or maintain their teaching performance. Of course the role of an academic might be more demanding than some other professions in some respects. Academics, for example need not only to be up to date in their knowledge in their fields, they also have to be up to date in their knowledge of teaching, communication and pedagogy to be effective.

On the other hand, perhaps the above argument is not so strong for lecturers because they are assumed to do research and thus keep up to date with the literature. Research has traditionally been a fundamental responsibility of all academics. Medical practitioners are not formally expected to undertake research, and perhaps that is mainly why they have to attend seminars. However, it can be argued that lecturers, by doing research in their own fields, can keep up to date in their subject matter; but in order to keep up to date with new developments in teaching, another important responsibility of lecturers, some formal requirements could be

considered, especially for those few university lecturers who are not active researchers, either in their disciplines or in teaching or learning.

In addition, as universities throughout Australia now operate in a highly competitive market place, student perceptions of the quality of teaching and the publication of national data about university performance, including teaching, have become important issues within each university community. Hence, considerable effort has been made by Wollongong University and many other universities to enhance the quality of their teaching. However, as indicated above, the process of university learning and teaching is complex and related to many factors which need further research.

The results of the study provide clear evidence about the strengths and importance of lecturers' language background which is strongly associated with their teaching performance. Despite the important role of this variable in teaching performance, relatively little research seems to have been conducted. Considering the results of this study and the research reviewed about the important role of communication in teaching, it is suggested that questions about communication style and immediacy behaviours of lecturers should be included in teaching-evaluation questionnaires. As some countries including Australia grow more in cultural and linguistic diversity, university committees and professional-development consultants might well continue enquiries in this area. Future research could extend enquiries into the range of influences on communication competence, and the importance that language background has in this aspect of lecturers' contribution to student learning.

The quality of teaching of lecturers with a doctoral degree was not perceived by students to be significantly better than those who have no doctoral degree. One possible explanation for this is that as indicated in 6.2, most academics have graduated from a British system which tends to be more directed to research than teaching. The difference between the quality of lecturers who graduated from British and North American systems could be further investigated. Another possible explanation is the limitations of students' judgements, a further topic for more investigation.

The design of the first phase of the present study may be criticised in that the examination of variables such as teaching experience and academic ranks should be made in a longitudinal rather than cross-sectional design. The present study utilised a cross-sectional design for two reasons. First, a longitudinal design requires much more time, resources and acceptance of the researcher in the context of the study than was available to a Ph.D. student. Secondly, similar results were reported for a 20-year study of student ratings, using both a longitudinal and a cross-sectional design (Murray & Rushton, 1990). This may suggest that the two designs might have yielded equivalent results in the context of the present study. However, it is acknowledged that cross-sectional studies provide a description of current phenomena and cannot claim a causal relationship. Utilisation of a longitudinal design is recommended for those projects for which the necessary time and resources are available.

Although the student-ratings questionnaires can be used for all of the four purposes mentioned (teaching improvement, promotion, research and helping students), it may be preferable to provide specific questionnaires for collecting data for each of the above purposes. For example, if student

ratings are intended to be used for teaching improvement, the data need to be collected in such a way that lecturers be informed of their strengths and weaknesses as revealed in the data. If student ratings are intended to be used for personnel decisions such as promotion, data need to be collected appropriately according to recommended procedures such as those outlined earlier (see 3d.3). However, considering constraints such as finance and time needed for these evaluations, it seems that in most places, one questionnaire format would be used for all purposes. In these contexts, the users must be cautious about interpretation of the student ratings in future research.

In spite of the many years of research already conducted on student ratings, the present researcher's perception is that more research should be done. Research should continue to establish the most effective ways of collecting and presenting the student-ratings data (Abrami & Cohen, 1990; Theall & Franklin, 1990). Abrami and Cohen suggested that "research should lead to a better understanding of the teaching-learning process and a better use of ratings for summative and formative decisions about instruction" (p. 231).

Contrasting views were found between lecturers and students about some attributes which appeared to influence lecturers' TP. For example, while lecturers themselves believed that they improved their teaching by experience, no positive correlation was found between length of teaching experience and student ratings. Therefore, further investigation is necessary regarding these issues. For example, undertaking interviews with students might provide insight into the above issue. Furthermore, the contrasting views of students and academics might be discussed by a

panel of experienced academics in higher education and some representative lecturers and students.

On the basis of the first phase of the study (quantitative method), four variables (language background, attitudes towards teaching, rank and faculty) were the significant predictors of lecturers' teaching performance.

In the second phase of the study (qualitative method), the following four attributes, among those studied, influenced T.P. the most: having a positive attitude towards teaching, teaching experience, holding a teaching qualification and the level of academic degree.

It appears that having a positive attitude towards teaching was the only attribute that importantly influenced teaching performance in both phases.

In summary, this enquiry has revealed, on the basis of both student ratings (Phase One) and lecturers' perceptions (Phase Two), that university lecturers are likely to be more effective teachers when their attitude towards teaching is positive, when their communication abilities in English are well developed, and probably when a suitable teaching qualification has been acquired. However, the implications of the other attributes examined are equivocal. This enquiry has also demonstrated that there are several questions related to effective university teaching - such as the role teaching experience, gender, faculty or discipline affiliation - which merit further investigation.

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