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Study Attitudes and Behaviours of Postgraduate Students of University of the Punjab

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Abstract

This paper focuses on the study approaches used by the students of different departments of University of the Punjab. These approaches were studied using revised versions of the questionnaire (ETLQ) Experience of Teaching Learning Questionnaire. The purpose of this study was to find out the differences among the student of various disciplines (Administrative Science - Management Sciences, Statistics - Natural Sciences, Science Education - Social sciences and Urdu Language) on various approaches of study and demands felts by the students during the course. For this purpose a 5 point LIKERT scale was administered on the first and final year students of above mentioned four disciplines of University of the Punjab Lahore Pakistan. The paper further focuses to find out the ways and means to enhance the attitude to study and study behaviours.

Keywords: Study approaches, Students Higher Education, Deep approach, Surface approach, Strategic approach

Introduction

This paper provides an overview of some findings from an in depth study designed to understand how the students of the University of the Punjab (Pakistan) go about their learning and the ways in which this is influenced by their perceptions of different aspects of their learning environments. Since there has been little research into the perspectives of Punjab University students, it intends to provide a context of reflections on the ways in which current teaching-learning practices in the higher education system might be improved.

The beginning section of the paper provides a brief overview of the literature, which is intended to illustrate the importance of this study and the concepts and theories on which it is built. As the general principle has been to investigate the ways that different parts of the teaching-learning environment work in combination to influence the quality of the students' learning. In addition, a disciplinary- and a cultural-specific dimension is

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introduced to help to provide contextualisation for the setting involved in this study. The central concern of the paper is that how high –quality learning is defined, pursued and supported in these four course settings.

English Language research into student learning has demonstrated a relationship between students' conceptions of learning, their approach to study tasks and the eventual learning outcomes. A five category set of descriptors for conceptions of learning was described by Marton and Saljo (1997). In hierarchical order the categories were: learning as the quantitative increase in knowledge; learning as memorising; learning as acquisition of facts, procedures, etc. which can be retained and/or utilised in practice; learning as the abstraction of meaning; and learning as an interpretive process aimed at the understanding of reality (Bowden and Marton, 1998).

Approaches to study have most commonly been categorised with labels of 'deep' and 'surface' approach (e.g., Marton and Saljo, 1976). A *Deep approach* is characterised by students directing their attention to the underlying meaning of the task, whereas for a *Surface approach* the attention is directed to the text itself leading to a reproductive orientation. Biggs (2001) has described approaches as having motive and strategy components.

Learning and Studying Questionnaire (LSQ) used in the present study also include the learning approaches and quality of the students' learning; two interrelated strands in the previous research have been identified as relevant. One study describing high-quality learning in higher education, the other on the aspects of teaching learning environments that students may perceive more directly, and which therefore affects their learning. There has been much interest in students' learning from the perspectives of students studying at various educational levels in dozens of countries and regions. As is common in research into students' learning in higher education, quantitative instruments were used to provide insights into the students learning. The questionnaire used in the study is a revised version of the Experiences of Teaching learning Questionnaire (ETLQ), which was specially developed for the UK-wide Enhancing Teaching Learning Environments in Undergraduate Courses (ETL) project. The questionnaire was filled in by the students from Urdu, Statistics, Administrative Science and Science Education disciplines. This is of interest, partly because this is the first time that the ETLQ (though in its revised form), which was developed for western contexts, was administered on university students from a different culture. Analyses of the data sets obtained have identified the main factors within the items concerned with students' perceptions of teaching learning environments and indicate the relationships that exist between these and their reported approaches to studying.

Literature Review

High-quality learning and ways of thinking and practising

The approaches describe qualitatively different ways of learning and studying, encompassing both students' intentions when studying and the learning processes they employ. Our current conceptualisation of the approaches, as exemplified in Table 1, draws on more than twenty-five years of qualitative and quantitative research with students across a range of contexts (Biggs, 2003; Entwiste, 1997, 1998, 2003; Entwistle and Ramsden, 1983; Marton and Säljö, 1976, 1997; Tait, Speth and Entwistle, (1995).The *Deep approach* - in combination with organisation, effort and the cognitive processes described in the 'monitoring studying' scale – provides a partial proxy for high-quality learning in higher education. Further development of this broad generic description of high-quality learning is increasingly rich in literature describing students' learning in higher education (e.g. Biggs, 2003;Enwistle, Marton and Hounsell,1997; Prosser and Trigwell,1990; Richardson, 2000). In this paper, however, we will focus the task of building up conceptual frameworks to describe high-quality learning as expressed within particular disciplinary contexts. Such frameworks may, of course, include aspects of approaches to learning; for example, a description of what it might involve taking a fully *Deep approach* in a particular subject area. The literature suggests that different disciplinary contexts will, each to some extent; possess their own norms, language and practices (Becher, 1994; Hounsell, 1988; Lave and Wenger, 1992; Ramsden, 1981). Research findings describing students' understandings and misunderstandings of academic tasks, and of key concepts, tap into the difficulties that students may experience in coming to terms with the understandings and practices of particular communities (Enwistle, Hounsell, Macaulay, Situnayake and Tait 1989, 1988; Prosser and Trigwell, 1994). Bearing in mind the literature about disciplinary differences, and adopted the phrase 'Ways of thinking and practising' in a subject area to describe the richness, depth and breadth of what students might learn through engagement with a given subject area in a specific context. This might include, for example, coming to terms with particular understandings, forms of discourse, values or ways of acting which are regarded as central to graduate-level mastery of a discipline or subject area.

A number of studies have reported differences in learning approaches used by students across institutions, faculties, departments and subjects (Alexander & Murphy, 1998; Biggs, 2001; Biggs; Clark, 1996; Entwistle et al., 1998; Entwistle & Ramsden, 1981; Lonka & Lindblom - Ylanne, 1996; Ramsden, 1992; Watkins, 1998). Generally the students enrolled in Arts faculties demonstrate deeper learning approaches than students in Science or applied science fields, though it is unclear whether this outcome is due to differences in contextual features such as content,

assessment and teaching methods; or whether these describe different entry characteristics of students who choose to follow a Science or Arts pathway. Education students generally occupy a median position between Science and Arts students in terms of their use of *Deep approach*es, but differences have been found with respect to the institution in which Education has been studied and whether it was studied as a postgraduate or undergraduate course (Biggs, 2003).

Table 1
Aspects of Approaches to Learning and Studying (Based partly on Entwistle, 1997p 19)

Approach	**Description**
Deep approach	Seeking meaning Relating ideas Use of evidence Interest in ideas (Related sub scale)
Surface approach	Lack of purpose Unrelated memorizing Syllabus bound ness Fear of failure (Related sub scale)
Strategic approach	Organized studying Time management Alertness to assessment demand Achieving (Related sub-scale) Monitoring effectiveness (Related sub- scale)

Teaching-learning-environments

Over the last three decades, there has been growing evidence of the impact on the quality of students' learning; of the teaching-learning environment, whether approached from the standpoint of institution-wide student sub-cultures (Becker, 1994), the academic department as a' learning milieu' or students' perceptions of teaching, assessment and course content and structure in everyday course settings (Ramsden, 1981). Research by Entwistle and Ramsden has proved particularly influential, providing compelling evidence, across a range of subject areas, of relationships between students' approaches to studying and their perceptions of the quality of teaching provision, the amount of choice offered in relation to content and method of study, the size of the formally assigned workload, and the appropriateness of assessment methods and procedures (Ramsden and Entwistle, 1981; Entwistle and Ramsden, 1983; Entwistle,1999). Ramsden (1981) has since shown the continuing salience of these findings through

annual surveys of Australian graduates using the Course Experience Questionnaire, an instrument which grew directly out of the original studies. Over the same period, further evidence has emerged of the pervasive, and often debilitating, impact of assessment and feedback on the quality of students' learning approaches and outcomes (Thomson and Falchikor 1980; Hounsell, 1987; Tang, 1994; Laurillard, 1997; Wilson, Lizzio and Ramsden, 1997; Scouller, 1998; Entwistle, 2000; McCune, 2000).

Biggs (2001, 2003) has recently introduced the concept of 'constructive alignment' as a means of accounting for the impact of teaching-learning environments on students' learning. From this vantage-point, teaching-learning environments are viewed as complex interacting systems.

Constructive alignment occurs to the extent that key aspects of the system are in harmony in supporting high-quality learning. In aligned teaching, there is maximum consistency throughout the system. The curriculum is stated in the form of clear objectives, which state the level of understanding required rather than simply a list of topics to be covered. Teaching methods are chosen that are likely to realise those objectives; you get students to do the things that the objectives nominate. Finally, the assessment tasks address the objectives, so that you can test to see if the students have learned what the objectives state they should be learning. All components in the system address the same agenda and support each other. Within this paper, constructive alignment is being used as a guiding concept in the study of postgraduate course settings as teaching-learning environments. That analysis indicated that constructive alignment might helpfully be widened in various respects: to encompass the alignment of learning support and course organisation and management as well as of teaching-learning and assessment activities; to take greater account of the provision of feedback in considering the alignment of assessment; and to incorporate alignment to the students taking the course concerned. It also suggested the importance of attention not only to the teaching-learning and assessment methods adopted, but also to how these methods were deployed and operationlized within given course and departmental settings, each of which could present particular contextual constraints and opportunities which influenced the freedom of action of the teaching staff concerned. The work of the ETL project has also attempted to take appropriate account of important advances in the understanding of environmental influences which have sprung from other areas of educational research. One is the study by Becher (1990) of academic 'tribes' and their territories, showing the importance of disciplinary cultures in understanding teaching and research practices in universities. A second is the seminal work of Lave and Wenger (1999), in which learners are viewed as 'legitimate peripheral participants' in discipline-specific communities of practice. And a third is to be found in the growing attention being given to the formative functions of assessment

in enabling students to attain high academic standards (Black and Wiliam, 1998; Sadler, 1989, 1998). The latter is especially relevant in a UK context; given the reduction in students' assigned coursework and opportunities for face-to-face contact with staff which has followed a declining unit of resource and worsening staff-student ratios (Department for Education and Skills, 2003).

Student Characteristics

Despite being the focus of teaching and learning activities, students are of course an interactive component within any learning context (Biggs, 2003; Entwistle et al., 1991; Vermunt, 1998). Their perception of the learning environment govern their responses to it (Entwistle,1991; Ramsden, 1981;Trigwell & Prosser, 1991a), but they enter the learning environment with previously held conceptions of learning (Lonka & Lindblom- Ylanne, 1996; Marton et al., 1997; Vermunt, 1998) which are in large part, responses to their experience in earlier learning environment, informed by prior experiences, in part determine their study behaviour in the current context (Vermunt, 1998) that, in turn, may affect lecturers' preceptions and the contexts they create (Prosser & Trigwell, 1990), establishing a self-perpetuating ecological interaction (Biggs,2003, 2001).

Some student characteristics affecting learning are immutable such as gender, relative intelligence, prior learning experiences, and some aspects of personality (Biggs, 2001). Some dispositional characteristics such as relatively stable learning styles (Entwistle & Waterston, 1988; Vermunt, 1998), and epistemological orientations (Wilson & Smart, 1996; Meyer, 1993), dependent on established patterns of causal attribution (Watikns, 1998; Millar & Irving, 1995), or developmentally responsive to varying levels of maturity or domain knowledge (Richardson, 1994b; Scott, Burns, and Cooney, 1996; Vermunt, 1996).

Case Settings

The University of the Punjab was formally established in 1882. This University has played a leading role in higher education in the country.

Urdu is the representative language of the Muslims of the sub-continent and the national language of Pakistan. The Department of Urdu has not only established liaisons with its counter parts in other universities but has also proved a source of inspiration for foreign students.

In 1952, Institute of Statistics was established in the University of the Punjab. Since its inception the Institute has been engaged in individual and collective research in the field of Theoretical and Applied Statistics.

The Institute of Administrative Sciences was established in 1962, By imparting state-of-the-art knowledge and skills, it helps in generating ideas, bringing people together, and preparing the next generation of leaders who value productivity, rule of law, equity, and justice.

The Department of Science Education was established in August, 1986. This Department prepares science teachers for secondary schools by offering two years M. S. Ed. and one year M. Ed degree programmes.

Aims and Methods of research

This paper is designed to explore ways of strengthening the teaching Learning environments experienced by students taking post graduate courses, so as to enhance their achievement. It will improve the existing research, teaching and learning in higher education, by extending the range of disciplinary perspectives being used and relating them more directly to the professional knowledge of students in contrasting subject areas. By working collaboratively with four departments of post graduate levels, ways of enhancing the system–wide capacity for research based practice will be explored and disseminated. The subject areas selected are Statistics, Administrative Sciences, Science Education and Urdu Language.

This paper reviews emerging findings on key aspects of teaching – learning environments in postgraduate courses. The central concern of the paper is, how high quality learning in the subject of Statistics, Administrative sciences, Science Education and Urdu Language is defined, pursued, and supported in these course settings. As a proxy for high quality constructivist learning outcomes, the concept regarding the ways of thinking and practising in the subject is introduced. This encompasses not only knowledge and understanding but also the skills, strategies and values associated with engaging with, and communicating within, discipline or subject area at postgraduate level. The paper also examines the four course settings as teaching learning environments, viewed from the perspective of constructive alignment.

The purpose of the study was to find out the differences among the students of various disciplines (Administrative Science—Management sciences, Statistics---Natural Sciences, Science Education----Social Sciences and Urdu---language) on various approaches of study. For this purpose a LIKERT Type, 5-point scale was administered on the first and final year students of above mentioned four disciplines of University of the Punjab, Lahore –Pakistan. The completed questionnaires were scored assigning score 5 to Strongly Agree, 4 to agree, 3 to undecided, 2 to disagree and 1 to strongly disagree. Separate means for each group of students and each approach (*Deep approach*, *Strategic approach* and *Surface approach*) and sub categories of approaches were calculated. The collected data was then analyzed using Analysis of Variance (ANOVA) to find out the differences. Posthoc test was applied where necessary.

Instrument Development

The questionnaire used in this study is a revised version of the ETLQ, which was specifically developed for the ETL Project. This

questionnaire is especially chosen for the study as it embodies many years of questionnaires development experience and a recent review of the current literature on students' learning (Entwistle et al., 2002). The ETLQ focuses on the ways students have actually studied the target module and on their perceptions of the course environment they experienced. It consists of five sections. The first section contains a short version of the ALSI (Approaches to Learning and Studying Inventory), in which student are asked to describe how they had actually been studying within the course unit (Entwistle & McCune, 2002). The second section is the longest section containing 40 items that covers the students' experience on the course. The third section asks about the demands that students felt, the course unit made in terms of knowledge requirements and learning processes; while the fourth section paralleled those aspects in relation to what they felt they had actually gained from the unit. These two sections, together with the final section with one question asking students how well they had done in the course unit they had just been taking, are used as indicators of students' self-rating of their university achievement.

The modifications made to the ETLQ were based on considerations of the cultural- and disciplinary-specific context of the present study. A principle that has been firmly adhered to during the revision process is to avoid any change to the composition of the main scales of the original ETLQ that might corrupt the defining features of its original construct. For the original five sections in the ETLQ that have been included in the questionnaire, some item-level changes had been made. Some questionnaire scales contain fewer items because several ETLQ items are not relevant to Pakistani settings, some scales contain more items which have been adapted from the LSQ to strengthen a few one-item scales or sub-scales, while others contain newly written items which serve the particular research interest of the present study, both in Pakistani students' ways of studying and in the disciplinary specific aspects of the teaching-learning environment. The data were analyzed by using analysis of variance. Results were considered to be significant at $p<0.05$. All the aspects studied in this analysis are summarised in this paper.

Conclusions

Initially the analysis of the five main scales each divided into subscales was performed. For the *Deep approach* scale, the subscales were seeking meanings, relating ideas, use of evidence and interest in ideas. For the *Surface approach* scale, the subscales were lack of purpose, unrelated memorizing, syllabus bound ness, fear of failure. For the *Strategic approach*, the subscales were organized studying, time management, alertness to assessment demands, achieving and monitoring effectiveness. The scales suggested by the analysis were almost the same as those of the ETLQ data.

For *Deep approach*, the Students of Administrative Science, Statistics, Science Education and Urdu were compared. The analysis indicated that the Master's Level students of these subjects significantly differed on *Deep approach* of Study. However, further analysis showed that this difference was significant only for comparison of the students of Administrative Science with Statistics and Science Education respectively.
From the subscale factor analysis relating to *Strategic approach* among the Students of Administrative Science, Statistics, Science Education and Urdu; it was observed that the Master's Level students of the subjects of Administrative Science, Statistics, Science Education and Urdu significantly differed on *Strategic approach* of Study. However, further analysis showed that on *Strategic approach* of study, the students of Administrative Science were significantly different from those of Statistics, Science Education and Urdu. Similar comparison was observed between the students of Statistics and Urdu. Analysis of the responses to the statements concerning *Surface approach* among the Students of Administrative Science, Statistics, Science Education and Urdu at the University of the Punjab indicated that the mean scores of the Master's Level students enrolled in these subjects do not differ on *Surface approach* of Study.

Study of differences on sub-scale 'Seeking Meaning' of *Deep approach* among the Students of Administrative Science, Statistics, Science Education and Urdu at the University of the Punjab revealed that the Master's Level students of these subjects significantly differed on the sub-scale Seeking Meaning of *Deep approach* of Study. However, further analysis showed that students of Administrative science were better than the students of Statistics, Science Education and Urdu. Differences on sub-scale 'Relating Ideas' of *Deep approach* among the Master level Students of Administrative Science, Statistics, Science Education and Urdu were observed to be significant. But when the results were compared pair-wise, the only significant comparison turned out to be between the students of Administrative Science and Students of Statistics. Similar analysis of the observations on sub-scale 'Use of Evidence' of *Deep approach* among the Students of these departments showed that the Master's Level students of the subjects of Administrative Science, Statistics, Science Education and Urdu significantly differ on this sub-scale of *Deep approach* of Study. Pair-wise comparisons among Subjects indicated that the students of Administrative Science were significantly different from the students of Statistics, Science Education and Urdu. Significant differences were again observed on sub-scale 'Interest in Ideas' of *Deep approach* among the Students of these four departments. However, further analysis showed that the mean score of the students of Administrative Science were significantly different from those of Statistics and Science Education.

Differences on sub-scale 'Organized Studying' of *Strategic approach* among the Students of same four departments at the University of

the Punjab were observed to be statistically significant. The difference was significant where students of Administrative Science were compared separately with the Students of Statistics and the Students of Science Education and Students of Urdu. The comparison between the students of Science Education and Students of Urdu was also significant. Similar differences on sub-scale 'Time Management' of *Strategic approach* among the Students of Administrative Science, Statistics, Science Education and Urdu at the University of the Punjab were observed. The students of Administrative Science were again significantly different in attitude from those of Statistics, Science Education and Urdu. The mean score differences on sub-scale 'Alertness to Assessment Demands' of *Strategic approach* among the Students of Administrative Science, Statistics, Science Education and Urdu at the University of the Punjab were also statistically significant. Pair-wise comparison showed that the difference was significant only for Students of Administrative Science as against the other three departments.

For the sub-scale 'Achieving' of *Strategic approach* the differences between mean scores of the Students of Administrative Science, Statistics, Science Education and Urdu again showed statistical significance. Comparisons between the departments yielded significant differences for the three groups *i.e.* Students of Administrative Science vs Students of Statistics, Students of Statistics vs Students of Science Education and Students of Statistics vs Students of Urdu. For the sub-scale 'Monitoring Effectiveness' of *Strategic approach* the mean scores of the students of all four departments differed significantly. Furthermore the difference was significant when either the students of Administrative Science were compared with those of Statistics or the students of Statistics were compared with those of Science Education.

The means of the four groups indicated that master level students of Science Education are higher on *Deep approach* and *Strategic approach*es of study than those of Administrative Science and Urdu. Another significant difference was that within group variance of the students of Urdu and Administrative Science was higher as indicated by the value of standard deviation of these groups. The possible reason of these differences was that the students of Statistics and Science Education (M S Ed) had their previous education with science subjects, while the students of Administrative science and Urdu have their previous education in the humanities and languages. Their education at Intermediate and B.A/B.Sc level might have less demand for *Deep approach* of study. The students admitted to the subjects of Administrative Science, Statistics and Science Education hade almost uniform level of achievement at B.A/B.Sc and Intermediate level, while students of Urdu was heterogeneous group in terms of their achievement at these levels and thus practiced different study approaches. The overall mean scores of the students of University of the Punjab indicated of the fact that the teaching strategies and learning resources were not adequately aligned

with the objectives of higher education. It is therefore, recommended that further studies on the alignment of teaching strategy, resources, and content may be made for the achievement of objectives of higher education in University of the Punjab.

Discussion

The purpose of the research study has been to explore ways of enhancing teaching learning environments in four different subject areas and consider the implications for educational development work more generally. The questionnaire analyses have confirmed and strengthened conclusions of the previous research (Prosser&Trigwell,1990; Biggs, 2003; Vermunt,1998) about the relationship between students perceptions of the teaching learning environments they have experienced, their approaches to learning and studding, and their levels of academic performance. The analyses coming from research provides evidence that the nature of the relationship is bi-directional, with *Deep approach*es being linked with appreciation of 'teaching for understanding' and with increases in deep and decreases in *Surface approach*es being associated with the whole set of experiences which had been used to define a constructivist teaching learning environments.

There were more similarities than differences among the subject areas in the factor analyses of the questionnaire, but using the whole set of data important differences have been emerging that show the importance of treating each subject area as having distinctive teaching methods that reflect the nature of the subject it self.

The impetus for the student learning research approach, adopted in this study, was a paper by Marton and Sä1jö (1976). By 'qualitative analyses of students' reports of their own study processes' (Entwistle & Napak, 1998), the researchers reported qualitative differences in learning outcomes depending on the approach to reading that had been used. The intentions and methods in reading the text were called the *deep* and *Surface approach*es, respectively. The surface and *Deep approach*es terminology, firstly derived from article reading in a naturalistic experiment, has greatly influenced the quantitative approach in student learning research founded by Biggs (2001) in Australia and (Entwistle & Ramsden, 1983) in the United Kingdom, which generally uses inventories to ask students what they usually do while learning and studying. In developing SPQ/LPQ (Biggs, 1987) and ASI (Entwistle & Ramsden, 1983), they both added a third approach, *achieving or Strategic approach* that was adopted by students to achieve the highest possible grades by strategies. The deep and surface terminology and the availability of inventories that can' rapidly and accurately assess at little cost how student learn' (Watkins, 1991), the quantitative student learning research approach has been widely applied to subjects both from Western and non-Western cultures (Biggs, 2003, Watkins, 1998).

Studies focused on the learning approaches and conceptions of learners (Kember, 1996; Kember & Gow, 1990, Watkins & Biggs, 1996) only generally confirmed the two basic factors of deep and *Surface approach*es, and the achieving scales did not load consistently on one factor as expected, but rather were associated with the approach that was more likely to succeed in that context (Biggs, 1993; Wong, Lin & Watkins,1996). Furthermore, Watkins (1998) pointed out that, though the construct *Deep* and *Surface approach*es to learning are generally comparable between Western and non-Western cultures, there might also be culturally specific aspects that render the constructs of Western theories and instruments only partially appropriate. The expressions of deep and surface constructs in different cultures might take into account those aspects (Biggs, 2001). However, what the above discussions pointed out should be fairly concluded as the relevance of the (deep and surface) constructs of approaches to learning to non-Western cultures at a relatively general level, and the likely culturally different aspects of these constructs. Such a conclusion meets with the lowest level of cross-cultural equivalence, the conceptual equivalence, for using the above instruments in cross-cultural research.

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