

Students' Perceptions of Different Tertiary Learning Environments  
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ABSTRACT: Using the Perceptions of Learning Environments  
Questionnaire  
(PLEQ), a semi-structured but open-ended data gathering procedure,  
1249  
students from 10 Schools in 5 Faculties at the Queensland  
University of  
Technology (QUT) indicated, for different types of tertiary  
learning

environments, not only the behaviours and practices that helped or hindered their learning but also why. Irrespective of the type of learning environment, students felt that their learning was helped when learning experiences were practical and experiential and the presentation and explanation clear mainly because these activities clarified their understanding and consolidated their learning; and that their learning was hindered when the pace of presentation was inappropriate and the presentation was unclear because these activities did not clarify their understanding or consolidate their learning. However, learning in each particular type of environment was also helped or hindered by activities and behaviours idiosyncratic to that environment. These and their reasons are identified and discussed and, although many are predictable, they reinforce the notions first, that different learning environments are designed to and in practice do produce different learning outcomes and second, that students are capable of discriminating between what they consider to be good and bad educational experiences.

## INTRODUCTION

Students' perceptions of their learning environments have a long theoretical history (Brunswick, 1955, 1956; Knight & Waxman, 1991; Lewin, 1935, 1936; Murray, 1938; Pace & Stern, 1958; Wittrock, 1986) and a rich empirical base (e.g. Brown & Atkins, 1988; Fraser, 1989, 1991, 1993; Fraser & Walberg, 1991; Marsh, 1987; Ramsden, 1992; Waxman, 1991). They have been consistently related to the quality of students' learning outcomes (Fraser, 1989; Ramsden, 1992) and the approaches to learning they adopt (Dart, 1993, 1994; Entwistle & Tait, 1993). The role of students'

perceptions in assisting lecturers to evaluate and improve their

teaching is well recognised (e.g. Marsh, 1987). It is important therefore that such perceptions are obtained in the richest possible form. In a previous article, the Perceptions of Learning Environments Questionnaire (PLEQ), a qualitative alternative to existing forced-choice quantitative procedures for gathering students' perceptions of salient aspects of their learning environments, was introduced and some general outcomes discussed (Clarke, 1995). The PLEQ has the facility to gather information about specific learning environments that students can nominate and this paper focuses on the similarities and differences in the perceptions students have about the different types of environments they experience during tertiary study.

#### THE DATA COLLECTION INSTRUMENT

The development and formats of the PLEQ have been discussed in some detail elsewhere (Clarke, 1995). Briefly, students are able to write about events that they feel help or hinder their learning and to indicate why. They are able to do this for any learning environment that they can choose from a supplied list:

LARGE GROUP LECTURES where there are more than 50 students;  
SMALL GROUP LECTURES where there are between 25 and 50 students;  
SEMINARS/TUTORIALS where there are less than 25 students;  
ONE-TO-ONE TEACHING, just student and lecturer/tutor;  
PRACTICAL SETTINGS ON CAMPUS such as laboratories, gymnasias etc.  
PRACTICAL SETTINGS OFF CAMPUS such as work environments, schools, hospitals etc.

The PLEQ has a semi-structured but open-ended format and a typical response is:

"In seminars,  
it helps my learning when the tutor explains step by step how to do things  
because it is easier to see the connections.

## SAMPLE AND DATA COLLECTION

From July 1992 to June 1993, the Teaching and Learning in Tertiary Education (T&LiTE) Project (Clarke, 1994a; Clarke and Taylor, 1993; T&LiTE, 1994; Taylor, 1994) was carried out at the Queensland University of Technology (QUT), a large metropolitan university in Brisbane Australia. In that Project,

extensive information was gathered from students and their (volunteer) lecturers about learning and teaching in their classrooms. It had as its major aim, the collaborative use by lecturers and members of the Project team of that information to inform possible changes in lecturers' behaviour that might lead to an improvement in student learning. The PLEQ was developed for and used in that Project along with a variety of other data collection procedures.

1249 students from 10 Schools in 5 Faculties at QUT completed the questionnaire. There were 746 (59.7%) females and 439 (35.2%) males while 64 (5.1%) did not indicate gender. The average age of the sample was 23.3 years. Further details on the sample, for example the distribution of students by course and year of course, are available in Clarke (1994b) and T&LiTE (1994).

Two experienced Research Assistants (RAs) administered the questionnaire as part of the complete T&LiTE Project questionnaire battery using standardised procedures in August and September 1992. As this was at least four weeks into the teaching semester, the students' perceptions of their learning environments were regarded as having stabilised.

## ANALYSIS

The "statements" (nominated events/behaviours) and the "reasons" of 100 randomly

selected students were collaboratively categorised by the writer and the two RAs, producing 55 categories of "statements" and 47 categories of "reasons".

Data from the remaining students were classified by the RAs using these categories with random "quality control" checks made by the writer. The categories almost always had positive and negative poles e.g. "presentation" was either "clear" or "unclear". The complete details of all categories are available in T&LiTE (1994) but a sample of the more frequently-occurring categories and illustrative responses are shown in Clarke (1995, p. 5) but reproduced here for convenience in Table 1.

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Table 1 somewhere here

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Students indicated that they regarded the "small lecture" and "seminar/tutorial" learning environments similarly so responses related to these two types

of learning environments were coalesced in this analysis. The five most frequently occurring "statement" responses and the most frequently occurring associated "reasons" for the "help learning" section for the whole sample are shown in Tables 2 to 6, one for each of the learning environments. Tables 7 to 11 are the corresponding summaries for the "hinder learning" section.

In these tables, please note that (I) the sum of the frequencies of the five most frequently occurring "statement" categories is less than the "Total" frequency as the latter includes the frequencies of all categories; (ii) the "reasons" frequencies associated with a given statement do not match the statement frequency for two reasons: The sum of the frequencies of the most frequently occurring reasons is less than the total number of reasons given, and

students often gave more than one reason as to why a particular behaviour or activity helped or hindered their learning and;  
(iii) there are not a consistent number of reasons associated with each statement due to the low frequencies of some reason categories.

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Tables 2 to 11 somewhere here  
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## RESULTS

### In large lectures

Students claim that their learning is helped in large lectures when the lecturer supports their learning by exposing students to practical, relevant experiences and material that is clearly presented, well structured and supported by audio-visual resources. Such behaviours and activities are helpful because they facilitate learning by clarifying understanding, consolidating and integrating learning, foster interest and promote concentration. On the other hand, experiences such as poor pacing, unclear presentation, lack of variety, poor discipline combined with the large numbers of students in this type of learning environment, produce a learning environment which hinders learning because learning is not facilitated as understanding is not clarified, interest is not fostered nor concentration maintained. This leads to frustration, anxiety and a reduction in the motivation to learn.

### In seminars

Practical, relevant activities in a group which has an appropriate size to promote a personal informal atmosphere and where there is a combination of clear presentation by the lecturer and content-focussed discussion among group members is the cocktail that students claim fosters their learning in the small group seminar situation.

The claim these behaviours and activities help their learning because they facilitate learning by clarifying and consolidating it, promote a personal informal atmosphere that reduces anxiety, allows questions to be asked and encourages interaction. Poor pacing, unclear and unstructured presentation by the lecturer in an undisciplined group, the students claim are a recipe that is debilitating as far as learning is concerned because it wastes their time, is perceived as irrelevant and does not assist them to clarify and consolidate their learning. In such an atmosphere, attempts by the lecturer to promote interaction by asking questions often promotes anxiety and embarrassment. In sum, it reduces their motivation to learn.

#### Practical settings on campus

Learning is helped in these settings when the experiences are practical and relevant, the lecturer provides personal support along with clear and well structured presentations in an informal personal atmosphere that promotes general discussion. These behaviours and experiences help because learning is facilitated by the clarification and consolidation of learning by relevant experience in an individualised and personal way. However, if material resources are not available and the lecturer does not provide personal support and clear presentation, learning is hindered in campus-based practical settings because time is wasted, the learning-by-experience that the students seek does not occur and leads to anxiety and frustration. As with the seminar setting, discussion and interaction in an environment such as this, rather than being useful and focussed, is seen as frustrating and anxiety-promoting.

#### Practical settings off campus

As with on-campus settings, students feel that their learning is helped when the experiences are practical and relevant, there is personal support from the lecturer

and they can provide input. These experiences individualise and personalise the learning. The additional attraction of the off-campus learning

environments are the variety that they provide. All of these experiences are helpful because they provide the opportunity for experiential, practical and relevant learning and promote personal and professional development in terms of promoting confidence in own ability and providing access to a range of other perspectives. However, if the group is too large, if personal support from the lecturer is lacking and the lecturer is also unaware of the students' knowledge level, does not structure experiences with a consequent inability to support students' learning, students feel that there learning is hindered because such experiences are frustrating, lead the students to question their own abilities leading to anxiety and a lack of confidence.

#### One-to-one learning situation

The personal support, clear explanation, opportunity to ask questions of an open, friendly and approachable and available lecturer were the experiences that students felt helped their learning in one-to-one situations because they clarified and consolidated learning, reduced anxiety and allowed students to be treated and recognised as individuals. On the other hand, one-to-one situations hindered learning if the lecturer maintained a power relationship over the student, was unaware of the students' knowledge level, could not explain clearly or was unavailable. Such experiences led to reduced opportunities to ask questions, frustration and anxiety.

#### DISCUSSION

There are a number of generic lecturer behaviours and learning experiences that emerge as important influences across most types of learning environments. Those

that students claim help their learning, irrespective of the situation, are clear, well structured presentations of practical, relevant material while, almost axiomatically, the opposite of these, combined with poor pacing and boring presentation, hindered their learning. These experiences have the effect of either motivating or demotivating students to learn with the latter effect having the affective concomitants of anxiety and frustration.

Each particular learning environment however has its own idiosyncratic influences and, often, it is the pattern of influences rather than an isolated specific influence that is important. The large numbers of students in large lectures do not

seem to be a problem if the lecturer is presenting relevant material in a clear, well structured and interesting way. If that is not happening however, the numbers become a problem as discipline - or lack of it - then interferes with the possibility of learning. In small group seminar sessions, interaction is seen as a positive experience within a friendly informal environment which is task-focussed as a result of clear organisation and presentation by the lecturer. On the other hand, being forced into interaction in a poorly organised seminar is anxiety-provoking. Practical settings, both on- and off-campus are highly valued by students as crucial opportunities for relevant practical learning and students become very upset when the opportunities are squandered by lack of resources and incompetent and insensitive lecturers. Even the most intimate learning situation of all, the one-to-one setting, can fail badly as a learning opportunity when the lecturer is again insensitive and assumes an overt, possibly self-protective superordinate position in the relationship.

Many of these outcomes are predictable and, in that sense, this research confirms what is already "known" about the role of generic teaching skills and learning experiences and of different types of learning environments. They are

assumed to perform different functions, and this research, confirms that they do have the capability of doing just that. This research also confirms that students are capable of discriminating between good and bad teaching in the sense that their interpretations of those constructs are congruent with what the traditional literature on effective teaching proposes (see for example, Ausubel, 1963). These interpretations however contain none of the notions central to the more recent constructivist views of learning, of student autonomy or of students assuming responsibility for their own learning (see for example, Biggs, 1989, 1990; Dart and Clarke, 1991; Ramsden, 1988). This is discussed in more detail in Clarke (1994b, 1995) and the T&LiTE Project (T&LiTE, 1994). What is perhaps also disturbing is the prevalence of "bad" experiences that students report. The ratio of "help" to "hinder" statements and associated reasons is about 2:1. There is no empirical or theoretical basis for estimating whether this is acceptable or not (Clarke, 1994) but the ratio presents a challenge for tertiary teachers and those charged with the responsibility for their professional development.

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Tables 1-11