THE RELATIONSHIP BETWEEN STUDENTS' APPROACHES TO LEARNING

AND THEIR PERCEPTIONS OF WHAT HELPS AND HINDERS THEIR
LEARNING

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ABSTRACT

This multi-method paper examines the relationship between
tertiary students' self-reported surface and deep approaches to
learning and their perceptions of those classroom-based
activities and lecturer behaviours that they claim help or hinder
their learning. 987 students from 10 Schools in 5 Faculties at
the Queensland University of Technology (QUT) in Brisbane
Australia completed the Study Process Questionnaire (SPQ), a 42
item forced-choice Likert scale inventory that can be used to

classify respondents as having a predominantly surface or deep
approach to learning, and the Perceptions of Learning
Environments Questionnaire (PLEQ), a semistructured but openended
questionnaire designed to gather students' views about what helps
or hinders their learning and why. Two dominantly Surface
Approach (SA) groups and two dominantly Deep Approach (DA) groups
were identified and their perceptions compared. The SA groups
were substantially similar while the DA groups, although having
many common perceptions, differed on the degree of structure and
autonomy they perceived as influencing their learning. The
findings are related to existing theoretical conjecture and
research and their implications first, for the consideration of
"approach to learning" as a complex multidimensional construct
and second, for tertiary teaching and the construction of
learning environments which facilitate the development of
meaningful approaches to learning by students, are discussed.

Approaches to Learning and the Learning Context

The concept "Approaches to Learning" has been identified as
"...one of the most influential... to have emerged from research
into teaching and learning in higher education during the last 15
years" (Ramsden, 1992, p. 39). Of the variety of
conceptualisations of approaches to learning in the literature,
the one that emerges consistently from a range of disparate
methodological procedures and different cultures is the
classification of surface, deep and achieving (Biggs, 1987;
Entwistle & Ramsden, 1983; Marton & SÑljî, 1984). The deep
approach is indicated by an intention to understand the material
to be learnt, together with strategies such as reading widely,
using a variety of resources, discussion, relating the unfamiliar
to the familiar, reflection etc. The surface approach is
characterised by an intention to reproduce material to be learnt
and avoid failure through focussing on specific details and using

rote learning strategies. The achieving approach is exemplified by an intention to excel using highly organised learning processes. The deep and surface approaches are the focus in this study.

It has long been accepted that how students perceive their learning environments has a significant influence on the quality of their learning outcomes (e.g. Doyle, 1977; Fraser, 1989; Ramsden, 1992; Waxman, 1991; Winne & Marx, 1977, 1982). Although this idea has its genesis in the theoretical and conceptual work of Lewin (1935, 1936), Murray (1938) and their followers (e.g. Brunswick, 1955, 1956; Pace & Stern, 1958), its current vindication lies in the student cognition paradigms of Knight & Waxman (1991) and Wittrock (1986) and in the extensive research activity on student perceptions of their learning environments at all levels of education reviewed for example in Brown & Atkins (1988), Fraser (1989, 1991, in press), Fraser & Walberg (1991), Marsh (1987), Ramsden (1992) & Waxman (1991). These reviews summarise this extensive literature which has had the ultimate aim of providing information that might be used to improve the quality of student learning and directly or indirectly, to improve the quality of teaching.

 Both the students' personal intention with regard to learning and the context of learning have been shown to be influential in the students' adoption of surface or deep approaches to learning. For example, see recent reviews, theory and research in Dart (1994, in press), Dart & Clarke (1991, 1992), Clarke & Dart (1991, 1993) and Ramsden (1992). Students may well have a preferred orientation towards, or an intention to use, a deep or surface approach to learning but it is the learning environment, or more strictly how that
learning environment is perceived, that will arouse or inhibit that approach. Ramsden (1992) contends that the deep and surface approaches that students use, or claim to use, "...are responses to the educational environments in which they... learn;
expect of them" (p. 62).

Practices that encourage surface and deep approaches to learning have been documented by various writers, mainly derived by sound logical conjecture from the theoretical premises of what constitutes surface and deep approaches (Biggs, 1989, 1990; Marton, Hounsell & Entwistle, 1984; Ramsden, 1985, 1987).

Ramsden (1992) summarises these practices thus:

Surface approaches are encouraged by:

.Assessment methods emphasising recall or the application of trivial
procedural knowledge
.Assessment methods that create anxiety
.Cynical or conflicting messages about rewards
.An excessive amount of material in the curriculum
.Poor or absent feedback on progress
.Lack of independence in studying
.Lack of interest in and background knowledge of the subject matter
.Previous experience of educational settings that encourage these
approaches

Deep approaches are encouraged by:

.Teaching and assessment methods that foster active and long-term
engagement with learning tasks
.Stimulating and considerate teaching, especially teaching which
demonstrates the lecturer's personal commitment to the subject
matter and stresses its meaning and relevance to students
.Clearly stated academic expectations
.Opportunities to exercise responsible choice in the method and
content of study
.Interest in and background knowledge of the subject matter
.Previous experiences of educational settings that encourage these
approaches (p. 81)

Some researchers have established empirical links between
approaches to learning and some of these aspects of the learning
environment. Watkins (1984), in a qualitative study,
found that a deep approach to learning was associated with an
adequate workload, allowing students time to think, assessing by
essays rather than exams, actively encouraging freedom in
learning and arousing interest. Dart & Clarke (1992), using a
quantitative paradigm, have shown that a learning environment
high in "constructive cognitive press" (Clarke & Dart, 1991) -
one that promotes cognitive and metacognitive behaviour in
students - increases the probability that students will use deep

strategies in their learning. Similarly, Blumenfeld, Puro &
Mergendoller (1992) identified as a major determinant of the use
by students of self-regulatory and higher cognitive and
metacognitive learning strategies, the existence of what they
called a "press for understanding". Dart (in press) has found
that students who endorse a mastery goal orientation are more
likely to use strategies associated with a deep approach such as
personalising material to generate meaningful understanding,

planning, monitoring and evaluating learning (metacognitive strategies), organising their learning and working with colleagues to facilitate learning. On the other hand, students who endorse a performance goal orientation, although they are likely to use metacognitive learning strategies and organised learning strategies, are unlikely to search for personal meaning and understanding in their learning.

This study has the aim of adding to the empirical support for the contentions summarised by Ramsden above by examining the perceptions of the learning environment of groups of tertiary students who claim to use a dominantly surface or deep approach to learning. This study extends the previous research in at least three ways:

- student perceptions of the learning environment are gathered using a qualitative methodology as opposed to the more commonly used Likert-scale instruments such as
CUCEI (Fraser & Tregaust, 1987), CHPQ (Stevenson, 1990), ILSU (Dart, in press) and the SEEQ (Marsh, 1981);

- the study focuses on those events in the learning environment that students feel help or hinder their learning; and

- an attempt is made to establish why these events seem to help or hinder learning.

Methodology

Sample

1249 students and 21 lecturers from 10 Schools in 5 Faculties at the Queensland University of Technology (QUT) in Brisbane Australia were involved in the Teaching and Learning in Tertiary Education (T&LiTE) Project during 1992 and 1993. That Project had as its major aim, the gathering of information from students and their lecturers about learning and teaching in their classrooms and the collaborative use of that information by lecturers and members of the Project team to inform possible changes in lecturers' behaviour aimed at improving student learning. Further details the Project are available in Clarke (1994a), Clarke & Taylor (1993) and T&LiTE (1994).

A sample of 987 for whom complete data relevant to this study

were available were used in this study. In this sample, 607
(61.5%) were female and 336 (34.0%) were male while 44 (4.5%) did
not indicate gender. The average age of the sample was 23.6
years.

Data Collection and Analysis Procedures

The T&LiTE Project data were collected by two experienced
Research Assistants in August and September 1992 using
standardised administration procedures. As this was at
least 4 weeks into the teaching semester, the perceptions of the
students about their learning environments was able to be
regarded with some confidence as having had an sufficient time to
stabilise. Of the complete questionnaire battery used in the
T&LiTE Project, the two procedures used in this study were the
Study Process Questionnaire (SPQ) (Biggs, 1987) and the
Perceptions of Learning Environments Questionnaire (PLEQ)
(Clarke, 1994b).

Study Process Questionnaire (SPQ)

The Study Process Questionnaire (SPQ) (Biggs, 1987) is a 42 item
questionnaire with six subscales. Three of the subscales measure
students' motives for studying (Surface, Deep, Achieving), and
three measure the learning strategies adopted by students
(Surface, Deep, Achieving). The corresponding subscales for
motive and strategy can be combined to produce a score
representing a Surface Approach, Deep Approach, Achieving
Approach, Surface Achieving Approach and a Deep Achieving
Approach. The response format is a 5 point Likert scale ranging
from 1 "this item is never or only rarely true of me" to 5 "this
item is always or almost always true of me". The SPQ has been
extensively used in research on learning at the tertiary level
and there is substantial validity and reliability data available
(Biggs, 1987).

 Perceptions of Learning Environments Questionnaire (PLEQ)

The Perceptions of Learning Environments Questionnaire (PLEQ)
uses a semistructured but openended format to gather student
perceptions concerning how they feel about activities and
behaviours they experience in different learning environments
along with the reasons why they feel the way they do. The semi-
structured openended approach allows students to choose not only
a particular learning environment for each response but also
allows them to write about only those activities and behaviours

important to them.

The particular format of the PLEQ used here focuses on the
"events that help/hinder learning" dimensions. It has also been
used with "events students like/dislike" dimensions (See Clarke,
1994b, 1994c, 1994d). Figure 1 shows the "help learning" format
along with a sample response.

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Figure 1 somewhere here
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The format for the "hinder learning" option is similar. The
introductory paragraph is the same and the "EVENTS" section is
modified appropriately as follows:

EVENTS THAT HINDERED YOUR LEARNING

For the subject you are now in, think about the behaviours and
activities of lecturers and students which you felt have hindered
your learning. In your own words, please describe these
behaviours and activities and also indicate why they hindered
your learning. Give as many examples as you can from the
different learning environments listed above.

For each dimension, the students are supplied with 10 blank
proformas of the type shown in the sample response, with the
option of more if required. The list of learning environments is
repeated at the top of every second page for convenience.

The comments - "statements" and associated "reasons" - of 100
randomly selected students were collaboratively categorised by
the first/second author and the two Research Assistants producing
55 categories of "statements" and 47 categories of "reasons".
These categories were used by the Research Assistants to classify
the comments of the remaining students with random "quality
control" checks made by the writer. Fortuitously, the categories
almost always had positive and negative poles e.g. "small group
activities" either "occurred" or "did not occur". Full details
of all categories are available in T&LiTE
(1994) but some common responses are shown in Table I.

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Table I somewhere here

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Identification of sub-groups of students using Surface and Deep
Approaches

The means and standard deviations for surface and deep approaches
for the whole sample of 987 are shown in Table II.

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Table II somewhere here

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Those students whose SA and DA scores were at least 1 standard
deviation above the total sample mean score for SA and DA
respectively were identified and intact classes were identified
using the following criteria:

- a relatively large number of students claiming to use a surface
approach along with a relatively small number of students
claiming to use a deep approach to learning;

- a relatively large number of students claiming to use a deep
approach along with a relatively small number of students
claiming to use a surface approach to learning;

The groups with the dominant approach within such classes then
became the focus of the study. The rationale for selecting
groups within intact classes is that the perceptions of the
groups will be about the same lecturer and the same learning
environments (subject matter, assessment, activities etc.).

Out of the 19 classes available from the 987 students, this
process identified four groups within intact classes with the
following characteristics:

Group 1   Group 2

Total N in class: 101Total N in class: 74
N using SA: 28 (27%)N using SA: 17 (23%)

N using DA: 4 (4%)N using DA: 3 (4%)

Group 3   Group 4

Total N in class: 25Total N in class: 35
N using DA: 10 (40%)N using DA: 11 (31%)
N using SA: 0 (0%)N using SA: 1 (3%)

Groups 1 and 2 consist of students who claim to use a dominantly
Surface Approach to learning and Groups 3 and 4 consist of
students who claim to use a dominantly Deep Approach to learning.
The gender and age characteristics of each group and the total
sample of 987 are shown in Table III. Chi-Square Tests and t-
Tests were used to compare each group with the total sample with
respect to gender and age respectively. The only significant
differences that emerged were that Group 1 was a significantly
younger [t(1013)=2.5, p<.05] and Group 4 was a significantly
older group [t(997)=5, p<.001] than the whole sample.

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Table III somewhere here

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It is the perceptions of these four groups that are summarised in
the following discussion.

Results

The general descriptions given at the beginning of the summary
of the perceptions of each group are based on the highest
occurring frequencies of the categories of "statements" and
associated "reasons". In each case, this is followed by examples
of specific comments in those categories.

Group 1 - Surface Approach

Of all the events and behaviours that occurred in their learning
environments, this group of students felt that their learning was
helped when the presentation by the lecturer was clear, well

paced and included practical applications because those
activities clarified and consolidated information, made learning
easier, did not waste time and assisted in the students'

preparation for assessment. Typical examples of students written comments are:

"My learning is helped when

pages of unnecessary information and this allows time to really listen."

the main points to be arrived at because then you have succinct notes and know what's important and what's not."

read along and not rush.

gives me guidance as to what to expect.

lecturer gives you a model to work and study from."

the exam because you know how to answer questions - very important for (content area) subjects".

because it lets me see how assignments must be written."

Of all the events and behaviours that occurred in their learning environments, this group of students felt that their learning was hindered when the presentation
by the lecturer was not clear, badly paced and lacked variety and class discussion was not structured and the class was not disciplined because those activities prevented the clarification and consolidation of information, made learning more difficult, wasted time and hindered preparation for assessment. Typical examples of students written commentsare:

"My learning is hindered when

copy down because your notes for the tute aren't enough to refer back to."

down because it's hard to keep up when they talk too fast."

follow and can't give her a right model to answer exam questions."

that they do not care about trying to get the point across to students."

because I fall asleep."

guiding the discussion because the discussion is usually

uninformative and usually doesn't stay on the right track."

the prescribed work."

one knows and it often wastes time."

miss out on the relevant info and this puts me behind."

everything because you don't know what is really important."

approach because this makes it difficult to study for exams."

Group 2 - Surface Approach

Of all the events and behaviours that occurred in their learning environments, this group of students felt that their learning was helped when the presentation by the lecturer in an appropriately sized group, was clear, included practical applications and questioning and the lecturer supported students both personally and in their learning because these activities clarified and consolidated information, individualised and personalised learning,
made learning easier and assisted the students' preparation for assessment. Typical examples of students written comments are:

"My learning is helped when

other because it is more friendly, relaxing and comfortable."

board because it enhances my understanding."

off the board because it assists greatly in learning."

because by then I will be able to go through notes which I don't understand."

effort in(to) my studying."

you get a direct answer to what you want to know."

me from researching in the wrong area and wasting my time."

papers because we then have an idea as to how to prepare for exams."

study from."

Of all the events and behaviours that occurred in their learning
environments, this group felt that there were two major
influences that determined what hindered their learning. First,
the lecturer, where the lecturer's presentation was not well
structured, poorly paced, lacked variety and relevance and
second, themselves, where they felt that their own low self-
esteem also adversely affected their learning. They regarded

these activities and characteristics as important influences
because they made learning more difficult, decreased
concentration, wasted time and meant that the lecturer did not
provide guidance, direction and support. Typical examples of
students written comments are:

"My learning is hindered when

time to be covering content that is not relevant."

difficult to keep up to date."

revise to keep you on track."

notes because it makes study difficult and the text does not
specify topics that the lecturer may want emphasised."

become tedious and I lose concentration."

same routine class work."

have formed an opinion and may look foolish."

I'm a slow learner and can't answer the questions."

is wrong."

Group 3 - Deep Approach

Of all the events and behaviours that occurred in their learning
environments, this group of students felt that their learning was
helped when the lecturer was perceived as having expertise and
presented in a clear, well structured way using resources and
discussion in a personalised classroom because these activities
clarified and consolidated information and made learning easier
through exposure to a variety of student and lecturer
perspectives and resources and by increasing the amount of
interaction and participation. Typical examples of students
written comments are:

"My learning is helped when

because it is the little intricacies of the subject that are most
interesting and memorable."

greatly assist research for assignments and general
understanding."

information because it increases one's capacity to retain the

information and study further afield."

own individuality and uniqueness because it makes you feel
worthy, highly regarded and motivates you to prove your
worthiness."

because she relates her experiences to us and motivates you by
her enthusiasm."

reflect upon the subject because the lecturer is then aware of
our needs and capabilities."

assists in clarification."

debate because in this sized group it increases group learning
and classroom dynamics."

evaluate own perception against peers' - learn more from them."

Of all the events and behaviours that occurred in their learning
environments, this group of students felt that their learning was
hindered when the classes were not disciplined, classroom
discussion was dominated by a few students, there was too much
information presented to allow reflection and the presentation
was not clear. These activities reduced the clarity and ease of
learning due to the reduction in equitable and appropriate
interaction and participation and the denial of access to a
variety of student and lecturer perspectives. Typical examples
of students written comments are:

"My learning is hindered when

do not stop them because I find it hard to concentrate on the
lecturer if there is general mumbling going on."

skills because the students become bored and despondent and this
leads to an inefficient learning environment."

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relatively short time
because I feel I have too much information to absorb."

reflect upon what you have learnt."

shallow, one-sided or not really cared for because learning
should be open-minded not a tightly controlled package."

get a chance to interact."

no input from anybody else and it's hard to learn anything more
if you're the only one talking."

tutorials because I feel that I am missing out on content."

Group 4 - Deep Approach

Of all the events and behaviours that occurred in their learning
environments, this group of students felt that their learning was
helped when discussion, small group and experiential activities
occurred, when lecturers supported students' learning and the
students were personally involved in their learning because these
activities enhanced clarification, consolidation and integration
of information, promoted thinking, supported the use of self-
paced, self-directed and individual styles of learning. Typical
examples of students written comments are:

"My learning is helped when

others' opinions, questions, answers etc."

and investigation of a subject because it helps clarify
problems."

discussed."

learn alternate ways of functioning."

me to experience the learning directly."

because I felt more involved in my learning processes and
direction."

some analytical thought processes for me - often I'm too lazy to
generate this off my own back.

allows me to move on to other concepts I have not considered."

it makes me test out my own hypotheses."

basis because it provides the opportunity to have personal
needs/concerns attended to."

me quickly relate to the new information."

me autonomy and a sense of being in control."

styles."

Of all the events and behaviours that occurred in their learning
environments, this group of students felt that their learning was
hindered when the lecturer lacked expertise, paced presentation
badly, was unaware of the students' knowledge base and needs, did
not provide personal support, assumed a superior status and when
there was little interaction among students because these
activities and characteristics reduced the opportunity for
clarification of information, decreased students' personal
involvement in and control over their learning, reduced the
possibility of interaction and participation and recognition as a
person. Typical examples of students written comments are:

"My learning is hindered when

are unrealistic expectations of students' performance."

don't."

they don't and cannot presume that a role equates with expertise
ability, knowledge or empowerment principles."

and presumes that I know as much if not more than they do because
I can't take down notes or grasp concepts because they have
talked too quickly."

treated as such."

feel involved."

spoken to and not involved in the process."

in control of our learning."

Discussion

Surface Approach Groups

The perceptions of Groups 1 and 2 are very similar. Both
believed that their learning was helped when presentation was
clear, well structured, well paced and included practical
application. They appreciated these aspects of their learning
environments because they clarified and consolidated information,
made learning easier and assisted them in their preparation for
assessment. What students in these groups did not appreciate was
the obverse of the above - lack of structure, clarity and
variety, poor pacing and poor discipline - because these
behaviours and activities made learning more difficult and
hindered preparation for assessment. The only major differences
between the groups was that Group 2 included negative personal
characteristics as having an adverse influence on their learning
and, as indicated earlier, Group 1 was a significantly younger
group. These differences and their implications are not explored
here as it is the Deep Approach groups that are of more interest
and these are discussed in some detail next.

Deep Approach Groups

Both Groups 3 and 4 perceive that interaction and positive,
supportive interpersonal relationships help their learning while
the opposite, reduction of the opportunity for quality and
equitable interaction due to an inept lecturer or a dominant
minority of students, hindered their learning. They do however
differ in important ways: Group 3 emphasises the provision of
some structure in their learning environment by the lecturer as
helping them learn or hindering them if it is not present, while
Group 4 report that their learning is facilitated when they are
given some freedom, autonomy and opportunities for self direction
and indicate that their learning is hindered when those features
are not available in their learning environment. There are at
least two possible explanations for this difference.

First, the difference between Groups 3 and 4 may be explained to
some extent by age. As indicated earlier, Group 4 was a
significantly older group. Dart (1994), in reviewing the
surprisingly limited research on the influence of age on the
adoption of approaches to learning and supplementing that with

research of his own, found that older students were more likely
to adopt a deep approach (as opposed to a surface approach) and
to use cognitive strategies associated with a deep approach.
However, both Groups 3 and 4 reported having an orientation of a
deep approach. It may well be that there are qualitative
differences between Group 3 and Group 4 in terms of the way they
process information. Such differences could be identified in
their conceptions of learning (Marton, Dall'Alba & Beaty, 1993)
and their strategy use (Dart, in press). This is currently being
explored (Dart & Clarke, 1994).

A second explanation could lie in the behaviour of the lecturer.
One of the factors that may influence the way that the intention
of using a deep approach is brought to actuality is the
particular approaches to teaching used by lecturers. In Group 3,
it could well be that the lecturer went about teaching in such a
way as to provide a structured learning environment within which
understanding could develop. In Group 4, the lecturer's approach
may well have been to provide students with more autonomy to
achieve the same end. An examination of the lecturers' beliefs
about learning and the congruence between that and their stated
intentions of how they go about teaching is also the subject of
ongoing research (Clarke & Dart, 1994).

The real explanation of the difference between Group 3 and Group
4 probably lies in some combination of these possibilities.
Whatever the explanation, these differences should caution
lecturers to avoid talking generally about "a" deep approach as
if it were a unidimensional concept. For some students, a deep
approach to learning may mean using appropriate strategies that
enable them to seek meaning and understanding in an environment
that is well structured and organised and supports that
intention; for others, it may mean pursuing the same intention in
an environment that gives them some measure of control or

autonomy in their learning and so necessitating the use of other
strategies appropriate for that environment.

Comparison of the Surface Approach and the Deep Approach Groups

In comparing the "pen picture" descriptions of the groups, a
number of similarities are evident. All groups to varying
degrees had similar perceptions as far as appreciating clear well

paced and well structured presentations and disparaging unclear, badly paced and
unstructured discourse. However, the reasons given by the two sets of groups for appreciating these activities in their learning environments were significantly different. For the surface approach groups, these activities made preparation for assessment easier while for the deep approach groups, they facilitated further research and understanding and allowed them to increase personal involvement in their learning. The difference is encapsulated in the comments: "My learning is helped when the lecturer explains things properly and gives the format for the exam because you know how to answer questions - very important for (content area) subjects" (Group 1 [Surface Approach] student) and "My learning is helped when the lecturer uses concise, well-presented and documented information because it increases one's capacity to retain the information and study further afield" (Group 3 [Deep Approach] student). The other major difference was in the perceived importance of classroom interaction. The Surface Approach groups did not perceive this activity as important at all in their learning while, for both the Deep Approach groups, the vehicle of discussion which exposed the views of all participants - students and lecturer - to scrutiny was seen as crucial in the development of personal meaning and understanding.

Conclusion

One of the aims of this paper was to provide empirical support for the theoretical conjectures about what types of learning environments will promote the use of strategies consistent with a deep approach to learning. The outcomes of the study do support a number of the suggested practices summarised by Ramsden (1992): Surface approaches are encouraged by "assessment methods that create anxiety", "an excessive amount of material in the curriculum" and "lack of independence in studying"; while deep approaches are encouraged by "stimulating and considerate teaching, especially teaching which demonstrates the lecturer's personal commitment to the subject matter and stresses its meaning and relevance to students" and "opportunities to exercise responsible choice in the method and content of study".

However, in attempting to achieve this aim, a more important issue has emerged with regard to the use of such "checklists". Lecturers (and researchers) using the concept of "approaches to learning" from their own perspectives, need to be aware that it may not be encapsulating the range of activities in learning

environments that students using these approaches to learning see
as facilitating a specific approach. In a particular learning

environment, using checklists that identify factors that
facilitate or inhibit specific approaches to learning may be
useful for the learning of some students but not others. There
are no such things as general recipes that can be relied on to be
successful in promoting change in or maintaining "a" deep
approach to learning for all learners. Any approach to learning,
and the one of particular interest here is the deep approach, is
a complex, multidimensional and, in particular, a personal
construct. Therefore, student perceptions of what helps or
hinders their learning need to be accounted for in developing
learning environments that facilitate say a deep approach to
learning. The message for lecturers is clear: a lecturer can not
just get up in front of a class and teach in recipedriven ways
that are suggested by theory, conjecture, and even normative
empirical findings. What the data in this study is saying is
that lecturers need to be flexible in their teaching styles and,
cognisant of the "checklists", try to accommodate the learning
needs of all in their class such as providing opportunities for
autonomy and within the same environment providing structure for
those who prefer it. This means catering for the
different perceived facilitators of learning that will allow
students to achieve the same goal of personal and meaningful
understanding.

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YOUR PERCEPTIONS OF YOUR LEARNING ENVIRONMENTS

This questionnaire focuses on how events in learning
environments influence your learning. You are asked about
events which help you in your learning and which hinder
you in your learning.

You may experience a variety of learning environments.
These could include:

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,
gymnasia etc.
PRACTICAL SETTINGS OFF CAMPUS such as work environments,
schools, hospitals etc.

* Numbers are approximate

EVENTS THAT HELP YOU LEARN

For the subject you are now in, think about the
behaviours and activities of lecturers/tutors and
students which you feel have helped your learning.
In your own words, please describe these behaviours
and activities and also indicate why they helped you
learn. Give as many examples as you can from the
different learning environments listed above.

An example of how you may respond 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__

_____

Figure 1 Questionnaire Format

Table I Sample responses to popular "statement" and "reason" categories

StatementPositive Pole (+)Negative Pole(-)

Practical LearningNo Practical Learning

Practical application/"Practical everyday"The lecturer doesn't
experiential learningexamples are given togive us very much time
occurssupport every point"on the computers"

ClearUnclear

Clarity of presentation"The tutor explains step"The tutor does not
by the lecturerby step how to doexplain things clearly"
things"

VarietyNo Variety

Use of a variety of"Things are explained in"The lecturer speaks
classroom/presentationdifferent ways and withcontinuously for the full
activitiesdifferent mediumslecture, reading from
(visual, oral etc.)"notes"

ReasonPositive Pole (+)Negative Pole (-)

IncreasedDecreased

Effect on clarification/"It gives me the chance"It does not help me
understanding of learningto have particularclear up a particular
misunderstandingsissue or idea"
clarified"

IncreasedDecreased

Effect on the"It facilitates my"You have gained
amount/ease of learninglearning"nothing from the lecture"

IncreasedDecreased

Satisfaction of students'"It maximises my"You can't get the
learning needslearning needs"information down"

Table II Descriptive Statistics for Surface and Deep Approaches
for the Total Sample

————————————————————————

MeanSD
——

Surface Approach   3.44   0.53
——

Deep Approach   3.38 0.54
——

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Conference, Newcastle, 1994
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Table III Comparison of Characteristics of the Four Groups with the Total Sample

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	Group 1	Group 2	Group 3	Group 4	Total Sample
Gender					
Female	14	14	5	6	607
Male	14	9	5	2	336
Not Indicated	0	0	0	3	44
Total	28	23	10	11	987
Chi Square (Group vs Total Sample)	ns	ns	ns	ns	
Age					
Mean	21.6	23.9	23.2	35.2	23.6
SD	4.0	5.5	5.1	9.0	7.1
t-test (Group vs Total Sample)	t=2.5 df=1013 p<.05	ns	ns	t=5.0 df=997 p<.001	

Figure 1 Questionnaire Format

Table I Sample responses to popular "statement" and "reason" categories

Table II Descriptive Statistics for Surface and Deep Approaches for the Total Sample

Table III Comparison of Characteristics of the Four Groups with the Total Sample