

An exploration of student learning experiences and approaches to learning

Pamela Sutton & Ann Henry, Southampton Institute

The research literature documents the different approaches to learning that students in Higher Education (HE) can adopt, e.g. deep, surface and strategic. Stage 1 of a longitudinal study aimed to determine the students' approach to learning, and to assess whether this was related to previous learning experiences, initial expectations of HE and learning experiences in HE. A questionnaire study was conducted with 57 Level 1, degree students. The results revealed that a high proportion of students rated themselves as deep learners. Approach to learning was generally unrelated to previous learning experiences, but was related to initial expectations of HE. The students' approach to learning was related to some initial learning experiences at HE and to assessment grades. It was concluded that the relationships between learning approach and learning experiences were generally consistent with previous research. In this study, the strategic approach appeared to be more beneficial in terms of assessment grades.

ASSESSING STUDENTS' APPROACHES to learning is not a recent interest for researchers in Higher Education (HE). What is novel is the more recent interest concerning the perceived quality of student learning experiences. Part of this new interest could easily be linked with HE students having an additional role as 'customer', with the majority of students being liable for payment of HE course fees. With this in mind, HE Institutions are mindful that students who are not satisfied with either their course or the Institutional policies, can decide to vote with their feet and withdraw from their studies. High student retention rates are desirable for a number of reasons with financial implications being the most obvious to those who manage HE institutions.

Part of the research on student learning experiences has involved defining students' approaches to learning. Chalmers and Fuller (1996) provide an up to date summary of the earlier research from the 1970s and 1980s (e.g. Biggs, 1987; Biggs, 1994; Entwistle, Hanley & Ratcliffe, 1979; Entwistle & Ramsden, 1983; Marton & Saljo, 1976; Saljo, 1979) that highlights three different approaches. They define the 'Surface' approach to learning as based on a superficial intention to learn information without

necessarily understanding the content and meaning of the material. Gibbs (1995) found that students adopt this approach when the workload is seen as heavy or when memorisation of material forms the basis of assessment. In contrast, a deep approach to learning is characterised by a strong motivation to actively understand and make sense of material read in texts or heard in lectures, seminars and practical classes (Chalmers & Fuller, 1996). This approach will benefit from good understanding and better long-term retention of material as well as higher grades and degree classification (Gibbs, 1995; Trigwell & Prosser, 1991; Watkins & Hattie, 1985). The third approach summarised by Chalmers and Fuller (1996) is referred to as 'Achieving' (Strategic). This combines both the surface and deep approaches dependent on the tasks and context of the learning situation. The main aim or intention is to use whatever strategies are necessary to gain high marks.

Entwistle, Tait and McCune (2000) reiterate the earlier findings of Entwistle and Ramsden (1983) by concluding that positive correlations are normally found with academic performance and the strategic approach. They argue that the deep approach is more likely to relate to academic success in

the later years of a degree course, and to be used when assessment is closely linked with good evidence of conceptual understanding. In contrast, negative correlations are generally found between academic performance and the use of a surface approach.

Biggs and Moore (1993) believed that students' 'conceptions of learning' were based on their earlier school and learning experiences as well as their current goals and motives. An earlier study by Saljo (1979) found five different conceptions of learning, which were confirmed by subsequent researchers (e.g. Marton & Ramsden 1987; Van Rossum & Schenk, 1984) and a further sixth description added by Marton, Dall'Alba and Beaty (1993). These six descriptions are: a quantitative increase in knowledge; memorising and reproduction; applying knowledge; making sense or abstracting meaning; interpreting and understanding reality in a different way and lastly, changing as a person.

Hence, the previous research suggests there are links between students' approaches to learning, their conceptions of learning and their perception of the assessment requirements. Chalmers and Fuller (1996) highlight that 'students' approaches to learning depend on their goals, motives and strategies as well as their interpretation or perception of the demands and requirements of the learning task' (p.6). They suggest that the first three 'conceptions of learning' require lower level cognitive processes such as rote learning or repetition. These are often described as quantitative conceptions and concern acquisition of isolated facts, skills or procedures. These three conceptions could be related to a surface approach to learning as proposed by earlier researchers such as Biggs (1987) and Entwistle and Ramsden (1983). The latter three conceptions are referred to as qualitative aspects of learning such as understanding the meaning of new information and relating this to what they already know. This generally involves higher level cognitive processes such as critical analysis and evaluation, and relates more easily to a deep approach to learning (Chalmers & Fuller, 1996).

Prosser and Trigwell (1999) provide a useful model [derived from John Biggs' (1978) model] that shows links between students' 'Approaches to Learning' and students' 'Conceptions of Learning'. They refer to this as the Presage-Process-Product model of student learning which takes into account a number of factors that may influence student learning. According to their model, the characteristics of the student (e.g. previous experiences) are related to the learning context (e.g. teaching methods and assessment) and these form the 'Presage' aspect of the model. The second part of the model regards the 'Process', which focuses on students' perceptions of the learning context as well as the students' approaches to learning (defined earlier). The 'Product' is the final part of the model and refers to the students' learning outcomes. This is influenced by both the 'Presage' and 'Process' aspects of the model. This model emphasises the importance of the students' perceptions of the learning and teaching context, and how these are influenced by previous experiences of learning and teaching and the context provided by the learning institution.

The objectives of phase 1 of this longitudinal study were to assess: (1) students' previous learning experiences in Further Education (FE); (2) students' approach to learning (i.e. Surface/Deep/Strategic); and (3) their initial expectations of and experiences in Higher Education (HE). With these specific objectives in mind, the Prosser and Trigwell (1999) 'Presage-Process-Product' model was further explored. In order to do this the following key questions were formulated: (1) What approach to learning was used by students? (2) How do students' previous learning experiences in Further Education relate to their approach to learning? (3) How do students' initial expectations of Higher Education relate to their approach to learning? (4) How do students' initial learning experiences in Higher Education relate to their approach to learning?

Method

Design

This study was focused on two questionnaires and incorporated both a between and within subjects design.

Participants

Fifty-seven participants were recruited from a Level 1 degree course. Table 1 details the number of males and females in each of the four age categories noted on the questionnaire.

Materials

Two questionnaires were used along with student examination and coursework assignment marks for all units in Semester 1.

1. The short 18-item version of the Approaches to Studying Inventory (ASI, Entwistle & Ramsden, 1983) was used. Six items refer to each of the three approaches (Surface, Deep and Strategic). An example item for each approach is as follows: ‘I tend to read very little beyond what is required for completing assignments’ (Surface), ‘I usually set out to understand thoroughly the meaning of what I am asked to read’ (Deep), ‘It’s important for me to do really well in the courses here’ (Strategic). The participants were required to indicate their strength of agreement or disagreement with each item on a five-point scale, ranging from ‘definitely disagree’ (scored as 0) to ‘definitely agree’ (scored as 4).

2. A new questionnaire was designed for the current study to assess previous learning experiences in FE as well as initial expecta-

tions and experiences of HE (Previous Experiences & Expectations in Education (PEEIE), Henry & Sutton, 2000, unpublished). This measure consisted of 23 questions relating to their previous experiences of FE, i.e. ‘What style of teaching did you experience at FE/Sixth form College?’ A further 18 questions referred to their expectations of HE and experiences during Semester 1 at a College of Higher Education, i.e. ‘When you first arrived ... what did you expect to do in seminars?’ and ‘What revision strategies did you use for Semester 1 exams?’

Procedure

The participants first completed the PEEIE questionnaire, then approximately one week later completed the ASI questionnaire.

Results

1. What approach to learning was used by students?

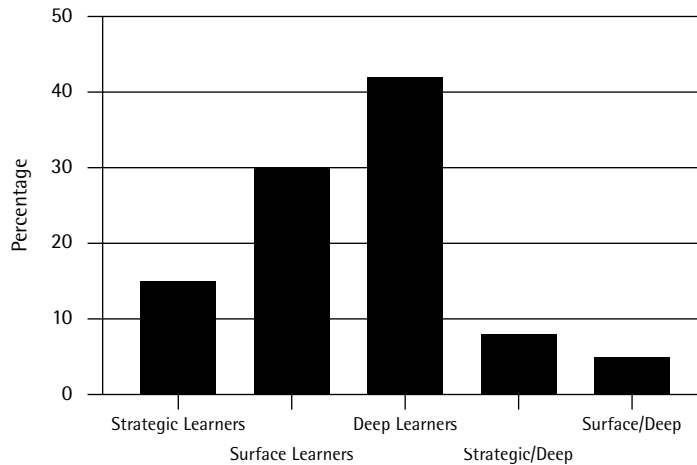
The Approaches to Studying Inventory (ASI) results in three scores, i.e., the student’s deep, surface and strategic score. Each of these scores can range from 0 to 24 (i.e. six questions with a maximum score of four for each) depending on the strength of the approach used by the student. For the whole sample, the mean scores on the scales were, Strategic M = 14.34, Surface M = 15.20 and Deep M = 16.20.

The students were divided into groups on the basis of their dominant approach (the highest score). Some students showed an equally high score for two approaches. The percentage of students in each group is shown in Figure 1, which illustrates that there were a high percentage of deep learners.

Table 1: Frequency of male and female participants in each age category.

Age/Gender	Female	Male	Total
16–21 years	35	6	41
22–25 years	4	6	10
26–35 years	0	1	1
35+ years	5	0	5
Total	44	13	57

Figure 1: Percentage of students classified by dominant learning approach.



2. How do students' previous learning experiences in Further Education relate to their approach to learning?

The students were asked what style of teaching they had experienced in Further Education. The percentage of students experiencing different educational styles is shown in Figure 2. The majority of students had experience of tutor directed styles of learning, e.g. dictated lessons. Fewer had experience of lessons where the tutor used overhead slides, which may require more work on the part of the student in noting what they see as important, and which are more common in Higher Education. Few students experienced student led seminars but many took part in discussion groups and individual work which are more student-directed.

Analysis of variance (ANOVA) was performed to assess the relationship between dominant approach to learning and how many hours per week the students had spent on four types of activities in FE, i.e. reading, assignments, discussion and reflection. This ANOVA showed a significant main effect of activity ($F_{(3,144)}=14.01, p<0.001$), but this did not interact with approach ($F_{(12,144)}=0.561, p>0.05$). The main effect of activity is illustrated in Figure 3. The majority of the students' time was spent working on their assignments, with very little time spent

on discussion and reflection. This effect was independent of the students' approach to learning.

The students were asked how often (on a 12-point scale ranging from 'never' to 'always') they engaged in different activities when preparing for their assignments and their examinations at FE, e.g. skim reading, making notes, and discussing ideas with other students. Correlational analysis between frequency of preparation activity and scores on the Deep, Strategic and Surface scales of the ASI questionnaire, revealed no significant relationships. Therefore the students' approach to learning was unrelated to the frequency with which they engaged in these activities at FE.

3. How do students' initial expectations of Higher Education relate to their approach to learning?

The students were asked to indicate what they had initially expected to do in lectures and seminars, from a list of activities given in the questionnaire. Two MANOVAs were performed to assess the expectations of firstly, lectures, and then seminars, in relation to each of the Deep, Strategic and Surface approach scores. The analysis looked at each activity and divided the students into between subject groups

Figure 2: Style of teaching experienced in Further Education.

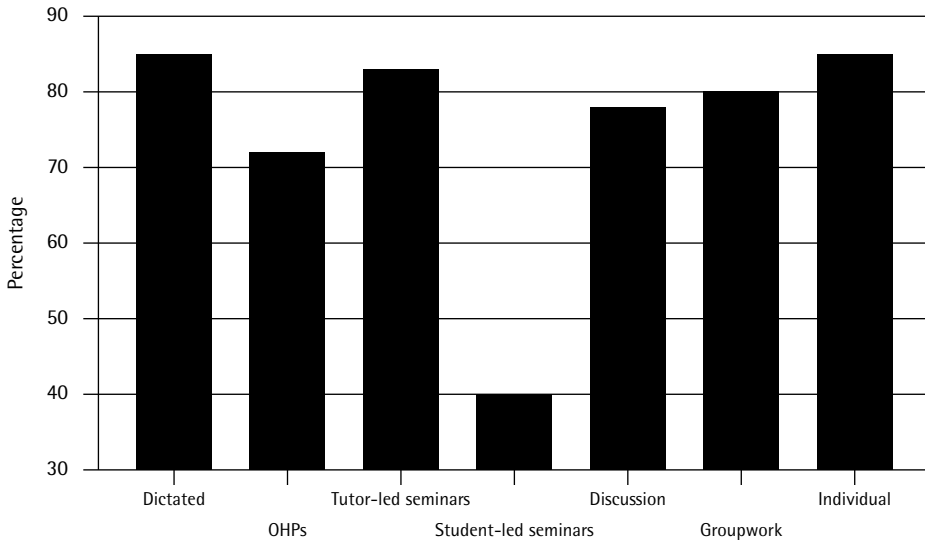


Figure 3: Time spent on learning activities per week in Further Education.

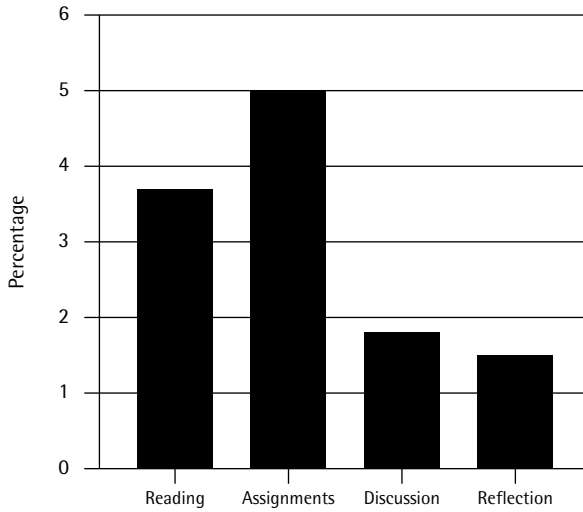


Table 2: Mean Strategic and Surface Approach scores in relation to initial expectations of Seminars at HE.

Strategic Approach Scores			Surface Approach Scores		
Expectation of Seminar Activity	Yes	No	Expectation of Seminar Activity	Yes	No
Taking notes from board/OHPS's	13.54	15.35	Discussing topics in small groups	14.73	16.36
Passive listening	16.50	14.17	Discussing material presented in lectures	15.44	13.33

depending on whether they indicated that they would expect to do this activity or not. The dependent variables for both MANOVAs were the scores on the three approach scales.

There were no significant differences between expecting a particular activity or not in lectures for any of the three approaches. There were, however, several differences in their expectations for seminars. Students who expected to actively listen in seminars had a lower mean Deep Score, i.e., 15.39, compared to those who did not expect to engage in this activity i.e. 17.88 ($F_{(1,37)}=5.60$, $p<0.05$). Table 2 shows the effects relating to the Strategic and Surface scores. The students who expected to take notes from the board or OHPs had a lower mean Strategic score ($F_{(1,37)}=4.59$, $p<0.05$), and the students who expected to passively listen had a higher mean Strategic score ($F_{(1,37)}=6.35$, $p<0.05$). Students who expected to discuss topics in small groups had a lower mean Surface score, although this effect only approached significance ($F_{(1,37)}=3.89$, $p<0.05$), and those who expected to discuss lecture material in the seminars had a higher mean Surface approach score ($F_{(1,37)}=6.96$, $p<0.05$).

The students were asked how many hours per week of independent work they had expected to carry out when they first started their degree. Correlational analysis between this and the students' scores on the Deep, Strategic and Surface scales showed a significant positive correlation with their Strategic scores ($r=0.33$, $N=49$, $p<0.05$).

The students were asked how much assistance (on a 10-point scale ranging from 'a great deal of help' to 'no help') they had expected from lecturers for essay assignments, oral presentations, examination preparation and report assignments. Correlational analysis between these scales and the students' Deep, Strategic and Surface scores showed a significant negative correlation between amount of help expected on essay assignments and their Strategic scores ($r=-0.314$, $N=53$, $p<0.05$).

4. How do students' initial learning experiences in Higher Education relate to their approach to learning?

The students were asked how satisfied (on a 10-point scale ranging from 'very satisfied' to 'not very satisfied') they were with various aspects of their degree course. Correlational analysis between these scales and the students' Deep, Strategic and Surface scores showed a significant positive correlation between satisfaction with discussions in seminars and their Strategic scores ($r=0.288$, $N=53$, $p<0.05$). There was also a significant negative correlation between satisfaction with library facilities and Surface scores ($r=-0.28$, $N=54$, $p<0.05$).

The students were asked what revision strategies they had used in preparation for their Semester 1 examinations. A MANOVA was performed to assess whether they performed a particular strategy or not, in relation to each of the Deep, Strategic and Surface approach scores. There was one significant effect which showed that those

students who discussed topics with other students when revising for their exams had a higher mean Deep score, i.e. 17.5, than those that did not, i.e. 15.10 ($F_{(1,37)}=6.15$, $p<0.05$).

The students' responses on the Approaches to Studying Inventory (ASI) were compared with their semester 1 average grades for coursework, exams, and overall average. The students' scores on the Strategic scale showed significant positive correlations with each of these marks i.e. with average coursework grade ($r=0.30$, $N=53$, $p<0.05$), average exam grade ($r=0.38$, $N=53$, $p<0.01$), and average overall grade ($r=0.38$, $N=53$, $p<0.01$). The students' scores on the Surface scale showed a significant negative correlation with overall grade ($r=-0.29$, $N=54$, $p<0.05$). The correlation with coursework was again negative but only approached significance ($r=0.27$, $N=54$, $p<0.05$) and there was no significant correlation between the Surface scale and exams although again the direction was negative ($r=-0.21$, $N=54$, $p>0.05$). The students' scores on the Deep scale did not significantly correlate with coursework, exam or overall marks ($r=0.09$, $r=0.11$ and $r=0.13$ respectively, $NS=55$, $p>0.05$).

Discussion

This section will discuss the results in relation to each of the three approaches to learning.

1. Deep Learners

Using the ASI, a high percentage of students were classified as deep learners, which was a surprising result as this was inconsistent with the informal observations of tutors. This classification was made by comparing the three scores from the Inventory for each individual student, and selecting the approach with the highest score. This meant that the group of students who were classified as deep learners had wide ranging scores on the deep approach scale. This situation was repeated with the strategic and surface scales. Therefore, the analysis that

was conducted using dominant approach as an independent variable must be viewed with caution, particularly as this analysis also suffered from low participant numbers in some groups. However, the majority of the analyses used the three individual scores (deep, surface and strategic) as a dependent variable, as this was less problematic.

Based on Entwistle and Ramsden's (1983) and Chalmers and Fuller's (1996) distinction between learning approaches it would seem probable that Level 1 students would show surface approaches to learning. The style of teaching they had experienced in FE would be more likely to promote surface learning as dictated lessons could lead to superficial understanding, limited comprehension and memorisation of material. Similarly, Saljo's (1979) initial two conceptions of learning refer to a quantity increase in knowledge and memorising and reproduction, which relates to the surface approach to learning (Biggs, 1987; Entwistle & Ramsden, 1983). According to Prosser and Trigwell (1999) previous experiences are related to the learning context and this would then impact on their approach to learning. Therefore, experiences at FE might lead them to show a surface as opposed to a deep approach to learning at the start of their degree studies in HE. This did not seem to be the case with the current study as more students rated themselves as deep learners. However, the questionnaire used was fairly short, and it was possible that demand characteristics were evident. The students could have been completing the questionnaire in terms of what they ideally would do, rather than what they actually do, e.g. 'I usually set out to understand thoroughly the meaning of what I am asked to read.'

The students' dominant approach to learning did not interact with the amount of time the students spent on four types of activities in FE, i.e. reading, assignments, discussion and reflection. Therefore, irrespective of learning approach, a large proportion of their time was spent working

on their assignments at FE and very little time was spent on reflection and discussion. It seems that although many students noted that they had experience of discussing topics at HE (see Figure 2) they did not spend much time engaging in this activity. With regard to Prosser and Trigwell's (1999) model, the students were concentrating upon the end product, rather than engaging in higher levels of cognitive thinking. This would be consistent with a surface or strategic approach to learning, and inconsistent with a deep approach. This result, therefore, provided further doubt on the high percentage of deep learners reported using the ASI questionnaire.

The students were asked what they had initially expected to do in seminars and lectures, when they first started HE. Some of these expectations were related to the scores on the ASI. Students who did not expect to actively listen to the seminar content (e.g. write brief notes on anything that they did not understand), had a higher deep score than those who did expect to do this. Initially this result may seem anomalous, however, it could be argued that the deep learners would expect to take a more verbally active role in seminars, and not necessarily consider that they would just listen. Chalmers and Fuller (1996) noted that deep learners are motivated to actively understand material which may suggest active listening, but they are much more willing to discuss and debate material in order to help them understand. Listening, however active, may not be perceived by these learners as sufficient to help them interpret and make sense of the material. No significant differences were found for any of the approaches for those students who felt that they should actively participate in discussions in seminars and those that did not. This would appear to be because the majority of students (80 per cent), irrespective of approach, recognised that they would need to do this in seminars.

The revision strategies that the students engaged in when preparing for their Semester 1 examination showed some rela-

tion to the students' deep approach to learning. Those students with a higher deep score were more likely to discuss topics with other students. This was, therefore, consistent with Entwistle and Ramsden's (1983) view that deep learners engage in higher levels of thinking and are motivated to understand the topic area.

The correlations between assessment grades and the scores on the deep scale were all fairly close to zero indicating very little relationship between these measures. This finding was inconsistent with the previous findings of Entwistle and Ramsden (1983), Gibbs (1995), Trigwell and Prosser (1991), Watkins and Hattie (1985) and Chalmers and Fuller (1996), which indicated that a deep approach to learning would lead to higher grades. However, Entwistle, Tait and McCune (2000), note that a positive relationship between a deep approach and academic success is more likely in the later years of a degree course. So these measures may become more positively correlated as the students progress through their degree programme. The current results could show that while some Level 1 students adopting the deep approach to learning did well in their examinations and assignments, other students did not. A reliance on a deep approach may lead some students to show a good understanding of material and therefore high marks. Discussing revision topics with other students may mean they think more deeply, but if the wrong conclusions are drawn or if the student deviates from the topic too much, then this could lead to poor results due to an inadequate coverage of the required information.

2. Strategic Learners

When asked what they had initially expected to do in seminars when they first started HE, the strategic learners had expected to take notes from overheads and/or the board, and had expected to passively listen in seminars (e.g. listen but write or say nothing). It is possible that strategic learners, who are motivated towards achieving high marks in

assignments and examinations (Chalmers & Fuller, 1996), do not necessarily see the connection between seminars and assignment marks. They may not see the need to take notes and are satisfied to just passively listen to what is being discussed.

Students with higher strategic scores initially expected to have to carry out a large number of hours of independent study per week in HE, and they expected less help from lecturers with regards to their essay assignments. This would be consistent with the profile of strategic learners described by Entwistle and Ramsden (1983) and Chalmers and Fuller (1996). These learners plan their time to achieve the end product, and, therefore, may not expect to be given much assistance precisely because they believe that they are expected to work more independently.

Strategic learners showed more satisfaction with small group discussions in seminars in HE. Research would suggest that deep learners would be more likely to engage in this type of activity in seminars as this would be compatible with their approach to learning (Entwistle & Ramsden, 1983; Chalmers & Fuller, 1996). However, strategic learners adopt both surface and deep approaches depending on the context (Chalmers & Fuller, 1996). It therefore seems that in the context of seminars they were adopting a deep approach to learning and gained satisfaction with discussing topics in more depth.

With regards to the students' results, i.e. the product of their learning (Prosser & Trigwell, 1999), there was a significant positive correlation between marks and the students' score on the strategic scale. This was consistent with the view that strategic learners are motivated to find an appropriate strategy in order to gain high marks (Chalmers & Fuller, 1996), and with the recent findings of Entwistle, Tait and McCune (2000). This situation was evident for the students' average coursework grade, average examination grade, and overall semester grade. This would appear to show

that a strategic approach to learning was more beneficial in terms of the product of student learning.

3. Surface Learners

When asked what they had initially expected to do in seminars when they first started HE, the surface learners did not expect to engage in discussions in small groups but did expect to discuss lecture material in the seminars. If these students perceive the need to memorise and reproduce material given to them (Gibbs, 1995), having the lecture material reiterated in seminars provides a good opportunity for them to go over this material, check their understanding and aid their memory processes. It may also be that this initial expectation of seminars was based on what they had previously experienced at FE (Biggs & Moore, 1993). A high percentage (83 per cent) had experienced tutor-led seminars but only 40 per cent had experienced student-led seminars at FE. It is possible that the tutors' heavy involvement in these seminars may have revolved around reiterating class/lecture material. This previous experience would then have influenced the students' perceptions of what was expected in seminars once they started HE.

The surface learners were less satisfied with the library facilities in HE. With their primary motivation being the need to reproduce material (Entwistle & Ramsden, 1983) and a quantity increase in knowledge (Biggs & Moore, 1993), they may rely more heavily on the library facilities, particularly if the workload is perceived as high (Gibbs, 1995). This could then lead to a negative rating of the library facilities, if they do not fulfil their requirements. Whereas deep learners may enjoy learning *per se*, and, therefore, are happy to read around a topic, the surface learners would be more concerned with only finding the core recommended material for their assignments and then reproducing it.

The direction of the correlations between the surface scale and students' results, i.e. average coursework grade, average examination grade and overall

semester grade, were all negative, although the only significant correlation was for overall semester grade. This could show that adopting this approach was not effective in terms of achieving higher grades, which supports the findings of Entwistle, Tait and McCune (2000), Entwistle and Ramsden (1983) and Gibbs (1995). It could be that this approach works well in FE where there was more emphasis on repetition of information, but for degree level learning which requires a deeper understanding of material, this was not an effective approach to adopt.

4. Key Questions and Conclusions

In terms of the four key questions posed in the introduction, the study showed that a large proportion of students rated themselves as deep learners, although problems were noted with the questionnaire used. Students' learning experiences in relation to their approach to learning appeared to provide support for Prosser and Trigwell's (1999) Presage-Process-Product Model of Student Learning. For example, there were some links shown between experiences, current approach and grades, but links between previous experiences and approaches were not clearly evident in the data. The significant relationships between initial expectations of HE and approach, and between early experiences of HE and approach were consistent with the literature (Entwistle & Ramsden, 1983; Chalmers & Fuller, 1996). However, it appeared that with this level 1 group of students, the strategic approach was more beneficial than deep or surface approaches in terms of assessment and examination grades. This was consistent with more recent work by Entwistle, Tait and McCune (2000) but contrasts the earlier literature (e.g. Entwistle & Ramsden, 1983).

The findings reported here relate to phase 1 of a three-year longitudinal study with this cohort of students. The second phase of the study incorporated both the original short version of the ASI as well as the updated and revised version of ASI, the ASSIST (Approaches and Study Skill Inventory for Students, see Tait & Entwistle, 1996; Tait, Entwistle & McCune, 1998). The second phase of the research explored students' approaches to learning during Level 2 of their degree studies. These data include comparisons between the students' scores on the ASI and ASSIST to explore any differences in these quantitative measures. A qualitative dimension using focus groups was also included in this phase. Focus groups were used to ascertain students' perceptions of learning as well as their own learning experiences and their conceptions of the learning context (e.g. lectures, seminars, practical classes as well as coursework and exams). The final phase of the longitudinal study examined stability and/or change in students' approaches to learning across Levels 1 to 3 of their degree studies. This will enable further exploration of Prosser and Trigwell's (1999) 'Presage-Process-Product' model of student learning.

Acknowledgements

This work was supported by funding from Southampton Institute.

Both authors contributed equally to this publication.

Correspondence

Dr Ann Henry

St. Angela's College,
Education Department,
Lough Gill, Sligo,
Co. Sligo, Eire.
E-mail: ahenry@Stacs.edu.ie

References

- Biggs, J.B. (1978). Individual and group differences in study processes. *British Journal of Educational Psychology*, 48, 266–279.
- Biggs, J.B. (1987). *Student approaches to learning and studying*. Hawthorn, Victoria: Australian Council for Educational Research.
- Biggs, J.B. (1994). Student learning research and theory: Where do we currently stand? In G. Gibbs (Ed.), *Improving student learning: Theory and practice*. Oxford: The Oxford Centre for Staff Development.
- Biggs, J.B. & Moore, P.J. (1993). *The process of learning* (3rd ed.). Sydney: Prentice-Hall.
- Chalmers, D. & Fuller, R. (1996). *Teaching for learning at University*. London: Kogan Page.
- Entwistle, N.J., Hanley, M. & Ratcliffe, G. (1979). Approaches to learning and levels of understanding. *British Educational Research Journal*, 5, 99–114.
- Entwistle, N.J. & Ramsden, P. (1983). *Understanding student learning*. London: Croom Helm.
- Entwistle, N., Tait, H. & McCune, V. (2000). Patterns of response to an approaches to studying inventory across contrasting groups and contexts. *European Journal of Psychology of Education*, XV(1), 33–48.
- Gibbs, G. (1995). Research into student learning. In B. Smith & S. Brown (Eds.), *Research, teaching and learning in Higher Education*. London: Kogan.
- Henry, A. & Sutton, P. J. (2000). *Previous experiences and expectations in education*. Unpublished questionnaire.
- Marton, F. & Saljo, R. (1976). On qualitative differences in learning I: Outcome and process. *British Journal of Educational Psychology*, 46, 4–11.
- Marton, F. & Ramsden, P. (1987). Learning skills, or skill in learning. In J.T.E. Richardson, M.W. Eysenck & D.W. Piper (Eds.), *Student learning: Research in education and cognitive psychology*. Buckingham: The Society for Research into Higher Education & Open University.
- Marton, F., dall'Alba, G. & Beaty, E. (1993). Conceptions of learning. *International Journal of Educational Research*, 19, 277–300.
- Prosser, M. & Trigwell, K. (1999). *Understanding learning and teaching: The experience in Higher Education*. Buckingham: The Society for Research into Higher Education & Open University.
- Saljo, R. (1979). *Learning in the learner's perspective: Some commonsense conceptions*. Reports from the Institute of Education, University of Gothenburg. No. 76.
- Tait, H. & Entwistle, N.J. (1996). Identifying students at risk through ineffective study strategies. *Higher Education*, 31, 99–118.
- Tait, H., Entwistle, N.J. & McCune, V. (1998). ASSIST: A reconceptualisation of the approaches to studying inventory. In C. Rust (Ed.), *Improving student learning: Improving students as learners*. Oxford: The Oxford Centre for Staff and Learning Development.
- Trigwell, K. & Prosser, M. (1991). Relating approaches to study and quality of learning outcomes at the course level. *British Journal of Educational Psychology*, 61, 265–275.
- Van Rossum, E.J. & Schenk, S.M. (1984). The relationship between learning conception, study strategy and learning. *British Journal of Educational Psychology*, 54, 73–83.
- Watkins, D.A. & Hattie, J. (1985). A longitudinal study of the approach to learning of Australian tertiary students. *Human Learning*, 4, 127–142.