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2
Approaches to Learning

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The new lecturer in the university of the twenty-first century who seeks to improve their teaching is faced with a bewildering array of questionnaires which promise to deliver useful information about their students and their learning. Some of these refer to "approaches to learning", others to "learning styles", still others to "learning patterns" and "study orchestrations". Can these provide answers to the complex challenges that currently present themselves in higher education learning contexts?

Coffield, Moseley, Hall and Ecclestone (2004) set out to assess the potential value of these tools, picking 13 commonly used questionnaires for the focus of their study, representing a range of learning theories. In short, they identify the ASSIST (Entwistle, 1997a), which measures "approaches to learning" as most appropriate for use, cautioning however that it could be "used by teachers without in-depth understanding of its underlying implications" (p. 25). What are these implications? This chapter provides an overview of key aspects of the approaches to learning theory. The review is necessarily selective, and where appropriate we refer readers to other resources for further details. Our focus is on the distinctive contributions that this research programme has generated over some three decades; we have attempted to identify particular insights that could be of value both to educators and to researchers.

The Origins of Approaches to Learning

Starting in the late 1960s, the experiences and voices of university students took on new levels of prominence in public life, and it is therefore not surprising that this era also saw new developments in research on student learning. In English-speaking countries, most of these researchers had backgrounds in educational psychology, and there was therefore substantial interest in developing questionnaires (termed "inventories") which were aimed at uncovering factors which could predict academic performance (for example, Biggs, 1970; Entwistle and Entwistle, 1970). Early work had focused mainly on traditional psychological attributes such as personality and motivation, but increasingly interest started to be directed towards the complex interaction between students and their environments.

Around this time, a research team in Sweden struck out on a new direction and, in a groundbreaking study, qualitatively examined students' responses to a "real" task which required them to read a piece of text in order to be able to respond to questions that would later be posed (Marton and Säljö, 1976a). This research approach had distinctive features that set it apart from the typical

methodologies that were dominant in educational psychology at the time (Entwistle, 1997b). Firstly, it used a naturalistic setting which aimed to approximate a real educational situation. Secondly, it aimed to understand the individual participants' own perspectives of the situation[1] rather than aiming for the perspective of an "objective" outside observer. Marton and Säljö analysed participants' explanations of how they approached the reading task, and identified two distinctly different approaches: the "deep" approach to learning,[2] in which students focused on understanding the text, and the "surface" approach to learning, in which students did not focus primarily on understanding the text but rather on memorising text in order to be able to answer the questions.

Entwistle has been described as the first person in the English-speaking countries to grasp the importance of this Swedish work (Ramsden, 2005). Based in the UK, he and colleagues had turned their attention towards the "natural setting" of real university contexts and had conducted interviews with students about their experiences of studying. For this shift they credit the influence of key North American qualitative studies of student learning such as Becker, Geer and Hughes (1968) and Perry (1970). Using the work of Marton and Säljö (1976a) they were able to identity deep and surface approaches but they also noted the presence of what was considered to be a third approach, the strategic approach, where students were aiming towards top achievement, using whichever of the deep or surface approach was deemed necessary.

Entwistle's inventory was thus reframed using these new concepts and the "Approaches to Studying Inventory (ASI)" was shown to be a useful tool for identifying these three distinct approaches to learning[3] (Entwistle and Ramsden, 1983). In order to further communicate this new research on student learning, both English and Swedish researchers published a collected volume which is still considered a definitive text and is now in its second edition (Marton, Hounsell and Entwistle, 1984, 1997).

In parallel work in Australia, Biggs (1978) published an analysis of student responses to his Study Processes Questionnaire (SPQ) in which he noted the similarity of two of his categories to Marton and Säljö's (1976a) deep and surface approaches. In fact, his full set of three categories showed an even closer correspondence with Entwistle's work, including a third strategic approach.[4] Biggs characterised approaches to learning as "congruent motive-strategy packages", each comprising a motive and related strategy (Biggs, 1987a). He defined the surface motive as "extrinsic to the real purposes of the task" while the deep motive is "to engage the task properly, on its own terms . . . founded on an intrinsic interest in that task" (Biggs, 1993, pp. 6–7). Based on each of these motives, students will use a congruent strategy towards that end.

Following the methodological mix represented in the early studies, approaches to learning have continued to be identified mainly in natural settings using either qualitative interview or quantitative inventory studies, with the vast majority of studies in the literature falling in the latter category. The most widely used inventories (Richardson, 2004) are successive versions of Biggs' Study Processes Questionnaire, the SPQ (Biggs, 1987b; Biggs, Kember and Leung, 2001) and Entwistle's Approaches to Study Inventory, the ASI (Entwistle, 1997a; Entwistle and Ramsden, 1983; Entwistle and Tait, 1995). The origins of these two inventories as described in this section are summarised in Figure 2.1 below. Other key inventories are reviewed in Entwistle and McCune (2004) and Coffield et al. (2004).

Characteristics of Approaches to Learning

As noted above, a third approach to learning, the "strategic approach", emerged in Entwistle's interviews and was later incorporated into the ASI. The same approach was represented in the early versions of the SPQ. Recent versions of both of these inventories have dropped the strategic approach as an "approach" *per se*, and Entwistle and colleagues have replaced it with scales that

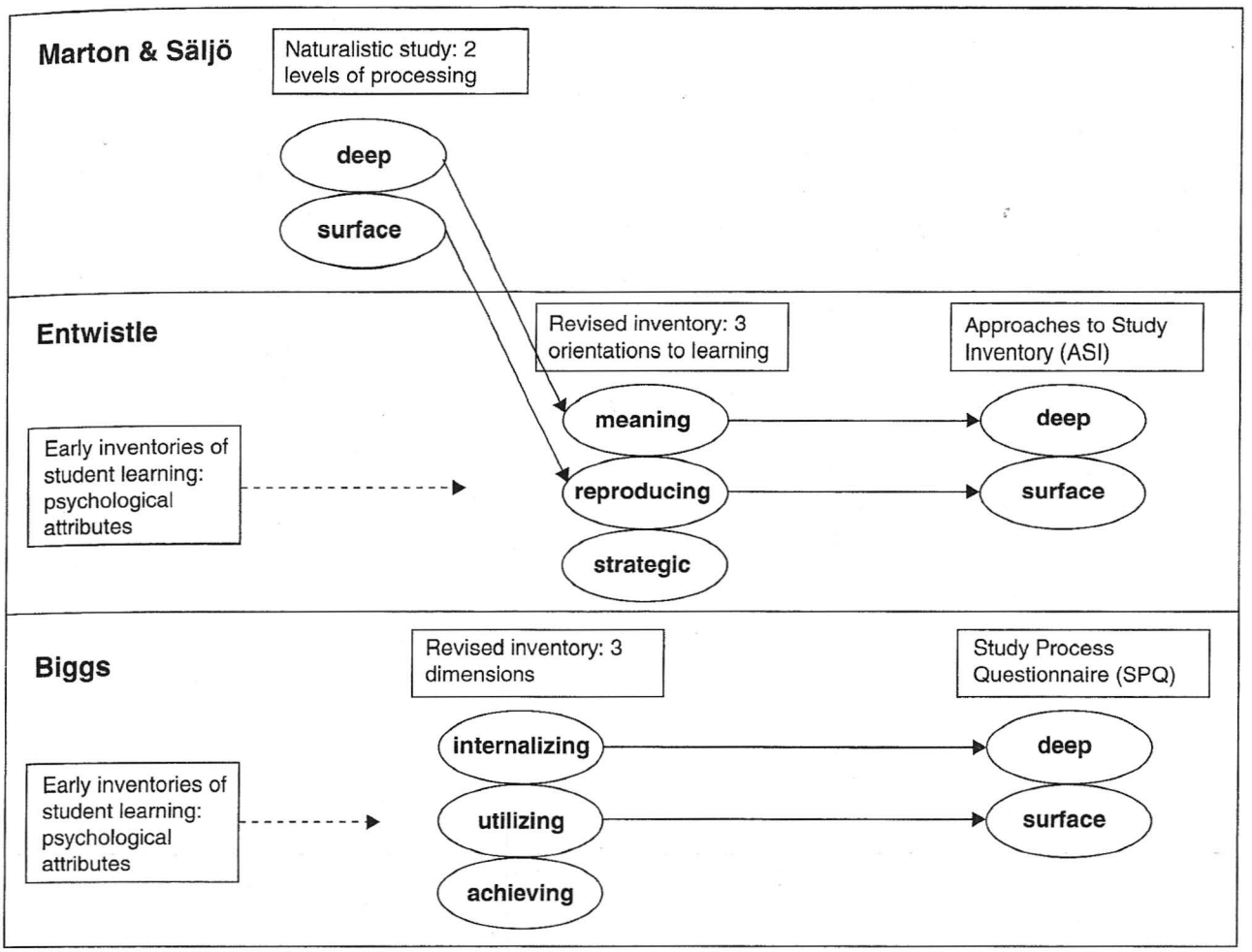

Figure 2.1 The Origins of Key Approaches to Learning Inventories.

measure "organised studying" and "effort management", as well as a fifth scale which measures "monitoring studying" and which is empirically related to the deep approach (Biggs et al., 2001; Entwistle et al., 2002). These aspects of learning bear considerable relation to the constructs of metacognition and self-regulation as represented in the educational psychology literature, particularly in North America (for example, Pintrich, 2004). Some of the newer inventories (for example, Vermunt and Vermetten, 2004) have specifically drawn on this literature to include these dimensions of learning. In short, all of these developments recognise that the "strategic approach" is not really a fundamentally distinct approach as are the deep and surface approaches. In this chapter we will therefore focus primarily on the "deep/surface dichotomy" which forms the focal point of the approaches to learning theory.

Entwistle (2004) provides a helpful summary of the learning strategies and processes used in the deep and surface approaches, reproduced as Table 2.1 below.

In reflecting on the key features of the deep approach, Entwistle (1997a) points out that "relating ideas" and "looking for patterns" can be seen as equivalent to Pask's (1976) notion of "comprehension learning" and similarly that "checking evidence" and "examining logic" define Pask's "operation learning". Both of these strategies were argued by Pask to be necessary for the development of a thorough understanding.

The deep approach is defined by a search for understanding, using whatever strategy can meet this end. Significant elaboration on the nature of the deep approach and of the processes by which students reach understanding, was provided by research on the so-called "Paradox of the Chinese

Table 2.1 Learning Strategies and Processes (Entwistle, 2004)

Deep approach	Surface approach
• relating ideas to previous knowledge and experience	• treating the course seen as unrelated bits of knowledge
• looking for patterns and underlying principles	• routinely memorising facts and carrying out procedures
• checking evidence and relating it to conclusions	• focusing narrowly on the minimum syllabus demands
• examining logic and argument cautiously and critically	• seeing little value or meaning in the course or set tasks
• memorising whatever is essential to understanding	• studying without reflecting on either purpose or strategy
• monitoring understanding as learning progresses	

Learner". The paradox is such: Chinese students on average were generally known to perform better academically than "Western students" and indeed tended to produce high deep approach scores on standard inventories. However, it is also well known that memorisation (or rote learning) is valued highly in Chinese culture and is used widely in teaching contexts. This seems to contradict a commonsense view on approaches to learning, which would associate memorisation with a surface approach. Marton, Dall'Alba and Tse (1996) solved this paradox by showing that for Chinese students, there is a fine distinction between "mechanical memorisation" and "memorisation with understanding", with the former being used in a surface approach and the latter strategy in a deep approach. Subsequent work attempted to establish the precise relationship between memorisation and understanding in a deep approach, and early work with high school students suggested that they were sequentially ordered, either memorisation followed by understanding, or understanding followed by memorisation (Marton, Watkins and Tang, 1997). Most recently, in a longitudinal study with Chinese university students, it has been established that these relatively mature learners use memorisation and understanding in a simultaneous manner (Marton, Wen and Wong, 2005). They explain as follows: "The logic of seeing memorisation and understanding as simultaneous is that in the case of repeated encounter with an object of learning, something is always invariant and something is varied. What is invariant (repeated) is supposed to enhance memorisation and what is varied is supposed to enhance understanding" (p. 297).

Another important study which produced further insights on the nature of the deep approach was conducted by Entwistle and Marton (1994), who investigated the ways in which understanding is developed by students who are revising for final examinations. From descriptions of these experiences, it appeared that students created "tightly integrated bodies of knowledge", which Entwistle and Marton termed "knowledge objects". These appeared as "quasi-sensory" experiences, with an awareness of aspects of knowledge beyond the margins of the current focus.

A recent study which investigated students' approaches to achieving understanding identified two interesting variations of the deep approach, termed "holding" and "moving" (Fyrenius, Wirell and Silén, 2007). The "holding" approach centres on the achievement of a fixed goal for understanding, and involves strategies of structuring and control. The "moving" approach, by contrast, involves an ongoing intention to continuously develop understanding with an open-ended outlook, and involves strategies which offer a change in perspective and deliberate variation.

The characteristics of the deep approach to learning can be seen to reflect what are generally held to be the aims of higher education (cf. Barnett, 1990). Indeed, an early study by Entwistle and colleagues found that although lecturers' espoused intentions focused on the kind of learning characterised by the deep approach, the actual demands of their courses were more in line with a surface approach (Entwistle and Percy, 1973). Subsequent work together with Ramsden was therefore focused on identifying the kinds of educational contexts that could better promote the ideals of higher education.

Relationships Between Approaches to Learning, Learning Outcomes, Educational Contexts and Student Backgrounds

Ramsden's work provided an elaboration of the role of context in determining approaches to learning. He characterised approaches as "relational", meaning that they arise out of the relationship between students and their environments. This he illustrated in the following model of the relations between students' perceptions of the educational context, their approaches to learning, and their learning outcomes[5] (see Figure 2.2).

The link on the right-hand side of the diagram between approaches to learning and learning outcomes forms the foundational justification for the theory and was in fact the focus of the original Marton and Säljö study (1976a). Students who were identified as using a deep approach were also seen to have qualitatively superior learning outcomes, as well as greater recall of facts. Svensson (1977) analysed the performance of this same group of students in the natural setting of a university course and found that students who used a deep approach were generally more successful than those who used a surface approach. Van Rossum and Schenk (1984) conducted a text-based naturalistic experiment somewhat similar to Marton and Säljö but used Biggs and Collis's (1982) SOLO taxonomy to classify learning outcomes. They found that students using a surface approach to learning never obtained more than a "multi-structural" level of learning outcome, in which facts are presented in an unconnected manner. The majority of students using a deep approach reached the "relational" level, in which ideas are presented as a coherent whole. In the context of a first year physics course, Prosser and Millar (1989) showed that students with a deep approach to learning demonstrated a greater degree of conceptual change towards more sophisticated conceptions.

The left-hand side of the diagram can be considered to represent those key aspects which influence the choice of approaches to learning,[6] and this forms the major focus of Ramsden's work. At the heart of his model are student perceptions, which mediate between educational context, student background and approaches to learning.

Regarding the impact of student background, rather than focusing on personality characteristics or motivation, it has been shown that a very useful characterisation of what students bring with them from prior learning experiences is the notion of "conceptions of learning", first established by Säljö (1979) and later expanded on by Marton, Dall'Alba and Beaty (1993). At the lower end of the range of conceptions of learning are "reproductive" notions such as an increase in knowledge, memorising and an acquisition of facts, while in the higher end they start with an abstraction of meaning, moving to an interpretive process aimed at understanding reality, and ending with learning as changing as a person.[7] Van Rossum and Schenk (1984) were first to explore the relationship

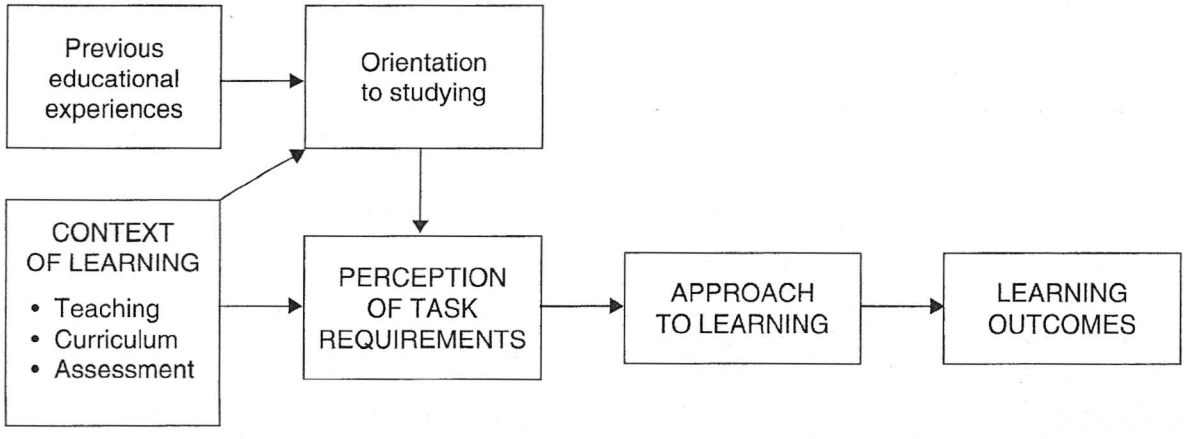

Figure 2.2 Student Learning in Context (Ramsden, 2003, p. 82).

between conceptions of learning and approaches to learning. As one would expect, they found a strong correlation, with students at the lower end of the conceptions of learning hierarchy tending towards a surface approach, and those at the upper end tending towards a deep approach.

A key finding of Entwistle and Ramsden's (1983) research established aspects of educational contexts which were related to the adoption of surface approaches to learning. These included high workloads, lack of flexibility and unclear goals and standards, and a high focus on examination preparation. The Course Experience Questionnaire, CEQ (Ramsden, 1991), emerged later from this work and continues to be used to measure students' perceptions of context. Thomas and Bain (1984) focused in more detail on students' perceptions of assessment and found that deep approaches were associated with open-ended written assignments, while surface approaches were common in multiple-choice and short-answer examinations. An important study in this area was conducted by Eley (1992), who analysed the inventory responses of a group of students who had just completed two concurrent courses in which the teaching approaches and course design were quite distinct. It was found that the same student could use slightly different approaches in different courses at the same point in time. When followed on a course basis, it was found that surface approach was linked to courses with an emphasis on performance in formal assessment, whereas the deep approach was linked to courses perceived as offering support, structure and cohesion, a focus on metacognitive development and independence in learning.

We have reviewed here a careful selection of studies which have illustrated the key linkages in the model given above, focusing on those which in our opinion have actually illuminated the nature of these relationships. There have been many more which have presented further quantitative verifications of these links. In fact, Biggs had already noted in 1993 that the relationships between all the variables in this model had been "heavily researched" (p. 9). We therefore contend that at this stage, after a further decade of ongoing industry, this line of enquiry should now be considered closed. It is not clear what repeated studies of these "variables" and their interrelationships are adding to knowledge on student learning.

Dissonance?

Groups of students whose inventory responses show illogical relationships between approaches to learning and perceptions of context were first identified by Meyer and colleagues and the phenomenon was termed "dissonance" (Meyer, Parsons and Dunne, 1990)[8]. For example, consider a student who is shown to adopt a surface approach and who states a preference for examinations which require detailed factual answers as expected, but who also ticks a statement which indicates a preference for assessments which require them to display their own thinking (Entwistle, Meyer and Tait, 1991). These evidently random responses were found to be associated with academically weak students and were considered as manifestations of a certain kind of student experience. In an early assessment of this new empirical finding, Entwistle et al. (1991) called for further research which might illuminate the reasons for these apparently illogical patterns. In response to the possibility that the main reason for the phenomenon of dissonance might be students' careless or unthinking engagement with the inventory, Entwistle et al. (1991) contend that this is not the case, based on the internal consistency of the item responses.

Research on dissonance has since mushroomed, although with maybe less critical interrogation of the actual meaning of this apparent phenomenon than might have been hoped for. One exception is an interesting study by Lindblom-Ylänne (2003), which interviewed students who had given "dissonant" inventory responses. With more detail in hand these responses become far more understandable, for example a student who scores highly on deep and surface approaches turns out to be someone who knows that his existing strategies are not working and is fully aware that he is trying,

with mixed success, to implement a new strategy. Other examples include students who did not follow the instructions closely and who reported on their studies across all courses, not the course in question, and those on the other hand who focused on one particular situation in the course. Although Lindblom-Ylänne does not suggest such an interpretation, we would consider this research to be pointing directly to the limitations of inventory-generated data, especially considering the interpretations that current-day students with diverse linguistic backgrounds might place on the relatively arcanely worded inventory items (Richardson, 2004; Setlogelo, 2008).

The Importance of Context

No matter whether derived from naturalistic studies, student interviews or responses to inventories, approaches to learning were fundamentally defined as relating to a particular context. They were seen as students' responses to a context, whether a programme of study or course or a particular task, and were distinctly different to other constructs in the educational psychology literature which were more closely linked to personality and individual preferences. One such construct is that of "learning styles", which enjoys to this day substantial prominence in higher education literature, particularly in North America (for example, Felder, 1994). Learning styles claim to represent students' inherent preferences for learning and are not defined as a response to a context (Biggs, 1993) and therefore should not be conflated with approaches to learning, even though there is substantial evidence of this in the literature (Cassidy, 2004; Coffield et al., 2004).

This focus on context should be considered the substantial contribution of this research field. It is also the one area in which there has possibly been the most conceptual slippage as the theory has moved out into popular usage; most tellingly in references made to "deep learners" or "surface learners" (Biggs, 1993). In approaches to learning there can be no such thing as a "deep learner"; all one can identify is a student who is using an approach to learning in a particular context.

Chambers (2002) suggests that it is the predominance of quantitative inventory data collection methods that has led to such deviations from the original intentions of this theory. These studies, she argues, have tended to place the "spotlight" on students rather than teachings and teaching, and in the tendency to "sloganisation" it has become too easy to characterise students as deep or surface learners and thereby to shift blame in their direction. Haggis (2003) moves beyond a focus on methods to considerations of methodology. She highlights the epistemological assumptions that have underpinned much approaches to learning research, where a gradual reification of the constructs has led to an overwhelming focus on quantitative confirmation of the relationships between a set of variables, referred to by Malcolm and Zukas as a "relentlessly positivist orientation" (2001, p. 35).

What is needed is a return to the origins of approaches to learning research which turned towards interpretivist methodologies in order to understand the impact of students' perceptions of context. Both quantitative and qualitative data collection methods can be employed, although it becomes likely that qualitative analysis will play an important role. In the remainder of the chapter we review studies that use an interpretivist methodology. The chief focus for most of these studies has been on whether one can modify a context in order to promote a deep approach to learning, and the following section focuses here. A related consideration concerns the characteristics of approaches to learning in particular disciplinary contexts, and this will be dealt with in turn.

Understanding the Influence of Context on Approaches to Learning

Marton and Säljö's original work, which first identified deep and surface approaches to learning and established their relationship to learning outcomes (1976a), turned immediately to the obvious

question of whether it is possible to promote a deep approach to learning through modification of the educational context (1976b). Their attempts to induce deep and surface approaches by inserting particular questions in the text pointed directly to the complexity of this challenge. As was expected, the superficial questions did elicit surface approaches to the task, but the "deep" questions were not always related to deep approaches, with some students performing a "technification" of the task and focusing in fact rather simplistically on the answering of the questions rather than on the underlying meaning of the text.

Ramsden, Beswick and Bowden (1986) reported on a learning skills programme which intended to increase the use of deep approaches. They were surprised to find that the students who attended did not perform any better or worse than their contemporaries who had not attended the programme, and furthermore that they actually increased their reported use of surface learning strategies, and marginally decreased their use of deep ones. This startling result is explained by the view that students extract from such programmes what is useful to them, with "what is useful" being fundamentally determined by their perceptions of the requirements of their courses. In this particular instance, student interview comments showed that their courses were perceived to be requiring the use of surface learning strategies.

Many studies have in fact shown that as students progress through their tertiary studies there is an increased prevalence of surface approaches (Biggs, 1987a; Gow and Kember, 1990; Watkins and Hattie, 1985). Biggs (1993) suggests a systems approach to understanding the complex relationship between context and student approach to learning, with students progressively attempting to achieve an "equilibrium" between themselves and the system. If they are increasingly adopting surface approaches, then these are implicitly what the system is perceived as requiring from them. Biggs (1999) later developed these ideas into the notion of "constructive alignment", where curricula can be designed such that they "demand" deep approaches of students and do not allow for the possibility of using surface approaches. This is certainly an attractive theory but given that one is always dealing with students' perceptions of the educational context rather than any objectively defined view of such a context, it is clear that this might be somewhat more challenging to enact in practice.

In a review of the literature in this area, Cope and Staehr (2005) note that there have been very few studies that give empirical assessments of attempts to induce deep approaches through structured modifications of the educational context. Newble and Jaeger (1983) report on a new ward-based assessment in a medical programme which was introduced in order to emphasise the importance of clinical skills. However, from the students' perspective it turned out this assessment was easier to pass, and so they spent more time in the library studying for their feared theoretical examination. The effect of the change was therefore exactly opposite to what was intended. Working in the context of the subject of anatomy in the early years of a medical programme, Eizenberg (1988) implemented a wide-ranging set of interrelated changes to all of curriculum, teaching and assessment, all focused towards the promotion of deep approaches to learning, in a subject area which is typically perceived as a vast amount of facts which will need to be reproduced. After exposure to two years of this newly presented subject, just fewer than half of students stated that they had used a deep approach to learning, although nearly all of them had intended to do so at the beginning of the year. In interpreting this finding, Eizenberg points to the impact of the other subjects in this demanding programme, which together resulted in these pragmatic responses.

Case and Gunstone (2002) report on modifications that were made to a second year chemical engineering course involving a reduction in content, changes to teaching style, the introduction of weekly journal tasks, and a greater focus on conceptual knowledge in the course assessment. The study focused in depth on the experiences of a small group of students as they went through the course, and showed that although a deep approach to learning was essential for success in the

course, students really struggled to make changes to their approach while in a demanding and stressful programme. Cope and Staehr (2005) conducted an action research project where over the period of five years they made successive changes to an information systems course, aimed at increasing the number of students reporting deep approaches to learning. They identified the central issue as being students' perceptions of workload. In their final iteration they managed to reach a point where they had reduced the workload where students perceived that there was enough time to use a deep approach to learning, but where there was still sufficient content to satisfy the requirements of the course. They nonetheless conclude that there are severe limitations as to what can be achieved by a single lecturer working in a single course that forms part of a broader programme that is unchanged.

Struyven, Dochy, Janssens and Gielen (2006) report on a study which again shows that the interactions between perceptions of context and approaches to learning are complex and that counterintuitive effects can often be observed. They compared students in a traditional lecture-based course with those in a "student-activating" setting. This latter modification involved assignments which were collaborative and intended to get students involved as "active" learners who could construct their own knowledge, along the lines of the problem-based learning methodology. Both groups of students had similar approaches at the start of the course, but at the end of the course they found that the group in the "student-activating" setting showed a shift to a surface approach, also with lower scores on the strategic approach. It would appear that the perceptions of workload associated with this course design worked against the adoption of deep approaches to learning.

Approaches in Disciplinary Contexts

In some of the early work on approaches to learning it was clearly stated that approaches to learning might have different manifestations in different academic specialisations, in line with the context-dependency of these approaches (Ramsden, 1984). It was suggested that in some science tasks a deep approach would initially demand a narrow focus on details, which taken on its own might appear to be a surface approach. By contrast, in the humanities a deep approach would usually involve establishing a personal meaning from the very beginning of a task. It is an unfortunate consequence of the excessive focus on inventory studies that there has been relatively little attention paid to this important dimension of the research. Indeed, there are some inventory studies where items have been modified better to match the discipline, but this does not allow the researcher to fully engage with the nuances of context.

The few qualitative in-depth studies which have been open to identifying the particular forms that approaches to learning take in particular disciplinary contexts have delivered rather interesting results. For example, Booth (1992) investigated students as they were learning to write computer programs, and identified four distinctly different approaches to learning in this context: an "expedient" approach in which a previous program was identified which would suit the purposes of the current task; a "constructual" approach, where elements from their previously written programs were cobbled together for a solution; an "operational" approach, which focused on what the program was going to have to do; and a "structural" approach, which focused initially on the problem rather than the program specifications. The first two of these approaches Booth considered to be surface approaches, while the latter two approaches she classified as deep. Similarly, in a group of students undertaking a fashion design project Drew identified a set of distinct approaches appropriate to that context (Drew, Bailey and Shreeve, 2002). In our work with engineering students we have identified two types of "procedural approaches", intermediate to traditional deep and surface approaches. Procedural approaches involve students focusing on the solving of problems,

sometimes at the expense of understanding (Case and Marshall, 2004). In recent work, McCune and Hounsell (2005) introduce the term "ways of thinking and practising" to describe in a particular discipline what might be the outcome of students' engagement with the field. For example, in final year biology courses, they identified working with primary literature and experimental data and learning to communicate in the biosciences as key dimensions of ways of thinking and practising in that context.

Conclusion

In this chapter it has been shown that the approaches to learning theory represented a significant shift in orientation for student learning researchers, particularly in moving away from an exclusive focus on individual characteristics and incorporating a focus on educational context. We have noted that an interpretivist methodology is the more productive research approach for exploring the influence of context. Nonetheless, the characterisation of the student that it presents is still very much conditioned by its origins in cognitive psychology. One is presented with an "asocial construction of the learner", an "anonymous, decontextualised, degendered being" (Malcolm and Zukas, 2001, p. 33, 38) who, rationally and freely, can choose between alternative approaches. Some approaches to learning researchers have incorporated perspectives similar to those in social psychology which recognise students' reasons for choosing to enter higher education and the role of collaborative learning within peer groups (for example, Gibbs, Morgan and Taylor, 1984; Vermunt, 2005; Yan and Kember, 2004), but this still fails to take account of the full impact of the social world on the individual experience.

In some ways approaches to learning can be seen as a description of what can be readily observed in almost any higher education context, but as a theory it doesn't offer much explanation for what underlies these approaches. Insights are needed into why some students appear to be unable—or unwilling—to engage with the aims of higher education (Haggis, 2003). Rather than locating the fault with the student, perspectives from social theory point to the ways in which the structures of power operate in order to perpetuate educational inequalities. Approaches to learning theory has been surprisingly insulated from these perspectives, which have had a profound impact on the broader field of educational scholarship (Coffield *et al.*, 2004; Haggis, 2003; Malcolm and Zukas, 2001). These perspectives are further reviewed in the following chapter.

In conclusion, then, we would like to suggest that the approaches to learning theory has opened up the area of student learning research for a whole new community of academic developers, many of whom did not necessarily have backgrounds in psychology or social science. It has given a view into what is going on in the higher education classroom, one which is immediately recognisable to practitioners (Entwistle, 1997c). It places at least some responsibility on educators to create learning environments oriented towards deep approaches to learning. It can also be a useful starting framework for those beginning to engage in the "scholarship of teaching and learning". However, for education researchers who wish to seriously engage with trying to understand students' experience of higher education, this framework on its own is arguably limited. There is a definite need to engage more widely with the broad range of perspectives that are available both in the theory of education and in social science more generally.

Notes

1. This is termed a second-order perspective (Marton, 1981).
2. These were originally termed "levels of processing" but later were termed "approaches to learning" (Marton and Säljö, 1984).

3. These were originally termed "orientations to studying" to indicate that they referred to general experiences of studying at university rather than a response to a particular task; they later adopted the term "approaches to studying" (Entwistle and Tait, 1995) to maintain this distinction, recent work refers to "approaches to learning and studying" (Entwistle, McCune and Hounsell, 2002).
4. These were originally termed internalizing, utilizing and achieving dimensions but later reworded as deep, surface and strategic approaches to learning (Biggs, 1987a).
5. This model was based on the "3P" model originally put forward by Duncan and Biddle (1974).
6. Note that key writers such as Biggs (1993) have stressed that all relationships in this model can be considered to work in both directions.
7. This final category was only identified in the later study by Marton, Dall'Alba, and Beaty (1993).
8. Initially these were referred to as "disintegrated" study orchestrations (Meyer, 1991) but this has been later replaced by use of the term "dissonant" (Meyer, 2000).

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