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# The deep approach to learning: analytic abstraction and idiosyncratic development

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## Abstract

This paper summarises previous research into approaches to learning and studying before reporting a small-scale longitudinal interview study of first-year psychology students' approaches. This qualitative investigation looked in depth at how students tackled their learning within a single discipline, and created fine-grained categories to describe their approaches. Few students showed marked, overall changes in their learning, although many did make more minor improvements in their skill in carrying out aspects of the approaches. The focus of this paper is on the nature and development of the deep approach. In particular, it considers five students who showed either distinct changes or no development at all. This group is discussed as case studies to explore the influences on, and resistance to, change in study skill. The results are examined in relation to the analytic framework provided, as a general way of describing the deep approach, and to explore why students in this sample showed little obvious progress in developing their approaches during their first year.

## Introduction

The distinction between deep and surface *approaches to learning*, together with the category of strategic *approach to studying*, have been widely used to describe students' ways of tackling academic tasks. While the original interview studies in this area suggested that an approach was a specific reaction to a task within a particular learning context, subsequent work indicated that students were, to some extent, consistent in their approaches to everyday studying. It was essential to recognise that approaches contained elements of both individual stability and contextual variability. Relative stability allowed inventories to be designed to indicate general ways of working in a particular course at the time the inventory was completed. These instruments have proved successful in allowing the approaches of groups of students to be explored over time and in relation to specific forms of teaching and differing assessment procedures. They have shown general relationships between approaches and both students' grades and qualitative measures of their learning outcomes (Entwistle *et al.*, 1989; Entwistle, Meyer & Tait, 1991; Marton & Säljö, 1997; Tait, Entwistle & McCune, 1998; Trigwell & Prosser, 1991).

The type of results which have been obtained in relation to groups of students can be illustrated by the factor analysis of a recent inventory – *ASSIST* (Entwistle, Tait and McCune, 2000). Based on sample of 1284 first-year students from three long established and three recently established British universities covering a spread of areas of study, Table 1 shows the relationships between the sub-scales of the inventory, and also suggests links with preferences for teaching and self-ratings of academic performance. The factor structure of the inventory is clear-cut and has been confirmed with other samples and at different levels of performance. These factors, and the aspects of studying they have been designed to tap, then provided well-established analytic categories for describing general tendencies in studying and their correlates. Factor analysis describes the relationships between variables in ways which show the broad overall pattern clearly, but cannot identify different patterns of relationship which may exist in sub-groups within a population (Meyer, 2000).

**Table 1** Factor loadings and Cronbach alpha coefficients for *ASSIST* sub-scales

(N = 1284, 58.0% variance)	Factor	I	II	III	(alpha)
<b>Approaches to Studying</b>					
<b>Deep Approach</b>					<b>(0.84)</b>
Seeking meaning		.67			(0.57)
Relating ideas		.79			(0.59)
Use of evidence		.75			(0.53)
Interest in ideas		.65			(0.76)
<b>Surface Apathetic Approach</b>					<b>(0.80)</b>
Lack of understanding			.77		(0.54)
Lack of purpose			.37		(0.68)
Syllabus boundness			.35	- 0.30	(0.62)
Fear of failure			.68		(0.76)
<b>Strategic Approach</b>					<b>(0.87)</b>
Organised studying				.77	(0.57)
Time management				.86	(0.76)
Monitoring effectiveness		.42		.48	(0.55)
Achievement motivation				.78	(0.69)
<b>Preferences for learning environments</b>					
Deep (Encouraging understanding)		0.55		(0.62)	
Surface (Transmitting information)			0.38		(0.69)
<b>Self-rating of academic progress</b>			- 0.31	0.47	(not applicable)
<b>Correlations between factors</b>					
		<b>I</b>	<b>II</b>	<b>III</b>	
Factor I (Deep)		1.00			
Factor II (Surface Apathetic)		- 0.20	1.00		
Factor III (Strategic)		0.35	- 0.22	1.00	

**Note:** Factor loadings below 0.30 have been omitted

For this reason, alternative methods of analysis have been used, such as cluster analysis, which groups together individuals who have responded to items in similar ways. By considering how the samples differ on additional variables not included in the cluster analysis, a clearer picture of the nature of the clusters can then be obtained. In a recent analysis of the same large sample, eighteen clusters were identified. To illustrate the kinds of variation which can be obtained using this technique, Table 2 compares two high achieving groups and two whose self-rating of their academic progress was much lower. Group 1 is the usual pattern of responses found among highly successful students – a deep strategic approach with low scores on surface apathetic. Group 2 differs somewhat (as indicated by the figures in bold) in that these students, more of whom were female and from non-science courses, combined deep, well-organised and well-motivated studying with relatively high levels of anxiety and syllabus boundness. Group 4 shows the opposite characteristics of Group 1 and also have the lowest self-ratings of academic progress. Group 3, with almost equally poor levels of performance, respond in ways which suggest a ‘dissonant’ pattern of responses, with the surface apathetic approach being associated with indications of a relatively strong deep approach.

**Table 2 Pattern of means describing the centroids of clusters with contrasting self-ratings on academic progress within the 18-cluster solution**

<b>Cluster means</b>					
<b>Sub-scales</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
(N = in 1284 sample)	(60)	(73)	(43)	(22)	
<b>Deep Approach</b>					
Seeking meaning	17.2	15.7	<b>13.4</b>	9.1	
Relating ideas	16.3	15.1	<b>14.4</b>	9.2	
Use of evidence	16.6	15.7	<b>14.5</b>	9.8	
Interest in ideas	16.9	15.9	<b>13.0</b>	6.6	
<b>Surface Apathetic Approach</b>					
Lack of understanding	7.9	9.9	14.2	12.2	
Lack of purpose	5.0	5.8	14.1	15.8	
Syllabus-boundness	8.7	<b>12.3</b>	16.5	18.0	
Fear of failure	8.8	<b>14.1</b>	17.1	13.4	
<b>Strategic Approach</b>					
Organised studying	16.4	14.4	8.7	7.3	
Time management	17.2	14.9	7.1	6.2	
Monitoring effectiveness	16.8	15.8	<b>11.5</b>	7.6	
Achievement motivation	18.0	16.5	9.2	7.9	
<b>Preferences for learning environments</b>					
Deep (Encouraging understanding)	17.4	15.6	13.4	10.2	
Surface (Transmitting information)	16.2	17.5	17.5	18.6	
<b>Descriptive statistics (not used in forming the clusters)</b>					
Self-rating of ac. progress (out of 9)	6.8	6.7	4.0	3.5	
<i>% of cluster who were</i>					<i>(% in total sample)</i>
in pre-1990s university	80.0	<b>71.3</b>	<b>48.8</b>	59.1	(68.7)
in science and engineering	56.6	<b>48.0</b>	<b>62.8</b>	77.3	(55.8)
male	46.7	<b>34.2</b>	<b>58.1</b>	68.2	(54.0)

Table 3 provides a more detailed description of the deep approach based in part on the inventory research already described, but also on interview with students about their learning (Biggs, 1987, 1993; Entwistle, 1995, 1997; Entwistle and Ramsden, 1983; Entwistle, Tait and McCune, 2000; Marton, 1976; Marton and Säljö, 1976, 1997 Tait and Entwistle, 1996). The core aspect of a fully developed deep approach is the intention to form a personal understanding of the topic under study, this is then combined with a range of conceptually related learning processes. Unsurprisingly, students taking a deep approach also tend to show active engagement and interest in their studies.

**Table 3 Elements of the deep approach**

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Intention to understand
Active interest and personal engagement
Relating ideas
Gaining an overview
Creating outlines and structures
Questioning and using evidence critically
Seeking the main point
Drawing conclusions
Seeing the purpose of a task or seeing it in its wider context

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While this earlier research has confirmed and extended our understanding of patterns of study behaviour in relation to academic achievement, and indicated the general influences of methods of teaching and assessment, it is much less successful at providing full or detailed descriptions of individual students' learning. Approaches to learning and studying provide analytic abstractions which summarise research findings and simplify the complexity of everyday studying. While such concepts have proved useful, observed behaviour and interviews suggest the importance of the idiosyncratic details of students' learning and of the complex effects of differing learning environments.

One limitation of the research into students' approaches to learning and studying, is that there has been little longitudinal research into how students' approaches might develop. What research there has been is almost all quantitative in nature (for example, Gow and Kember, 1993; Volet, Renshaw and Tietzel, 1994; Watkins and Hattie 1985). Such quantitative studies are limited, in that they cannot provide much insight into the details of students' development. Further, the inventories measure the extent to which students adopt a particular approach at a given point in time, not the development of students' skill in carrying out a particular approach. For this reason, a longitudinal study has recently been carried out in which students were interviewed in depth on three occasions during their first year of study.

### **Aims**

- To create a description of the deep approach which was specific to first-year psychology.
- To explore the extent to which the deep approach provided a useful analytic abstraction in understanding students' learning and development.
- To chart the change in students' learning, and to suggest what influences were important in assisting or hindering that development.

### **Methods and analysis**

A longitudinal research design was adopted which used repeated semi-structured interviews to focus on students' learning within a first-year psychology class. 19 students were interviewed on three occasions spread over their first year, while a further 7 students were interviewed only at the end of the year, to check for any possible effects of the interviews themselves. The longitudinal interviews were timed to take place, once near the beginning of the academic year, once after their first piece of assessed work, and once after most of their assessed work had been completed.

The transcripts were analysed using the NUD.IST computer package (QSR, 1997) to identify both categories and looser themes in the data. While the existing literature indicated the division into deep, surface and strategic approaches, these analyses were more fine-grained and sought to explore the nature of the deep approach, not just in psychology, but within specific academic tasks of which essay-writing proved the most revealing. The analysis of the approaches was not limited to categories

identified in previous research, rather the aim was to create a set of categories which represented the main aspects of the students' intentions and learning processes. A thorough analysis of the data was made to identify all of the examples of development related to the approaches. This included looking for any change in the categories to which students' responses had been assigned, as well as any change *within* the categories over time. Care was also taken to identify and take account of all of the extracts which seemed to describe influences on students' development.

## Findings

Table 4 sets out the categories used to describe the deep approach for the students in this study. At first sight this seems quite similar to the general conceptualisation identified from the previous literature. The main difference was in the limited ability of these first-year students to go beyond basic understandings of the course material. The students in this study were less able than more experienced students to engage critically with content and to develop personal perspectives which extended across the boundaries of particular tasks or lecture series (compare with Entwistle, 1995, 1998; Entwistle and Entwistle, 1991, 1992). Further, it is important to bear in mind that the complete approach, given in Table 4, does not give a good representation of the learning of most of the students in this study. None of the students showed this deep approach in its entirety and certain important elements of the approach were particularly rare, for example, the category 'thinking for yourself' was only identified in the interviews of 5 students.

**Table 4 Categories included in the deep approach**

<b>Category name</b>	<b>Description</b>
<b>Intention to understand.</b>	An intention to understand course material.
<b>Thinking for yourself.</b>	Tentative attempts to develop personal perspectives on topics in psychology.
<b>Interest.</b>	Showing an interest in course content.
<b>Selecting and summarising.</b>	Focusing learning within learning tasks, for example, staying relevant to the essay topic or selecting the main ideas in lectures.
<b>Relating, organising and structuring.</b>	Relating ideas, organising and structuring learning materials.
<b>Getting an overview.</b>	Working to get an overview of a topic.
<b>Memorising with understanding.</b>	Either memorising material from the course, having first understood it, or memorising terms to aid understanding.
<b>Use of evidence.</b>	Using evidence to support or evaluate arguments and to draw conclusions, with critical comment.
<b>Monitoring understanding and related regulation.</b>	Checking understanding and modifying learning when problems are identified.

A further distinction from the generic approach set out earlier was that these students had to be able to enact the deep approach within the discourse of psychology. Becher (1994) suggested that different disciplines can be seen as having very different cultures, norms and values. Coming to terms with these differences can be described in terms of learning to work within the discourse of a discipline. For the students in this study, these issues were most apparent in relation to their essay writing. To take a deep approach to that task, the students had to use evidence and drawn conclusions in the manner considered appropriate in psychology, which involved a greater reliance on critical evaluation of research evidence and less emphasis on personal beliefs and experiences than the students had typically experienced in their prior learning contexts. The students often had difficulty with these issues. This theme is developed further in McCune (1999) and McCune and Entwistle (1999).

For most students there was little evidence of significant development within the deep approach, but many showed some minor changes in aspects of their skill in using the approach (the control group analyses suggested that the repeat interviewing did not influence the students' development). This limited development seemed problematic, given that the students' approaches did not appear to be well developed and that they were given advice relevant to their difficulties. This advice included lectures on student learning which covered topics such as approaches to learning, and the students also received more specific advice related to their assessed tasks.

A number of influences were considered important in understanding why the students' approaches did not seem to develop as profoundly as might have been hoped. Firstly, the students generally seemed to have somewhat limited goals – these were typically to complete their assessed tasks, to get reasonable grades and to develop a basic understanding of their lectures and core texts. As most of the students tended to feel they had achieved these goals, there was less impetus for development. Further, the need for students to develop their ways of learning was not generally treated as an explicit or important goal in the department, or in the students' prior learning contexts. Although the students were given advice, this varied between tutors, and the student learning lectures were not followed up in tutorials or the class examination. This may have given students the impression that development in their approaches to learning and studying was not seen by staff as a central issue.

Other influences included the negative attitudes that some students held towards advice about learning, and the difficulties that they had in coming to terms with the academic discourse in psychology - as represented in the problems they had in fully understanding the advice and feedback given in relation to their assessed work. Some students were also quite dependent on external pressure, such as deadlines, to motivate them to work. This meant that tasks were often left to the last minute, giving little opportunity for change in students' learning methods. Where the students did develop their deep approach, this most often occurred in relation to the essay writing task. Working on essays was generally more likely to prompt students to adopt a wider range of deep processes.

These findings are discussed in more detail elsewhere (McCune, to be submitted). The focus here is on five students who were chosen as case studies, either because they had shown marked improvement in their studying, or there was almost no change at all. An examination of these cases was used to consider the value and limitations of the deep approach as an analytic abstraction. These findings also illustrate some of the ways in which students explained the reasons either for changing, or not changing, their approach to studying. The case studies suggested that students' development seemed to be strongly influenced by complex idiosyncratic combinations of experiences, abilities, beliefs, attitudes and motivations. They also suggest the importance of students' perceptions of the fine-grained details of the learning context, such as specific essay titles, or particular discussions they had with their tutors. It seemed that certain students were more receptive to opportunities for change than others, making them able to take advantage of certain critical incidents in order to develop more profoundly than other students in the study. This receptiveness to change was not one simple ability, but instead appeared to involve unique combinations of factors which support change and the absence of elements which could hinder change. In contrast, it was clear that some students could also be particularly resistant to development. Summaries and indicative quotes from the case studies are provided here (given different names to preserve anonymity): full details can be found elsewhere (McCune, to be submitted).

The first two cases, Alistair and Kirsty, illustrate some of the reasons why students may not develop their learning. Kirsty's case also demonstrates the problems inherent in using abstractions such as the approaches to characterise individual students' learning, as does the third case – Susan. Whilst the approaches were never intended to provide detailed descriptions of individual students' learning, it is nonetheless interesting to explore their limitations in this regard. Susan's case also provides an example of a student who could see problems in her learning and who tried to develop, but who had problems with doing this. This readiness to develop was quite rare in this sample, although it was also shown by the final two case studies, Gail and Leane. These two are of particular interest, as

they developed their deep approach to the extent that they seemed to have made very significant changes in their ideas about learning.

### **Alistair**

Alistair showed very little development in his learning in general throughout the year and there was no evidence of change in his deep approach. His learning at university also showed clear similarities with his learning at school, especially in his methods of examination revision. The most striking characteristic of Alistair's learning was the extent to which he was extrinsically motivated by assessment and his dependence on external factors to judge the quality of his learning. He found it very hard to work without the pressure of an immediate deadline:

Because I knew (the first essay) didn't count towards exemption ... I thought, well, it doesn't actually matter extra specially if I cocked it up ... If it was more important, I would have done probably a little bit more, but I tend to leave it until fairly near the last minute ... I tell myself that I work better under pressure, but that's probably not true....

Before I was writing (my lecture notes) up ... (but because) I am currently counting on an exemption ... I don't really care about them all that much at the moment ... I suppose in the second year I'll come a cropper, because then I'll realise I have the notes from first year, but I haven't read them up for ages...

This dependence on external motivation seemed likely to have limited his development, especially since it was combined with mainly high grades. It would have been very difficult for this student to change unless he felt under pressure and these grades did not put pressure on him to improve. The related problems that he had in managing his time may also have affected his development, as he would not have had time to experiment with new ways of learning, even if he had the inclination to do so.

The quotes below suggest that he sometimes employed a way of thinking about learning which would allow him to rationalise problems so that he still felt that he was capable of learning well. Where he employed these tactics, this would block his development, as he would not face up to problems in his learning.

If I'd done badly in the essay, or the exams, then I would have thought, 'Oh crumbs' and then I would have looked for other ways of justifying how well I was doing ... I'd have looked for an excuse ... I'd say, 'I haven't done enough work, so I haven't done very well'. Or I'd say 'Well, I have done really well, but the exam was difficult' ...

I think I probably do things quite differently each time. It depends on loads of different factors, like what I am doing in other subjects, whether I've got any time, or when the deadline is ... how much I feel like working that month ... How tired I am, how happy or depressed I am. How much (there is) to do going outwise ... I know I perhaps could write a better essay, but it doesn't really bother me ... Because if I write it at the last minute then I'll do really badly, then I'll justify by the fact that I wrote it at the last minute ... and I know that I now understand the information, so that assuming that that essay doesn't count towards something hugely massive, I can make up in the exam, because I'll understand it relatively well, even if the essay is written badly I think ...

Despite this apparent avoidance of threats to his self-esteem, at other times he did seem able to critique his work and to see the potential consequences of his learning problems. For example, for his third psychology essay he was able to make a strong critique of the piece and rewrote the essay on this basis. It may be that the distinction between these different instances is that Alistair avoided anything which suggested that he did not have the ability to work well, but could accept that sometimes he would not work well due to circumstances. This may explain why, despite the difficulties that he had, he still expressed considerable confidence in his ability to learn in psychology. His confidence also seemed to stem partly from a belief that his school experiences had prepared him well for studying psychology at university.

Alistair's confidence in his learning ability seemed to form part of the reason why he was not responsive to study skills advice at school or at university. He also took the student learning lectures as confirmation that his way of learning was appropriate, because the lectures emphasised the importance

of understanding. The lectures did not seem to prompt any critical reflection, even though Alistair was weak on other aspects of learning mentioned in the lectures. An additional problem for Alistair was his belief that he would not be able to use advice, even if he felt it was sensible:

I wouldn't take any notice of it, I don't think ... I assume if I went to the study skills books, or a study skills workshop, it would tell me to organise my time better, and to write notes in this way, and to do this, that, and the other, to improve it. (But) I would go away and take no notice of it ... What makes me take no notice? Bloody mindedness I suppose. For example, if it said to organise my time better and just do an hour a night, I would think, 'Well that's nice, but I don't want to'. I may start ... (but) I would just give up on it ... It would say things which I'd think, 'Ah it's very sensible' ... but I wouldn't take any notice of it... It always comes down to whether you can stick to that plan yourself ... most of the time I won't be able to.

### **Kirsty**

Despite a thorough analysis of her interviews, the only slight change found in Kirsty's learning was that in the first few lectures she tried to write everything down but realised that was not working and so began to write only the main points. This case study is an example of the difficulties inherent in using the approaches to characterise individual students' learning. Although Kirsty expressed a strong interest in psychology, and an appreciation of its relevance, as well as an intention to understand, her inability to work meant that this was not reflected in the ways in which she studied. She thus showed the intentional aspect of the deep approach but with few of the related processes.

The central problem Kirsty mentioned was that she found it hard to get down to work, typically leaving everything until the last minute. She also had a related problem, that she found it very difficult to work unless she had large blocks of time free. These had both been difficulties for her since school. It was apparent that Kirsty's problems with working prevented her from taking a fully deep approach, despite showing an intention to understand.

I really enjoy the lectures, not so much that I manage to make them all, but I do really enjoy them ... The lecturers have been interesting as well ... Ideally, I would listen, and then take brief notes, and then maybe expand on the notes when I got home, but I've never done that,... 'cos I'm lazy...

I find that once I've started an essay, I like to finish it right there and then ... I like to get into it, do it for a whole day. If I had anything else on; ... if it was 12 o'clock and I'd come out of a lecture, and I had a lecture again at 2pm, there is no way I would go to the library for the two hours in the middle, because it just wasn't worth my while starting, and so that's a problem.

Although Kirsty was well aware of the problems in her learning, she felt that she would not address her study problems unless they caused her some significant difficulty. She did generally gain good grades, but even when she barely passed an examination this did not seem to have affected her learning.

(I had realised that this problem with my studying would arise) but I'm not a worrier ... Like I said before, nothing really bad has happened yet, maybe I'll fail my psychology exam, that would be a very bad thing ...I didn't think ahead, and even if I had it wouldn't really have bothered me at the time, because, well, I'd just think, 'I'll cross that bridge when I come to it'...

Kirsty's reaction to advice about learning shows how profoundly her difficulties influenced any possible development. She was so focused on the problems that she would not even consider any other improvements. She had not used study skills materials (with the exception of handouts on essay writing) and did not feel she would gain much from using them. She also held similar attitudes to the student learning lectures.

I tend to avoid study skills, 'cos I know I don't have them ... I suppose I'm a bit cynical about the likelihood that I will adhere to any sort of study skills system ... I suppose I should, 'cos that's where I'm lacking...

I didn't go to all of (the student learning lectures) actually, I think that was maybe the week I was doing all the essays, or I was doing something anyway. Yeah, I did find that interesting and, yeah, there are bits that you think you know do relate, (but) I feel that I really know what my problems are with studying ... it's basic laziness, that's all it is really, so I don't think that much about approaches to studying or whatever ... I suppose I don't really like to, you know, mask it in any deeper ideas about why I don't do it, I'm sure it just is laziness...



Kirsty's account of her final essay showed how her problems in learning interacted with the particular essay question to push her towards minimal engagement. For a previous essay, which had a more complicated title, she had been forced to make more effort to use deep processes. Although it is well known that students' approaches to studying are affected by the learning context, the detailed dynamics of these issues are difficult to describe in terms of clear categories or models. Whilst essay-writing generally seems to support a deep approach (Scouller, 1998; Thomas and Bain, 1984) this is clearly not the case for this particular student in relation to this essay question. It was clear that the fine-grained details of Kirsty's experiences, beliefs and attitudes were very important to fully understanding her learning. The extracts which follow illustrate some of these points.

It was a very straightforward essay title ... it didn't say, 'discuss', or 'evaluate', that's the point... this was just asking you to basically put down something about what (the) theory was, without any of your own thoughts on it, or anyone else's thoughts on it ... That's the sort of essay I like, because ... it's quite easy, you don't have to struggle over complicated ideas ... It's not necessarily what I would enjoy the most, but knowing that I don't tend to put too much work towards my essays, it's the sort of title that I enjoy getting, because I know that there's more chance that I can do it with the minimum of effort....

I left it to the very last minute ... being lazy ... I had three (essays) and a presentation, and that does put me off. Like, how I was saying about the reading, if I have more than one thing to do, I can't decide which to do, and I'll find I won't do any for a while anyway...

Normally, what I'd do (for an essay) is take notes on pieces of paper, ... then I'll put them all together in an essay ... I didn't do that this time; I suppose because it was so much simpler ... I did (take some notes), but not nearly as detailed as usual, and I worked from books more,....

I had a lot of references I suppose ... because everything I had, really, was taken from somewhere, because it wasn't any of your own thoughts ... I suppose that was what you were supposed to do...

I got (a high B) for it and he said it was it was a good essay, and it was quite thorough, and explained the theory...

I don't know, I don't know, I don't know (what a good psychology essay is). I've found the essays for psychology quite easy really, in that I've not given them a lot of time or effort, and I've done better than I thought I should...

I don't know that I learned anything (from doing this essay) - how negative! ... I don't find I do learn much from my essays. Because I do them so quickly, they don't stick in my head...

## **Susan**

Susan left school with few qualifications but after working for some years, she completed an access course which qualified her to study psychology at university. As we shall see, this background was an important influence on her positive attitude to development. Susan did not show such an extensive shift in her underlying ideas about learning as did Leane and Gail but was able to make some progress in her skill in learning.

Throughout her course Susan felt that her learning needed to improve and was prepared to ask for help and to use study skills materials. This willingness apparently arose from the interaction between her lack of confidence in her learning ability, aspects of her self-image, and a complex combination of motivations, which generally seemed to have persisted at least since her time on the access course. Throughout the interviews Susan explained that her skill in learning was not up to a standard which would allow her to cope easily with the course. Fortunately this was combined with a beliefs that her learning could improve to the extent that she would be able to succeed. This is unlike the cases of Kirsty and Alistair, whose lack of development can be partially attributed to their accepting that they would not be able to solve certain of their study difficulties.

Susan appeared to see herself as someone who fought against difficulties rather than giving up; there were several instances during her interviews where she used the metaphor of learning at university as a battle to be fought. This view is one of several important aspects of her learning which was not

well captured by the approaches to learning categories developed to represent the learning of the students in this study.

Last year (on the access course) was a real struggle for me ... I was so determined I wasn't going to be beaten ... I'm a fighter, there was always that, 'Nup, you're not going to give up yet', you know. I'm really really glad that I didn't, I'm a real fighter, you know, I'm a survivor, so here I am.

I literally scraped through (the multiple-choice examination) by the skin of my teeth and I was bitterly disappointed ... So, with renewed determination, I have come in to the Spring term ... There's a lot of fight in me yet; I am not going to give up without a good struggle...

The fact that she saw her degree as one of her last chances to get a good education, and to do something with her life, was also very important. Then there was significance she placed getting a degree from this particular university, and she described how proud her family were that she had begun these studies. She also found psychology very interesting as a subject and planned to work in clinical psychology after her degree.

I'm enjoying the challenge ... When people hear you've got a degree from (this university), it's 'step back in amazement' type thing ... I don't feel that this is my last chance ever in life, but I think it's one of my last chances to get a good education, so I'm determined I'm going to stick in there... Obviously, my family are very, very, proud of me, and they give me great support in every way, which has been tremendous...

Despite her positive attitude to development, Susan did not make as many changes in her deep approach as might have been expected given the difficulties she found in understanding psychology. There are a number of possible explanations for this. Firstly, over the early weeks of her course, Susan was struggling to become acclimatised to the difference between university and her access course. These problems initially seemed to limit the resources she had available to take on board other opportunities for development. Once this had been overcome, one of her main difficulties appears to have been with time management. This was affected by her having chosen outside courses which she felt were too difficult and time consuming, by the paid work which she did and by difficulties she had in completing her assessed tasks efficiently.

This pressure of time helped to explain why Susan did not in fact begin to make use of any study skills advice until her last interview. On several occasions through the interviews, she mentioned having had the opportunity to make use of some sort of help, but not having had the time to do so. One further problem which limited Susan's development was that she seemed to have seriously misconstrued the intent of the feedback given on her first essay, which might have helped her develop her deep approach had she understood it.

## **Gail**

Gail's description of her school and university learning could, on the whole, be characterised as the adoption of a deep/strategic approach. Unlike the earlier cases, her deep approach developed strongly during the year. This seemed to be due to her ability to reflect on her learning - which had carried over from school - allowing her to take advantage of a particular critical incident in her tutorials. Her beliefs about what she needed to achieve in her learning, the fact that she took responsibility for her own learning, and her motivation in relation to university were also important.

Perhaps the most important shifts in her thinking were the related development in her ideas about critical use of evidence and about thinking for herself in relation to her essay writing. For her final essay, Gail felt that she was perhaps better at essay writing than some of her peers because she tried to understand the material for herself, rather than paraphrasing the textbooks. She also noted that she felt that she could now present both sides of an argument with evidence and offer some critical comment. Neither of these abilities were apparent in relation to her first essay. Gail explained that the reason for this change was instruction in critical reading given in her nursing tutorials. This was then supported by her tutor's comments on her psychology essays and by the student learning lectures:

The nursing tutorials that I've had, we always have an article or a chapter of a book to read ... We've been questioning a lot more about ... whether they actually cover the points that they've said they'd cover, and questioning whether the author is biased. I found that that's really made me think a lot more about what I'm actually reading ... Because I did sciences and maths (at school) ... you take for granted what's there. I think that's helped me with my psychology as well, because I have to keep remembering with psychology that they're only ideas, and psychologists views on something, and it's not actually dead set. Whereas before with my 'A' levels, then most of what I've been reading is actually fact...

We talked about the deep and surface approaches (in the lectures) and that reinforced what I was already coming to realise, about being more critical of what I was reading, ... taking more of a deep approach...

Before, I wouldn't maybe have had the confidence to do that (to use evidence critically) and partly I wasn't sure whether to put that into the essay. I think that's something with previous essays, ... the tutor's put, 'Based on what evidence?' Or, 'Why?' And that's led me to what's been missing has been to be a bit more critical of the studies, so I've tried to pick up on that more.

Another important change for Gail was in the way she dealt with her lecture notes. In the first interview she explained that there was a difference in the pace and complexity of the material presented at university as opposed to school, and she noted that to cope with this she would need to organise her reading. This need to deal with the lecture material well seemed to relate to expectations that she carried over from school, that she would have notes that she could understand.

(First interview) I'm finding them difficult, in that there is so much covered in each lecture, and there's a lot to read up on afterwards. I haven't really got into the ... way of working yet, and I need to get more into when I do set reading at a set time each day, rather than when I feel like it ... There is just a lot more covered in each lecture than I expected ... I mean in lectures I've had so far here we've already gone ... through all of ... the psychology that was in the biology that I did for 'A' level ... I think it's less detailed here, but it's more complicated.

(On how she judges her progress in psychology) It's not compared to other people, because I don't think anybody has really got settled into it yet. I think it's just because I don't feel very organised at the moment ... I suppose it's comparing it to sixth form, and to having a ... really good set of notes that I understand, and that are going to be useful to look back on, 'cos at the moment I don't feel I've really got that in psychology.

This is interesting, because students, including Gail, often have good notes dictated to them at school by the teacher and she had quickly realised that she must take over this responsibility for herself, not all of the students in this study seemed to rise to this challenge. Gail was able to fulfil her good intentions by her third interview, where she described a well organised system for dealing with her lecture notes and reading. One clue as to why she was able to accept this responsibility is given in the following extract, where she talks about how university was something she had chosen to do for herself, as opposed to work at school which was imposed on her:

Yeah, I think I've got more mature with my studying, because I know more now that it's something that I've chosen to do ... I could be in employment, or something. I've chosen to stay on at university, but at school then it's more you've got to do it because it's compulsory, and like your parents are telling you to do it, and your teachers are telling you to do it...

From the quotation below, we see that Gail was not daunted by changes in her ideas about learning, even when they were quite profound. This is important, as it must be difficult for most students to cope with such upheavals at a time when they are making so many other changes in their lives.

S: I have to keep remembering with psychology, that they're only ideas and psychologists views on something, and it's not actually dead set. Whereas before with my 'A' levels, then most of what I've been reading is actually fact...

I: Do you quite like this new way of looking at things?

S: Yeah.

I: You don't find it a wee bit daunting that it's all fuzzy?

S: In a way, yeah, it makes me less trustworthy of what I'm reading, but in a way it makes me feel more independent in my work, it makes me feel less like I'm being taken in by what they're writing, if I actually think, 'Well why ... are they saying (that)?' ... Yeah, it's OK.

## Leane

Leane was chosen as a case study because the change that occurred within her deep approach was one of the most extensive and clear examples of development in the sample. Her development seems to have been supported by her interest in psychology and her sense of its relevance, as well as the importance she placed on being able to develop her ways of learning. She was the only student in the study to give this as a reason for valuing university. In her first interview, she also described how she would rate her progress in psychology against the quality of the learning methods she adopted.

(I will know how I am getting on by) the level of understanding really ... I think if I adopt what I see to be as quite a good way of actually learning from all the different intakes I have been given - books, lectures, the talks...

The seeds of the changes in Leane's deep approach, which occurred mainly through essay writing, were apparent in her first interview. In describing her learning at school, Leane recounted a number of instances where she had successfully changed her learning; it seems likely that these experiences will have supported her positive attitude to development at university. Problems with essay writing at school also led her to understand the importance of asking for help when she was in difficulty.

The next piece of the story is to do with Leane's reaction to writing her first essay at university. After her first essay, she had come to realise the importance of understanding in these essays, although it was not clear what had provoked this change:

For 'A' levels, it seems to be more on style to get you through. But by the time you get to university, style isn't enough, because obviously all the tutors are going to be a lot brighter, and they actually know exactly what it is they are talking about ... I used to be a bit of a culprit for a waffly essay that I didn't actually know that much about what I was writing, and that seems to be the thing now of actually having to find out what it is you are actually writing an essay on. That sounds a bit stupid, but before you could get away with being quite airy-fairy about things, as long as it was a nice read for them. So, yeah, now it's actually getting into the realms of having to read those big books about it, and having to understand it yourself.

By the third interview, Leane had been to see her tutor to ask him to explain his comments on her first essay. The tutor read her essay aloud to her and this proved to be very significant for her development. Hearing her essay read out gave her a different perspective, which allowed her to see the limitations of her work; previously she had not been able to do this. Her ability to accept that there were problems with her essay is likely to have been very important for her development.

After my first essay I had a bit of a chat with (my tutor) about it ... What he did he read it through back to me, and I was the sort of audience to my own essay, and I thought some of it was completely terrible, and I thought, 'What can he be thinking' ... You tend to, I think, be a bit presumptuous and think just because you have had these little thoughts in that direction, maybe they will just realise you have them. Then you will be looking at it thinking, 'I just haven't expressed what I thought here'. I know I thought it really kind of strongly, I was really excited about it ... I was quite grumpy about the mark I got; I thought I had much better ideas than that ... Then you heard it back and, well, I would have given myself exactly the same mark, if not lower, because it was really badly expressed.

From this first essay to her second and third essays Leane's grades improved and she also made a number of developments in her deep approach to essay writing, which seemed to be at least partly due to self-regulation provoked by this incident. One aspect of these developments in her essay writing was that she worked to be sure that she understood material that she read for her essays. It is also interesting that she came to see understanding as quite difficult, whereas in her second interview she had thought it was quite simple.

(Third interview) I found it quite frustrating ... The first time I read it I really came away with the feeling I hadn't actually got anything from it ... I just found myself whizzing through it ... because it took a lot of grinding through to understand it, I would skim through it ... I would just skim through it and got completely the wrong meaning, just because I assumed it would be a different meaning ... So, it was a result of that I just had this one day when I thought, 'I must be doing this a bit wrong, I must be reading it wrong or something'. So, I just read through it a second time, very slowly. Sometimes I would read it aloud, that kind of helped ... It was very much easier to understand. I think just reading through it a second time and not having this horrible feeling, 'Oh its taking so long' ... *I think actually this time I understood what they were talking about, rather than just made up what they were talking about by making little references back to it...*

A further development was that Leane seemed to be making tentative attempts to gain a more personal understanding and to bring in her own ideas for her final essay. It is not entirely clear how this development came about, but it may have been related to her reaction to the essay topic. She felt that she was reflecting on the relevance of the topic for herself, rather than distancing herself from it.

(Third interview) I try and make (the essay) a little bit more original, rather than just right from the book. So, I try and think about it myself first and then, I don't know, not sort of meaning to make it original, but I think just when you consider something yourself, your own ideas are obviously going to be put into that ... I wrote little drafts, just how I thought about these little things, and the things I thought about them ... It came, I think, from ... reading similar texts ... I feel there has to be a time after you have read it, and before you write it down, where you have to consider it to be able to understand... I think this is what I did in my first essay ... I just hadn't thought about it, and took it from what I had written down, and tried to kind of put it on the piece of paper and type it up ... I would have before distanced myself from it, I think ... I find now by thinking about it is relevant to me, and this is why the social psychology thing is kind of easier to do, I think, because it wasn't, sort of, so scientific.

## **Discussion**

The full longitudinal study from which this paper was derived illustrated how difficult it can be for students to develop their ability to successfully adopt the deep approach to studying. It was suggested that some of the main reasons for this limited development were to do with the students' somewhat restricted goals and the lack of explicit emphasis on development in their current and prior learning environments. The negative attitudes towards advice shown by some students were important, as were the difficulties in communicating the academic discourse of psychology through the advice and feedback provided. For certain individuals, their dependence on external pressures for their motivation also seemed to be a limiting factor.

The focus of this paper was on the perspective on students' learning and development provided by the five case studies. These studies brought to the fore the complexity of students' learning and the importance of their idiosyncratic experiences, beliefs, attitudes, abilities and motivation for understanding their development. It was apparent from the case studies that, while the general categories for approaches to learning and studying described in the introduction are rooted in students' descriptions of their experiences, they do not adequately describe the day-to-day reality of individual students' learning. The value of this more abstract level of description has been repeatedly illustrated in research in this area, but nonetheless the case studies and other findings suggest that such abstractions have their limitations.

It was clear, for example, that the description of the deep approach had to be modified to suit first year students and also the ways in which students work in this particular discipline. This latter point has been made previously. Entwistle and Ramsden (1983) illustrated how approaches were expressed in different ways in the sciences compared with the humanities. In the science areas, the deep approach appeared to require an initial concentration on details which seemed in some ways similar to a surface approach, whereas in the humanities, a deep approach involved students working from the outset to form personal interpretations of the material. Even having modified the approaches categories to suit this particular sample, it was clear that this description still had its limitations. Students sometimes showed only certain aspects of an approach whilst, even within a specific learning task, other aspects were clearly absent. Thus, the conceptual groupings of elements into approaches do not always work well at the individual level. Further, it was clear that the categories did not include all the important aspects of an individual student's learning. For example, Susan's view of herself as a fighter was crucial and persisting aspect of her learning. And yet it is not included in the definition of either deep or strategic approaches.

One possible response to such limitations of the approaches categories is to suggest that the use of a more comprehensive system of categories might provide a better picture of students' learning. While it is possible that some conceptually related categories might be profitably added to the approaches, this could not be taken far without the concepts losing both their original meaning and the simplicity which makes the categories readily intelligible. Further, the complex and idiosyncratic nature of students' learning and development shown in the case studies suggests that no category system or general model

of the influences on students' development can fully represent individual students' experiences. This has been illustrated by a number of other studies in this area. Beaty, Dall'Alba and Marton (1997) discuss detailed case studies of the development of students' conceptions of learning. Although the students' learning could be represented by a system of categories describing their conceptions, the authors found that there were also important idiosyncratic threads running through individual cases. For example, within their developing conceptions, two students focused on themselves as people (but in different ways), one on disciplinary knowledge, and one on capability and the skills that come through learning. These personal perspectives ran through the transcripts and were central to the ways in which the students' learning changed, yet they would not have been addressed by the basic categories for the conceptions.

The complexity of the influences on students' learning is also illustrated by studies which demonstrate that students' approaches influence, and are influenced by, their perceptions of the learning context (Entwistle, Meyer and Tait, 1991; Entwistle and Tait, 1990; Entwistle, Tait and McCune, 2000). The inter-relationships between aspects of students' learning also seem to differ both between individuals and between groups (Entwistle, Meyer and Tait, 1991; Entwistle, Tait and McCune, 2000; Pintrich and Garcia, 1993; Sambell and McDowell, 1998). Further, both the macro characteristics of the system - such as the general forms of assessment - and the micro characteristics - such as the particular problem set - can have important influences (Laurillard, 1997; Scouller, 1998; Thomas and Bain, 1984). There is also the issue that aspects of the system seem to be hidden or tacit (Ballard and Clanchy, 1988; Sambell and McDowell, 1998; Snyder, 1971). It is, of course, possible to represent some of this complexity using statistical techniques such as the cluster analyses described earlier (Entwistle, Tait and McCune, 2000) and unfolding analyses can be used to represent learning at the level of individual students' inventory responses (Meyer, 1998; Meyer and Muller, 1990). Both these and other statistical techniques have been used successfully to provide more sophisticated insights into students' development and their reactions to the learning context (Meyer, 1998, 2000; Meyer and Muller, 1990; Vermetten, 1999; Vermunt and Verloop, 2000). These techniques are, however, limited to the inventory items used and thus cannot be expected to fully capture and the dynamics and critical incidents within individual students' experiences.

The argument being made here is not that the earlier research into approaches to learning is flawed, but rather that different methods and forms of analysis provide different perspectives on students' learning. The case study method used in this research gives an insight into students' experiences which can be used to complement and expand the findings of the earlier studies. One of the implications of these findings is the potential importance of taking into account the diversity and complexity of students' learning when providing support to staff or students. Failure to do so might result in some individuals rejecting advice based on these concepts, because it does not appear fully to represent their experiences. This might in part explain why the research in this area has not had as marked an effect on practice as might have been hoped. It may be that case studies such as those described here could usefully be used, in conjunction with analytic categories, as a means of prompting students to reflect productively on their learning.

The case studies also illustrate some of the potential problems inherent in supporting the development of students' learning effectively. The study by Beaty, Dall'Alba and Marton (1997), mentioned above, and also several of our own case studies, suggested a consistency in attitudes and approach, and draw attention to the influence of individual personality and past experience. Some students come in with well-established views about their strengths and weaknesses, and also about the extent to which those characteristics can be changed. The lack of change seen in our case studies has to be viewed in this light, and has important consequences for advice on studying and the ways it which it is given. For example, Alistair's case raises the question of how staff might support the development of a student who only works when pressured, and who reacts negatively and defensively to advice about his learning. It was worrying to find him ignoring the aspects of the student learning lectures which reflected badly on his learning, while remaining cynical about the benefit of study

skills support in general. Alistair's problems raise significant questions about the provision of general learning support without individual attention. Even if the advice given was relevant and based on research into students' everyday learning, it still seems unlikely that students with these tendencies would be able to benefit from such help. Kirsty's case illustrates similar problems. Unless the advice given to her had dealt directly with her difficulty to get down to work, it is hard to see how she would have benefited from it.

The limitations of generic advice are also suggested by the students' who showed marked improvement in their approaches. Again, these students showed a certain consistency in their attitudes and approaches from school. They showed a sensitivity to the opportunities for change afforded by particular incidents. It seems that this sensitivity rests on varied and individual experiences, attitudes and motivation. The general advice provided in the student learning lectures in some cases supported such changes, but it did not seem to be enough in itself, since most of the students did not make much use of the advice presented in the lectures or react strongly to the opportunities presented through advice and feedback from tutors.

Another potential problem is that the mainly good grades given to the students in this study seem to have contributed to their sense that there was little need to develop. It is possible that lower marks, and friendly criticisms specifically related to the demands of academic discourse in the subject, might alert students to the need to change.

## **Conclusion**

While the analytic framework of approaches to studying provided an essential first step in making sense of how students learn, it has been argued that fine-grained, discipline specific, longitudinal studies are now necessary to enable staff and students to understand studying within a specific course. The results of this study provide an insight into the development of students' approaches which could not have been obtained from the quantitative longitudinal studies that have been carried out to date. They also provide a more thorough understanding of how the deep approach is exemplified within a specific discipline and of the relation between the general analytic framework describing approaches to studying and individual activity and development. This suggests the value of more extensive use of case study methodology than has been common in research in this area. In carrying out research into student learning we now need to take account of the tension between clarity and parsimony on the one hand, and faithfulness to the complex and idiosyncratic nature of students' day to day learning in context, on the other. It seems that ineffectiveness of study advice may be partly understood in terms of the persistence of existing attitudes and habits, the nature of students' goals, the level of marks awarded, and the extent to which learning development is represented as an explicit goal by staff. Effective advice should ideally take into account the more idiosyncratic and dynamic aspects of studying, and the specific academic discourse and learning contexts within which the students are operating.

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