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An Investigation Into Students' Approaches To Learning in Higher Education

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Abstract

This study explored students' approaches to learning in higher education with the aim of identifying the strategies and study skills that students believe lead to effective learning. A qualitative method, in the form of semi-structured interviews, was used with ten students from Newcastle University, five of whom were postgraduates. The study revealed a strong relationship between students' approaches to learning and the study skills they use. Additionally, the study indicated that mature students (postgraduates) tend to have a more effective approach to learning than younger students (undergraduates). The implications of this study highlight the importance of having organised strategies for effective learning in higher education and achieving positive outcomes.

Keywords
Learning Approaches; Study Skills; Strategies; Higher Eduction; Deep and Surface Learning

I. Introduction

It could be argued that the study of students' learning in higher education is a relatively new area. In recent years, there has been increased research into how students select their study approaches. As a lecturer at Libyan universities, I have noticed that many higher education students are not aware of the importance of study skills and seem to lack the use of study plans, which are essential for coping with the demands of university subjects. Martin and Ramsden (1984) emphasised that the purpose of learning skills is to develop and organise the process of student learning. It is assumed that learning skills should help students gain strategies, such as methods of note-taking, that can make learning more effective and increase students' awareness of their learning approaches. Marton (1976) highlighted that students' approaches to learning can be classified as either a deep approach (focused on understanding) or a surface approach (focused on memorisation). It has been found that one strategy for promoting a deep approach is the development of study skills. Students with strong study skills are likely to be more experienced and possess a variety of ways to tackle any problem (Gibbs, 1992). The approach a student adopts—deep or surface—is likely influenced by how they use different learning skills, such as note-taking and reading strategies. Moreover, there is likely a relationship between the learning skills used and the level of understanding achieved. Similarly, Marton, Dall'Alba, and Kun Tse (1993) found that students use memorisation as a skill leading to better understanding.

It is assumed that the study skills required in higher education are likely different from those needed in schools, and it is a mistake to think that entry qualifications guarantee an appropriate level of study skills. For this reason, students coming directly

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from school may find it difficult to cope with the demands of higher education. In line with this, secondary school teachers may struggle to provide students with such preparation, arguing that these skills are better developed by universities or other higher learning institutions. In schools, for instance, students receive more support from their teachers, who are familiar with the students' abilities and weaknesses. In higher education, however, students are given opportunities to learn independently, relying on their own abilities and initiative. Moreover, in schools, students receive significant help and time to organise their work, so when they transition to university, they find they must handle most of the work on their own. These differences and their implications are often not fully appreciated by either lecturers or students. Consequently, students in higher education are left to their own devices and may use inadequate or inappropriate study methods, which at best allow them to keep up but are unlikely to lead to a deep understanding. Ultimately, students must take responsibility for developing their own study skills. Therefore, it is essential to explore how students learn successfully in higher education by examining their approaches to learning and determining whether study skills contribute to better understanding. This may highlight the need to improve the quality of teaching in higher education and to offer workshops and courses on study skills to help new students adopt successful learning approaches.

"Study skills" is a widely used term that describes different approaches to studying and learning, including habits, techniques, strategies, and understanding (Andrew, 1990). Habits refer to the conditions that provide the best environment for studying, such as the time and place for studying, whether in a well-lit room or in bed, studying alone or with others, and the routines that help create the ideal study situation. Techniques are the methods students use for studying, including how they take notes during lectures, rewrite them, and skim through reading materials. Strategies involve planning and managing studies, such as revising notes, consulting books, preparing for exams, and selecting helpful materials for revision. Understanding enables students to be effective in reflecting, predicting, analysing, and linking new information to their previous experiences. Dodd and Shaughnessy (1988) defined study skills as any activity or behaviour that enhances the learning process and includes various activities such as note-taking, underlining, and using mnemonic devices. They suggested that academic problems are not solely the result of poor study skills but are also influenced by factors such as poor organisational skills, poor coping skills, and emotional disturbances. Indeed, using study skills while studying might not necessarily lead to better performance but can likely lead to a more effective approach to learning.

Brown and Atkins (1988) reported that the study of student learning has generated increased interest in the value of teaching study skills. Similarly, Ibrahim (1989) highlighted the importance of offering a study skills course for first-year students, with the aim of making learning more interesting and effective. Delivering a course or workshop on study skills at the departmental or faculty level is essential, as each individual department or course team will have its own specific requirements and input. This may involve offering additional tutorials and handouts to support students' learning. Likewise, skills need to be practiced in conditions where supportive feedback is provided, weaknesses are identified, and alternative strategies are suggested. For this reason, study skills pamphlets alone are largely ineffective, and even traditional study skills workshops often err by being too prescriptive. Follow-up workshops for first-year students are needed later in the year to provide opportunities for them to discuss the different approaches they have been adopting (Ibrahim, 1989). These workshops allow students to review the strategies they have been

using, for example, in note-taking or reading skills. By that time, they will have encountered different course requirements and contrasting teaching styles. Consequently, discussions can become focused on actual experiences, and the variety of experiences can provoke lively debate.

During discussions with students, it is worthwhile to emphasise that there is more than one way to approach learning, and to explore which methods are most effective. However, it is essential to make students aware that, ultimately, they are responsible for identifying the study methods that will help them achieve success. Schmeck (1988) highlighted the workshop techniques used in North America, where there is a greater emphasis on training students to implement specific strategies. These workshops may focus on selecting important ideas, problem-solving, and cognitive learning strategies. Drawing on ideas from cognitive theory, such workshops would provide students with a rationale for using techniques such as 'verbal elaboration' and organisational strategies like grouping. Although these concepts may seem jargon-heavy, it is important to recognise that they involve significant thinking skills that can be taught and that will help students study more effectively. The strategy workshops typically involve an initial explanation of the strategies to be learned, followed by extensive practice sessions. Students are then encouraged to identify ways to apply these new strategies within their own courses. This combination of skill practice, followed by systematic discussion of how to use the skills, seems to be an essential component of ensuring their transfer to academic courses.

However, Brown and Atkins (1988) described traditional study skills courses as too broad (see, for instance, Gibbs, 1981) and based on a simplistic conception of the psychology of learning, assuming that there is only one right method. Wells (1986) argued that study skills training often neglects motivation, values, and attitudes. Similar criticisms have been made of some books on study skills, which seem to assume that the majority of students will adopt the same approach to learning (Wells, 1986). Nowadays, improvements to the traditional approach, particularly in the USA, have focused on more effective strategies (Dansereau et al., 1979) designed to help students manage anxiety and maintain a positive attitude toward learning (Hartley, 1986). Awareness of the pitfalls in teaching study skills has led to broader aims in some courses (Tabberer and Allman, 1981), with the goal of helping students become more effective learners by using study skills (Tabberer and Allman, 1981). To fully appreciate this aim, it is essential for students to understand exactly what is meant by "effective." Tabberer and Allman (1981) explained that the term "study skills" can carry different meanings for different people; for some, it is synonymous with "exam skills," and as such, teaching study skills may be seen as teaching students how to achieve better exam results. Students may be advised to focus on the most important points and not to try to remember everything for exams. Indeed, there are strategies students can use to get better marks in public examinations. For others, teaching study skills is synonymous with advising students on how to navigate a confusing and demanding academic environment.

Overall, it is important to show students that learning can be made easier by providing methodical, practical sessions that demonstrate shortcuts for certain tasks—e.g., they don’t have to read the entirety of every book due to time constraints. In this context, effectiveness equals efficiency, with the goal of giving students the means to promote and control their own learning, a sense of potential competence, and optimism about their abilities, while also emphasising the importance of active participation in learning.

II. Review of Literature

2.1 Students' Approaches to Learning: Deep and Surface

One aspect of students' approaches to learning involves the level of processing, which can be either deep or surface level, and a second related aspect concerns whether the learning is active or passive. Marton (1976) defined deep and surface as two levels of learning processing. A deep level of learning refers to understanding, while a surface level of learning refers to memorisation. These approaches are considered aspects of students' skills that indicate how they tackle their studies. It is likely that deep learning cannot be achieved without the use of certain skills, making it important to explore what these skills might be.

The most significant work on students' approaches to learning was conducted by Marton in the mid-to-late 1970s. Other researchers, such as those from Gothenburg (1977) and the Lancaster approach to learning (late 1970s), have further developed his work. Marton and Saljo (1976) primary objective was to relate qualitative differences in what students learn to their approach to the learning task at hand. Their original idea of an approach to learning emerged from a naturalistic experiment in which students were asked to read an academic text. The texts used in these experiments were reasonably difficult and presented clear arguments supported by evidence. Marton and Saljo asked the students questions about the meaning of the text and the strategies they used to understand it. After a time delay, they asked the same questions again. They found a relationship between what the students said about their learning process and the level of outcome (the amount of information retained five weeks later). Those who had linked what they read to their previous knowledge and identified the main arguments understood and remembered the passage better.

From this experiment, Marton and Saljo developed a general classification scheme to describe differences in the levels of understanding reached by students. They called the strategy used by students who understood and remembered the text longer the "deep approach," while the memorisation of ideas that were quickly forgotten was termed the "surface approach." The investigators also highlighted a significant difference in the students' descriptions, claiming that some students processed information at a surface level, while others processed it at a deep level, and that the level of processing was related to retention rate. Not only did Marton and Saljo identify the existence of deep and surface approaches to learning, but they also described how each occurs. They found that attention is directed differently depending on the approach: in a deep approach, students focus on the "intentional content" of the learning material. For example, students using a deep approach tried to understand the author's point about a particular problem or principle.

Active learning involves taking in new information, filtering it through experience, reflection, abstraction, experimentation, and then repeating the cycle as further inputs are made. It is important to grasp the nature of this fundamental distinction. The difference between deep and surface learning is not quantitative, such as motivation or level of attention. Deep learning is not simply "more" surface learning, nor is it related to psychological concepts in the study of memory (see, e.g., Craik and Lockhart, 1972). Marton's approach is rooted in phenomenological psychology (Marton, 1978), with a focus on the meaning of learning as defined by the students rather than the experimenter. The distinction between deep and surface learning describes a qualitative difference in approaches to tasks requiring high-level learning: active searching for meaning in a text versus memorising or reproducing words or ideas. In this respect, students who adopt the former approach have a degree of control over their learning strategy.

Svensson (1970) investigated deep and surface approaches in students' regular studying, rather than just in an experimental situation, and examined the relationship between approach to studying and academic attainment. He compared findings about how students study with their examination results at the end of the year. His results showed that of the students who used a deep approach in both the experiment and regular studying, 90% passed all their examinations. In contrast, only 23% of students using a surface approach in both contexts achieved this level of success. Svensson also found that students adopting a deep approach tended to spend more time studying.

Entwistle and Ramsden (1983) suggested that students who study deeply are more likely to find the material interesting and easier to understand, making long hours of study more enjoyable. In contrast, students using a surface approach focus on an inappropriate learning technique—rote memorisation—which is time-consuming and tedious, often leading to less academic success. Svensson (1970) reported that of his students using a deep approach to regular studying, 9 out of 11 did three or more hours of independent work a day, while 8 out of 19 students using a surface approach worked less than three hours a day. Although this study involved a small sample, the results suggest a trend.

In line with these findings on learning approaches, Richardson (1995) emphasised the lack of proper study skills among higher education students in general, although he noted that older students tend to follow a deep approach (meaning orientation) more than younger ones.

It could be argued that previous studies primarily focused on distinguishing between deep and surface learning approaches. However, little is known about how students achieve a deep level of learning and what specific skills they employ to reach this level. Clearly, certain skills must have played a role in facilitating this process. Moreover, although Marton and Saljo categorised students' approaches based on their responses to an academic article, these responses were somewhat ambiguous in revealing the exact skills students used when tackling the article. Therefore, this study seeks to explore students' approaches to learning, specifically examining the study skills employed by students in higher education to achieve either deep or surface learning.

III. Research Method

A qualitative method, in the form of semi-structured interviews, was used in this study with higher education students at Newcastle University. The aim was to answer the following key research question: Which approaches and study skills do students use, and how do they believe they can learn effectively in higher education? The target population was selected from various faculties of Newcastle University, encompassing both undergraduate and postgraduate students. A sample of ten students was chosen using simple random sampling, ensuring an equal number of male and female participants from both postgraduate and undergraduate levels. Consequently, one student from each of the following departments was interviewed: Physiological Science, Physics, Zoology, Electrical Engineering, and Medicine. Additionally, five students from the School of Education were also interviewed.

Seven open-ended questions, based on relevant literature, were formulated by the researchers using introspection and their professional experience. All interviews were tape-recorded, transcribed, and subsequently analysed.

IV. Results and Discussion

4.1 Results

The interviews suggested differences among participants in their learning approaches and use of study skills, reflecting their experiences and educational backgrounds. Seven students, including five postgraduates, indicated that they use a deep learning approach, which involves understanding concepts through various methods such as revision, note-taking, consulting with peers and tutors, slow and careful reading of comprehensive books, journals, and articles, and completing practice exercises. They further highlighted that effective teaching plays a crucial role in achieving understanding. Conversely, three students stated that they use a surface approach, such as memorising data, to understand and retain facts. Interestingly, these students also reported reading extensively and reviewing material repeatedly to achieve understanding, emphasising the importance of revisiting content multiple times to gain a deeper understanding.

The findings also indicated differences between undergraduate and postgraduate students regarding the study skills they use to achieve effective learning. Postgraduate students appeared to be more adept and versatile in their use of study skills compared to undergraduates. All postgraduate participants reported that regularly reviewing their session notes was very beneficial and helped them better understand the material. Regarding note-taking methods, they suggested creating concise sentences of key points, which helped them concentrate during sessions and retain information more effectively. Besides taking notes, they engaged in extensive reading, utilising the library and consulting relevant journals and articles. To enhance their reading effectiveness, they underlined important points and jotted them down on paper, read carefully between the lines, and connected their reading to prior knowledge.

In contrast, undergraduate students did not seem to have a study plan, except during exam preparation. They associated their study skills primarily with exam preparation and summarised note-taking, relying heavily on memorisation as the most effective way to learn. The interviews indicated that undergraduate students lacked organisation in their note-taking and tended to focus more on past exam papers, identifying the most common questions and answers, summarising, and memorising them. They also appeared to lack specific reading skills, relying on repeatedly reading passages to grasp their meaning. They emphasised the importance of a quiet environment for effective reading.

Despite these differences, both undergraduate and postgraduate students expressed dissatisfaction with their current study skills and a desire to improve them. They believed that study skills evolve over time and that new strategies could further enhance their learning in higher education. Seven participants suggested that study skills can be improved through various means, such as self-discipline, increased reading, commitment, motivation, and a systematic study program rather than long, intensive periods. Additionally, they advocated for study skills courses for all students are necessary, in order to raise awareness of different strategies and developing better study plans.

4.2 Discussion

This study revealed insightful findings concerning students' approaches to learning and the use of study skills that contribute to effective learning in higher education. In contrast to previous studies, such as those by Marton and Saljo (1976), this study did not employ a specific scale to measure students' responses to an academic article. This absence of a quantifiable measure makes it challenging to categorically classify students as deep or surface learners. Nonetheless, the study identified strategies likely associated with each

approach, allowing conclusions to be drawn about whether students lean towards a deep or surface approach based on the study skills they employ.

The findings suggest that students' approaches to learning are closely linked to the study skills they use. A deep approach, as indicated in this study, is associated with certain practices: careful note-taking, regular revision, working through examples, careful reading, interactive learning with peers, and consulting comprehensive resources, coupled with effective teaching. These are strategies that students perceive as making learning in higher education effective. The deep approach (focused on understanding) appears strongly connected to the application of varied study skills and is influenced by what students perceive as effective teaching methods.

Conversely, the study suggests that a surface approach is associated with a lack of planning and organisation, reliance on memorisation, and an inappropriate method of teaching. Students who adopt this approach often believe that memorisation leads to understanding, reflecting findings by Marton, Dall, and Kun (1993) that suggest memorisation can contribute to meaningful learning. Particularly among undergraduate students, there is a perception that memorisation and understanding are interconnected rather than distinct processes. This may indicate confusion about the distinction between surface and deep approaches to learning, or it could suggest that repeated reading and intense concentration lead to a form of understanding that is not strictly memorisation but rather focused engagement. This finding may not fit with Marton and Saljo’s views on students approaches to learning however, it aligns with Fransson's (1977) description of the four approaches to learning, including deep passive and surface active approaches, suggesting that students may combine different elements of deep and surface strategies.

Moreover, the study highlights significant differences between undergraduate and postgraduate students regarding their approaches to learning and the study skills they use. Postgraduate students were found to have well-developed study habits and skills, such as effective note-taking, strategic reading, interactive learning, and systematic study planning, leading to a deeper approach to learning. This finding aligns with Richardson (1995), who observed that older students tend to prefer a deep approach to learning. Furthermore, this study underscores the importance of study skills in higher education, supporting Gibbs (1992), who emphasised that these skills facilitate effective learning.

In contrast, undergraduate students often only plan their studies in preparation for exams, following strategies such as creating timetables, reviewing lecture notes, and memorising past exam questions and answers. This finding reflects Rowntree's (1988) emphasis on the need for preparatory strategies well before exam time. However, this method is often accompanied by high anxiety and difficulty in covering all material before exams, echoing the findings of Entwistle and Ramsden (1983) that such a surface approach leads to less successful outcomes. It is evident that whether students adopt a deep or surface approach to learning is influenced by their use of study skills.

In agreement with Schmeck (1988) and Ibrahim (1989), this study highlights the role of universities and lecturers in guiding first-year students, helping them become independent and responsible learners. This may involve lecturers and departments taking greater responsibility for promoting strategies that encourage a deeper approach to learning.

V. Conclusion

This study identifies the most effective strategies employed by higher education students to enhance their learning. Different strategies are evident among students, particularly postgraduates, who employ techniques such as careful note-taking, effective reading, and engaging with peers and tutors. These strategies include organising and summarising notes through various means (jotting down key points, using examples, quotes, and sketches), which aids in retaining and recalling information. In contrast, undergraduate students often lack organisation in their study methods, which may indicate the use of less effective learning strategies.

The findings support the idea that many undergraduate students rely on inappropriate learning methods, possibly because they are left to navigate their studies without sufficient guidance. This underlines the need for equipping these students with essential study skills to help them meet the demands of higher education. Moreover, the study highlights the importance of adopting a deep approach to learning—where students look beyond surface-level information to understand core arguments, ideas, and principles. While these results align with existing literature on students' learning approaches, they also emphasise a need for specific study skills that can lead to effective learning.

Furthermore, older students (postgraduates) tend to have a better command of study skills compared to younger students (undergraduates), who appear to be less experienced and unaware of the importance of using effective study skills. The implications of this study suggest a need for an intensive course or workshop on study skills to better prepare students for the academic demands of higher education and to encourage more effective learning strategies.

Finally, further research is recommended to explore the relationship between students' approaches to learning and the use of study skills in higher education. Such research should employ larger samples and diverse data collection methods to deepen our understanding of these dynamics

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