

Students' Approaches to Learning in an English-Medium Higher Education

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Abstract

This in-depth, qualitative study examines perceptions of the learning approach that students receiving their higher education in the medium of English language adopt, factors that influence students to adopt a particular learning approach, and which approach tends to be more effective in terms of learning outcome. First and final-year students ($n=151$) responded to a survey questionnaire. Furthermore, interviews were held with volunteering students ($n=48$). Students' responses indicated a tendency towards surface learning during the first-year and a mixture of surface and meaningful learning during the final-year. Various factors were identified affecting the students' adoption of an approach. Deeper learning was achieved through the use of a strategic learning approach by the students' jointly constructing disciplinary knowledge. Suggestions are proposed to promote students' achievement of more effective learning of their disciplinary knowledge.

Keywords: English-medium higher education, acquisition of disciplinary knowledge, strategic learning, deep learning, surface learning, joint construction of disciplinary knowledge

1. Introduction

Universities have an important contribution to make to the social and economic well-being of a country by educating the nation's prospective researchers, scientists and businessmen. In Turkey, higher education, which is conducted in the Turkish medium of instruction (TMOI), has started to take a different direction with the establishment of several universities offering some or all of their courses in the English medium of instruction (EMOI). As the demand for such universities increased, the issue of EMOI and its impact on teaching and learning at higher education has been amongst the most widely debated issues (Kırkgöz, 2005; 2009; Sert, 2008).

The official policy of *Yüksek Öğretim Kurumu (YOK)*, the Higher Education Council, states the purpose of higher education in Turkey as to educate people who are highly specialized in their respective field of specialism (2006). This national goal, decreed at macro-policy level, can be realized only if the undergraduate education helps students become effective learners and adequately equips them with the disciplinary knowledge. What -specifically- does this mean for a student who is

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expected to acquire his/her disciplinary knowledge through the medium of English language, a foreign language to him/her? What are the students' perceptions of their learning approaches, what factors underline students' adoption of a learning approach, and what approach tends to be more effective in students' acquisition of their disciplinary knowledge? Several research findings indicate that the approaches to learning has a significant role to play in influencing the quality of student learning (Smith & Miller, 2005; Byrne et al., 2009).

An investigation into understanding student learning approach is, therefore, needed in order to help students be better learners if they are aware of their own learning approach (Biggs, 1987), and also help educators be more efficient in their teaching. This study aims to investigate these issues in the context of three English-medium academic disciplines in a state university in Turkey.

2. Approaches to Learning in Higher Education

'Approaches to learning', developed around 'deep and surface constructs' is one of the theories that has gained prevalence in conceptualizing student learning in higher education (Haggis, 2003; Marshall & Case, 2005). 'Deep and surface constructs' are the two qualitatively different ways that students are believed to conceptualize the idea of learning. Haggis (2003, p.90) notes that

These different ways of understanding learning are considered to underlie two basic approaches to learning: quantitative, which involves memorizing and acquisition conceptions underlying a 'surface' approach in which the student's intention is to memorize the text, and abstraction, understanding reality and developing as a person underlying 'deep' approach in which the student's intention is to understand the meaning of the text.

2.1. *The surface learning approach*

The surface approach to learning incorporates the use of memorization i.e., rote learning to recall course content, linked to lack of understanding (Entwistle, 2001). Students who adopt surface approach commonly learn through memorizing facts, accepting all the information unquestioning (Entwistle & Ramsden, 1983). Their main intention is just to get things done with minimal efforts. It is claimed that students who learn by rote are often able to construct a holistic understanding of what they are learning, as they do not relate aspects of the task to a whole and avoid personal meaning. This approach may allow them to pass examinations, but what affects their learning is mainly about "quantity without quality" (Haggis, 2003).

2.2. *The deep learning approach*

Students who adopt *the deep approach* to learning aim to understand the subjects with the intention of seeking own meaning and enhancing understanding. They are interested in the academic task, relate the task to themselves, and integrate parts of the task into the whole (Ramsden, 2003). Such students actively engage with course content, monitor the development of their own understanding, and attend to the meaning and significance of the materials to be studied (Fox, McManus & Winder, 2001; Marton & Saljo, 1976). Because these students attempt to maximize their understanding by reading widely, discussing, and reflecting on the topic, deep approach is more likely to result in a high level of understanding and effective learning (Entwistle & Ramsden, 1983).

Case and Marshall (2004) contend that there is a continuum between surface and deep approaches, which vary according to the intention of the student and the context of the learning task. Haggis (2003) states that "if a student believed that memorization was rewarded, then the student would choose a 'surface' approach appropriate for that context" (p.90). According to Ramsden (2003),

students with the ability to use deep approach may use surface approach when the task demands it, such as learning a large amount of material quickly for an examination.

The distinction between meaningful and rote learning was originally made by the psychologist Ausubel (1963) who argued that “meaningful learning refers to a distinctive kind of learning when incoming ideas are related in a “nonarbitrary” and “nonverbatim” manner to what the learner already knows in the processing or internalization of new ideas” (p. 59). If, on the other hand, a learner memorizes the incoming information verbatim as a series of arbitrarily related words, both the learning process and the outcome result in rote learning. In such a situation, neither the learning process nor the learning outcome can possibly be meaningful. Ausubel defines meaningful learning as a student generated process that entails construction of relations among ideas and concepts.

Meaningful acquisition of disciplinary knowledge would have important consequences in enabling an individual to become an effective professional in his/her discipline, influencing his/her academic achievement. This argument was confirmed by such researchers as Ausubel (1963) Marshall and Case (2005) who contend that meaningful learning is so important in the process of education, and that deep approaches to learning are desirable and attainable goals in higher education. The desirable tendencies to induce deep approaches to learning would have the effect of creating an increase in meaningful learning rather than surface approach to undergraduate students with high level of specialized knowledge.

2.3. *Strategic learning approach*

Besides these two approaches, a further approach to learning is identified, namely the use of the *strategic learning approach* (Entwistle & Ramsden, 1983; Biggs, 1993; Entwistle, 1991). Students who adopt this approach may appear to use attributes of deep or surface processing in line with the demands of the context, and they focus on organized study, time management, and monitor effectiveness of one’s study. Although the results seem to be inconsistent, the use of a deep learning approach is, in general, associated with higher quality learning outcomes and higher grades, and a surface approach with lower quality learning outcomes (Crawford, Gordon, Nicholas & Prosser; 1998; Zeegers, 2001; Ramsden, 2003). Much of the literature focuses on the claim that “‘without exception’, deep approaches to learning and ‘ways of understanding which include complete ways of conceiving something’ are ‘more likely’ to result in high quality learning outcomes and surface approaches leading to poor outcomes” (Prosser & Trigwell, 1999, p. 4).

Studies have reported that high academic achievement and performance can be predicted from students who adopt deep approach to learning either alone or in combination with strategic approach (Diseth & Martinsen, 2003). Van Rossum and Schenk (1984) investigated quality of the learning outcomes of 69 first-year psychology students. Their results show a positive relationship between a deep study approach and high quality learning outcomes. Zeegers (2001) evaluated 200 first-year science students’ learning outcomes. The study showed a consistent positive correlation between the deep approach to learning and assessment outcomes. Snelgrove and Slater’s study (2003) with nursing students found the deep approach to be significantly correlated with average grade performance. Ekinçi (2009) identified the learning approach preferences of undergraduate students from three universities in Turkey. Her findings reveal that although undergraduate students have a higher tendency of applying deep learning approach in dealing with a topic, they mostly prefer surface and strategic learning approaches. Significant relationships were identified between students’ learning approaches and such variables as teaching-learning environment, subject field and grades. Senemoğlu (2011) compared Turkish and American college of education students’ learning approach. Findings indicated that most Turkish and American students preferred deep and strategic approaches to learning, and as the school year increased, the use of surface approach decreased.

2.4. *The constructivist approach to learning*

A related line of thinking comes from constructivism, which is based on the idea that learning is an active, constructive and goal-orientated process, and learners construct knowledge through the engagement of an intellectual activity by processing information based on existing mental structures (Johnson & Johnson, 1991). This active and constructive learning is considered vital in the acquisition of disciplinary knowledge.

The constructivist perspective is based on student directed learning, and places the responsibility on the learners' active construction of ideas. A further benefit of the constructivism to learning can be related to its emphasis on meaningful learning. To constructivists, learning occurs with understanding in which a learner must actively construct meaning, making links between the existing knowledge and the incoming information, gradually elaborating one's conceptual framework (ibid).

Constructivism also focuses on the social aspect of learning, connecting the development of 'effective' learning with collaborative learning. It is suggested that learning is facilitated by sharing, i.e., by means of interaction with one's peers and knowledge results from the dynamic interaction of people (Jaeger & Lauritzen, 1992). This is the reason why constructivists have promoted "co-operative learning", a practice in which a group of students co-operate and work as a team in constructing knowledge.

The benefit of working in a group is that group members can monitor individual thinking, and provide feedback for clarification and change leading to 'effective' learning (Ramsden, 2003). Alavi (1995) support working collaboratively as leading to 'effective' learning as follows:

In collaborative learning situations, through conversations, discussion and debate, participants offer explanations, interpretations, and resolutions to problems. This leads to active and social construction of knowledge and development and internalization of meaning and understanding. Furthermore, group discussions reveal different views and enable a more comprehensive conception and understanding to emerge (p. 12).

Studies (see Johnson & Johnson, 1991) conducted with different learners provide evidence of the effectiveness of collaborative learning in terms of student satisfaction with the learning process and outcomes. Additionally, collaborative learning experiences tend to promote more learning than individualistic learning experiences, and a more positive learning environment, compared to individual learning.

Within the theoretical framework discussed above, this study seeks answers to the following questions:

1. What approach(es) to learning do the first and final-year students adopt in acquiring their disciplinary knowledge in an English medium education?
2. What factors affect students in adopting a particular approach to learning?
3. What approach(es) tend to be more effective in terms of learning disciplinary knowledge?

3. Method

3.1. *Participants*

The participants ($n=151$) of the present study were from the three academic disciplines; the Mechanical Engineering (ME), the Electrics-Electronics Engineering (EEE), and the Departments of Economics and the Business Administration (DECOBA), each has chosen English as the medium of instruction in a state university in Turkey. Of the 73 first-year students, 23 were from DECOBA, 26 from ME and 24 from the EEE. Of the 78 final-year students, 26 were from DECOBA, 30 from ME and 22 from the EEE, thus giving a fairly representative sample of students across the three academic

disciplines. The rationale for including first and final-year students was to find out whether students' approach to learning changed over time.

3.2. Instruments

Many studies investigated students' learning approach in a more quantitative way using taxonomies and questionnaires (e.g., Entwistle & Ramsden, 1983; Biggs, 1987), but few studies have looked at it from a qualitative perspective (see, e.g., Marton, 1981). As suggested by Prosser and Trigwell (1999), although there are substantial differences between the aims, methods, and results of the different studies, they all have in common the dichotomy between a deep and a surface approach in students' learning. One of the most popular ways of ascertaining learning approaches has been the use of Likert scale surveys (McCune & Entwistle, 2000). However, such surveys have been criticized as often leading to confusion to second language speakers, especially when one is invited to agree or disagree with negative statements (Cohen et al., 2000; Haggis, 2003). Furthermore, it is argued that respondents tend to avoid choosing extremes on the scale, forcing the values to the centre; and most importantly, the technique makes no provision for respondents to provide their views in their own words.

The present study, therefore, opted instead to use a questionnaire and interview that required open-ended responses from the students themselves in order to develop a more qualitative picture of student learning approaches. Based on an initial interview held with the students, a five-item open-ended questionnaire was designed. The questionnaire was initially designed in English. Then, it was translated into Turkish and back-translated into English with the assistance of two experts to check consistency and reliability of the translation. In administering the questionnaire, the Turkish version was used. To obtain validity of the instrument, and to ascertain the comprehensibility and appropriateness of each statement, the questionnaire was piloted to 65 first and final-year students, and minor changes were made based on the students' responses.

The questionnaire was administered between May-June, towards the end of the academic year. As a follow-up to administering the questionnaire, the researcher held individual interviews with a random sub-sample of the volunteering students (n=48); 22 first-year and 26 final-year students from the three English-medium departments in order to provide an in-depth picture of how these students understood learning and their approach to learning in EMOI.

Interviews were held shortly after the week in which the questionnaire was completed. The interview questions were related to the issues on the questionnaire. Interviews which took between 20-30 minutes were conducted in Turkish. Interviews were audio-recorded, transcribed, and translated into English for data analysis.

3.3. Data analysis

Both interview and data from the 151 completed questionnaires were analyzed qualitatively through a process of pattern-coding to find the recurrent themes. In the present study, a three-stage data analysis was performed: In the first stage, data from the first-year students were analyzed. Tally charts were used to produce a list of responses to each item in the questionnaire to find the recurrent themes. Based on the qualitative analysis of the responses given to each question, data reduction was achieved through a process of selecting, focusing, simplifying, abstracting and transforming the data (Miles & Huberman, 1994). Once analysis of the data from the questionnaires and interviews for each academic discipline was completed, a cross-sectional analysis was done across all academic disciplines leading to generalizations about the responses given to each question.

In the next stage, a similar process was carried out for the final-year students. As a final step, a cross-sectional analysis was performed across the first and final-year students to offer generalizations about the responses to each question between these two groups of students. Findings are reported as

perceptions of the first and final-year students, as a whole. Extracts from interviews are used to support the findings from the questionnaires.

One month after analyzing the interview data, post-analysis interviews were performed with the participant students as a means of member checking (Miles & Huberman, 1994) for quality assurance purposes so as to verify the interpretations of the students, themselves, and to create reliable and trustworthy data. The process of analyzing student responses was carried out independently by the researcher of the present study, and another researcher who was familiar with this type of data analysis. Both raters agreed on 92% of the categories.

The following section presents research findings in line with each research question addressed.

4. Results and Discussion

The first research question addressed *what approach(es) to learning the first and final-year students adopt in acquiring their disciplinary knowledge in an English medium education.*

A majority of the first-year students across the three disciplines professed primarily to surface dimension and memorization, showing a clear profile fitting the definition of Ramsden's (2003) surface approach. Students' memorization was to focus on the text itself, trying to memorize as much of the facts as possible for subsequent use in the examinations, which they admitted was bound to get forgotten easily soon after the examination, as in the following questionnaire data characterizing this preferred approach to learning from a DECOBA student:

The first-year economics course mainly involves learning definitions and concepts. What we tend to do is to memorize information because we cannot learn them during lecturers. What we learn through memorization does not remain for long in our mind.

Most students appeared to use attributes of the surface learning approach to achieve short-term objectives. They tended to resort to rote-learning; as a result, they could not have a deeper understanding. Students stated that they resorted to memorization due to lack of understanding disciplinary knowledge, as expressed by another first-year DECOBA student:

I am beginning to learn new terms related to my discipline. I mostly learn by memorization. While studying for exams we memorize rather than understand the details. Soon after the exam we forget most of what we have learned.

Additionally, students admitted that they tended to memorize to pass examinations, admitting that what they memorized was forgotten soon after the exam. This confirms what Haggis (2003) argued that memorization may allow students to pass examinations, but it is "quantity without quality", as illustrated by the following questionnaire data:

Because we cannot understand the subjects in lectures we are obliged to memorize (ME).

Several times, without understanding the topic I memorize information. I know this is not a useful because I have a feeling that I am learning my professional knowledge superficially (DECOBA).

The approach that the final-year students adopted to learning disciplinary knowledge varied along deep and surface dimensions with students changing their approaches to learning in response to changes in the teaching environment, such as the lecture's expectations from the students in examinations. This finding supports Marshall and Case's (2005) statement that "a learner can adopt a deep approach in one context and a surface approach in another, depending on the characteristics of

the context and the learner’s interpretation thereof” (p. 259). This is illustrated below by a student from EEE:

Many final-year courses require solution to problems, no comment by the students. What we tend to do is to memorize previous year’s examination questions in terms of how those questions are solved.

The second research question addressed *what factors affect students in adopting a particular approach to learning*. As seen in Table 1, both first and final-year students expressed the same type of factors that affected their adoption of a learning approach.

Table 1. Factors Affecting Students’ Adoption of a Learning Approach

Factors	First-year	Final-year
	N	N
Impact of English medium of instruction	66	68
Lecturers’ expectations of the students	58	50
Lecturer’s style of delivery	54	52
Students’ proficiency in English	52	48
TOTAL	230	218

As illustrated in Table 1, four factors were found to have an impact on the ways students’ adopt a learning approach. The *English medium of education* was identified to be the first important factor that appeared to influence the students’ adoption of an approach(s) to learning their disciplinary knowledge. Most first (n=66) and final-year students’ (n=68) comments indicated that EMOI created an obstacle to learning disciplinary knowledge, and reduced their ability to understand important details; thus, leading to superficial learning.

The next factor that affected students in adopting a particular learning approach was *the lecturers’ expectations of the students* in the examinations. Although this occupied the next most important category for the first-year students; it was the third most important category for the final-year students. The approach that final-year students adopted to learning disciplinary knowledge varied in response to changes in the teaching environment, such as the lecture’s expectations from the students during examinations. In the interview, many students admitted that in some courses they had to understand the topic rather than memorizing information because the examination questions asked them to comment, as stated by the following final-year DECOBA student:

Some lecturers emphasize certain points so, we study and take examinations accordingly. Others ask questions requiring comments. Memorization is no good for such exams. We must understand and relate ideas.

Lecturer’s style of delivery was the next factor influencing students’ adoption of an approach. Both first and final year students agreed that some lecturers did not go into sufficient details, as expressed by the following final-year students:

Some lecturers continue teaching even though we have not understood crucial points. What we tend to do is to memorize information in such courses without understanding the details (ME).

The final category for both the first and final-year students was the students’ level of proficiency in English. Many first and final-year students stated that their English was not adequate enough to

follow their undergraduate courses in English, effectively, as reported by a final-year DECOBA student:

Even though I am in my final year, my level of proficiency in English is not adequate to help me understand details of my disciplinary subjects.

As a result of memorization, students, in the present study, perceived that they were having lower quality learning of disciplinary knowledge, a low level of understanding and less effective learning, which confirms the argument put forward by Crawford, et al. (1998), Zeegers (2001) and Ramsden (2003) that surface approach leads to poorer learning outcomes. Findings revealed that students tended to adopt surface approach in the first year, is not unique to this cohort of students. Several other similar studies confirmed present findings (see Richardson, 2000). In essence, a primary goal in higher education policy seems to be encouraging deep and meaningful learning. However, research findings suggest that the students' stated learning outcomes in EMOI are, to a large extent, incongruent with the objectives of higher education policy. Relating to the aims of the higher education, the desirable tendencies would be developing deep and meaningful learning environment to enable students to graduate as fully-fledged professionals, the underlying purposes of the higher education policy. As argued by Marshall and Case (2005), and Rollnick et al. (2008) deep approaches to learning should be desirable and attainable goals in higher education. It is therefore crucial that English-medium higher education be oriented towards attaining such aims articulated by educational policy to empower students as deep learned professionals.

The third research question addressed *what approach(es) tend to be more effective in terms of learning outcomes*. Consistent with the responses given to the previous questions, most of the first (n=61) and final-year students (n=70) reached a reasonably consistent agreement that when they encountered difficulty in accessing disciplinary knowledge from the lectures and written sources, they developed, as they reported, a system of *strategic approach* to direct their own learning, to become active creators of disciplinary knowledge, and to achieve more learning outcomes. As agreed by Hacker (1998) "only when students know the state of their own knowledge can they effectively self-direct learning to the unknown" (p.13). Based on the interview and questionnaire comments, majority of the students adopted *joint construction of disciplinary knowledge* in groups with fellow friends by undertaking the following actions, as summarized in an interview held with a first-year student from DECOBA:

We share topics among our friends. When we get together each of us explains one particular subject, reflecting our understanding of it. This way of learning is both time saving and very beneficial in terms of questioning, evaluating ideas and relating concepts to each other. We can complement each other's knowledge. I mean what one student does not know the other student might know and in this way we learn from each other. Because we experience similar difficulties we can sympathize with each other.

The concept of sharing, highlighted above, is consistent with the constructivist theory. As suggested by proponents of the constructivist theory, learning is facilitated by sharing, e.g., by means of interaction with one's peers, and knowledge results from the dynamic interaction of students (Jaeger & Lauritzen, 1992). Students' attempts towards understanding disciplinary knowledge indicate that they are co-creators of knowledge. Students admitted that these shared understanding of the knowledge provided richer epistemic frameworks in acquiring their disciplinary knowledge.

Another interesting aspect of sharing was that disciplinary knowledge was created 'in action' personally with the students exploring disciplinary knowledge from the Turkish (L1) sources to attain the initial frame of reference, which they then related to English (L2) in the internalization of new disciplinary ideas. During this process, one's conceptual understanding is enlarged through reflective thought, leading to a gradual acquisition of knowledge, and then synthesizing both dimensions (L1 and L2) to create a more satisfying disciplinary knowledge. This style that most students adopted is

congruent with what Ausubel (1963) stated if new information must be acquired by individuals it must be integrated and reconciled with the existing knowledge, and form a coherent set of structures.

Many students admitted that undertaking the above action through collaborative learning, allowed 'meaningful learning' to take place as a way of complementing surface learning. They were also able to understand disciplinary knowledge better, in greater detail, and retain it longer. The following extract from a final-year EEE student reflects the opinion of the most first and final-year students:

When we study from Turkish texts first we not only understand it better but also make connections between ideas and different topics. Our learning becomes more meaningful.

Furthermore, working together resulted in a common grasp of disciplinary knowledge, helping students to reach a more comprehensive mutual understanding of disciplinary knowledge.

5. Conclusion and Implications

This study has investigated perceptions of the approach(es) to learning that the first and final-year students adopt in receiving their education in the medium of English language; factors that affect students in adopting a particular approach to learning, and what approach(es) tend to be more effective in terms of learning outcome. Students' responses indicated a tendency towards surface learning during their first-year and a mixture of surface and meaningful learning during the final-year. Various factors were identified as having an impact upon the students' adoption of an approach to learning. Students adopted *a strategic approach to learning* through a joint construction of disciplinary knowledge to attain higher qualitative learning outcomes in the context of their English-medium education.

As underlined by the higher education policy, the desirable tendency to induce deep approaches to learning would have the effect of creating an increase in meaningful learning rather than surface approach on undergraduate students to acquire a high level of disciplinary knowledge. If English-medium universities are to educate students who are to acquire higher qualitative learning, the students should be helped to gain deep approach ability through meaningful instruction. Disciplinary knowledge, therefore, needs to be mediated in such a way as to make it more accessible to students through integrating new teaching and learning strategies. If lecturers are to find ways of improving learning outcomes of their students, they must understand how their students learn and the factors impacting upon their learning approaches to assist students to adjust their learning approaches in order to promote deep and meaningful learning.

The present study has been concerned with students receiving English medium of education from one state university in Turkey. Further studies need to be conducted with students receiving Turkish medium of instruction in order to make a comparable study possible on similar issues raised in the present study. In addition, the present study is based on the qualitative data from students' responses gathered from interviews and questionnaire; hence, further study can also use data from other sources such as students' examination results in order to increase generalizability of the present research findings.

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