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Learning Approaches of Successful Students and Factors Affecting Their Learning Approaches *

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Abstract

The purpose of this descriptive study is to identify learning approaches (deep, surface, or strategic) among successful undergraduate students and the factors that affect and shape their learning approaches. The study sample comprised 90 freshman students who were ranked in the top one percent portion of the 2013 University Placement Exam (UPE) in Turkey. Students were variously attending faculties of education, law or medicine and were grouped in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS). Data was obtained via semi structured interviews with students and recorded on a form developed by the researchers. We found that students tend to be inclined to a surface learning approach, their teacher has a rote learning education understanding - the content of the course is quantitative, and exams are multiple choice or use a true/false system. However, they tend to choose a deep learning strategy when their teacher has both research and interrogation based expectations, the content of the course is qualitative, and the exam style is writing an essay or of a fill in the gaps type. Moreover, preparation courses and group of friends t have significant influence on how students internalize strategic learning approaches.

Keywords

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Introduction

In order to improve the quality of student learning, it is important to understand the learning process of students Their learning can be addressed within the framework of cognitive or behavioural theories but it is also necessary to consider their experiences within the learning environment. (Marton & Booth, 1997, p. 13). In this way, learning can be seen as a process of changing behaviour through experiences. Learning approaches can be defined in terms of how a learner's intentions, behaviour and study habits change according to their perceptions of a learning task. In this context, learning approaches have been classified as deep, surface, and strategic.

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Research on learning approaches basically focused on examining students' learning and studying behaviors towards exams and exam types. In this context, the significance of learning approaches was initially highlighted by Terry (1993). This research interested in how students prepare for various types of exams. In a qualitative study by Terry (1993), students were asked their opinion as to how they study for different types of examination (objective test and essay exam) and whether they vary their study habits accordingly. From students' response to the question, " Which study habits and approaches suit objective test and essay examination" two different approaches were determined. For example, as study habits for objective tests students stated these as important factors "studying to pay attention to important points, to underline important key words, repeating key sentences while studying". Whereas, when preparing for an essay examination requiring meaning-oriented expression they described their approach as "writing down the relationship between issues discussed in one or a few chapters of a book, organizing related issues in a logical way and thinking about it" (p. 592-598). These findings were supported by two subsequent studies done by Meyer (1934, 1935). It was found a relationship between students' study habits and the types of examination they were preparing for.

The early study on learning approaches is a qualitative research conducted by Marton and Säljö at the University of Gothenburg. The study examined how students handled reading tasks in a given certain time period. The results indicate that students preferred to use two different approaches defined as - deep and surface. Students who adopt surface learning approach tend to pay attention on important point in a text and repeat them in the learning context. Students who adopt deep learning approach have tendincies on getting intent and meaning within the scope of text (Marton & Säljö, 1976a, p. 4-8).

In a study conducted in 1979 by Ramsden, the effect of curriculum, instruction, assessment and the expectations of students in different departments on courses and tasks on learning have been investigated. As a result, it has been found that students' perceptions about their teachers and departments have important effects on their learning approaches. In addition, the most important aspect of this research have emphasized another study conducted by Miller and Parlet (1974) at the University of Scottish. In this study, students taking a good degree, working for exams and prefering by teachers are classified as cue-seekers by Miller and Parlet. But Ramsden said that although this classified ' suitable for free departments, because this classified' not to take into account some of the point not suitable for other departments. So, the first time, Ramsden proposed strategic learning approches for students who study more success and exam-oriented (Ramsden, 1979, p. 420-425, Entwistle, Hanley, Hounsell, 1979, p. 366).

In the study conducted in 1979 by Ramsden, the effect of both curriculum, instruction, assessment and students' in different stages of a course different expectations on courses and tasks on students' learning have been investigated. As a result, students' perception both their teachers and departments have been found to have important effect on their learning approaches. In addition, the most important aspect of this research have emphasized the study conducted by Miller and Parlet (1974) at the University of Scottish. In this study, students with high degree, working towards exam are classified as cue-seekers by Miller and Parlet. However, Ramsden said that this classification is suitable for free departments but not for other departments as some points have not been taken into account. So, Ramsden proposed strategic learning approaches for students who are more successful and exam-oriented (Ramsden, 1979, p. 420-425, Entwistle, Hanley, Hounsell, 1979, p. 366).

Biggs, another contemporary of Ramsden, investigated relationship between the study process of students and the structural complexity of their learning. Biggs observed that the study processes used by a student during learning will be related to both the amount of and quality of learning,. Although such a relationship seems obvious, the nature of relationship should be supported more specially. In this context, Biggs developed a "Study Process Questionnaire" which took into account factors affecting the study process of students in 1978. Study processes are distinguished as three independent dimensions; utilizing, internalizing, and achieving. In utilizing, there are two inter-related motives: pragmatic reason such as obtaining a paper qualification and hence a better job and

avoiding failure related to exam anxiety, Students couldn't find any positive reasons for studying and their study strategies are centered around avoiding failure, but doing as little work as possible. That is why, students become syllabus-bound and study only what they have to (Biggs, 1979, p. 381-382). In this context, utilizing can be said to be similar to surface learning approach. Whereas for internalizing, a student needs more intrinsic motivation and interest. Therefore a student who reads widely, beyond set texts and attempts to inter-relate material that he/she reads, places it in an overall conceptual framework that is meaningful to him/her (Biggs, 1979, p. 382). In this context, internalizing can be said to be similar to deep learning approaches. In achieving, the student is encouraged on winning, competition, and achieving outstanding success. Therefore, cognitive strategies used by students direct them to get high grades and develops more organized studying process. (Biggs, 1979, p. 382-383). In this context it can be said that the approach called success can have parallelism with the strategic learning approach. It is therefore useful to consider contextual approaches as deep learning, surface learning, and strategic learning. These are described in detail below.

Deep Learning Approach

A deep learning approach is part of an intrinsic motivation arising from individual' need to undertake a task meaningfully and properly (Biggs, 2001, p. 85, Curzon, 2004, p. 232, Biggs & Tang, 2007, p. 24). So, while student handles the task he/she tries to use the most appropriate cognitive process. When learners need tolearn, they automatically focus on underlying meanings, main ideas, issues, principles, and successful practices. In this context, deep learning focuses on not speacial details which are not supported by conceptually but on main ideas, subjects and principles. (Biggs, 2001, p. 85). Students who adopt this approach develop various study strategies to find principles underlying reasons and their importance while they are studying the detail of a subject area. Students can develop hypotheses and test them and try to see connections in the context of understanding the logical reason of a subject area (Curzon, 2004, p. 232). In this process, students use meta-cognitive abilities such as self-assessment, self-questioning, error detection, correction of errors, dealing with extreme data, take into account different ideas and the limitations of these ideas (Chin & Brown, 2000, p. 124-125). In this process, the basis of a deep learning approach is to continue the relationship between students and task through the learning process with student satisfaction (Biggs, 2001, p. 85). Thus, deep learning is an approach relating new ideas to previous knowledge and experience, looking for patterns and underlying principles, discussing on these patterns logically, using proofs being aware of one's own understanding and having self assesment skills. (Entwistle, McCune & Walker, 2001, p. 107-109).

Surface Learning Approach

According to Biggs and Tang, surface learning approach is students doing what have to be done. In other words, they define it students having a sense of doing tasks with a low effort to (Biggs & Tang, 2007, p. 22). In short, a surface learning approach is fulfilled out of the the real purpose of the task (Biggs, 2001, p. 85) and is defined as a reflection of an external motivation (Biggs, 2001, p. 85, Curzon, 2004, p. 232). In this process, the task to be done is seen as an obstacle that must be overcome by the individual. Thus, students adopting surface learning prefer to overcome this obstacle by spending l less time and effort byusing low-level cognitive activities (Biggs, 2001, p. 85, Biggs & Tang, 2007, p. 22). So, students only focus on finding keypoints. when they are studying. Students do not see the task a s a whole so they preceive the content as seperated parts from each other. Students only focus on repeating and recalling the knowledge (Curzon, 2004, p. 232, Biggs & Tang, 2007, p. 22). memorising without understanding of the content is a typical way of of this approach (Biggs, 2001, p. 85). Thus, knowledge are gained passively without practicing. (Curzon, 2004, p. 232).

Strategic Learning Approach

Strategic learning approach is based on using deep or surface learning approaches, according to what cognitive processes are perceived to be neccessary to accomplish the learning task, i.e. a decision about whether a search for meaning is required or merely facts to remember as reflected in similar perceptions of the evaluation process approach (Entwistle, 1995, p. 47). Thus, the essential aim is to be successful and students are motivated by achievement and high grades (Newble & Entwistle, 1986, p. 165). Also, the most important features of this approach is emphasizing on the organization of study methods and time management (Entwistle, 1995, p. 47).

In conclusion, , learners follow different learning ways in deep, surface and strategic learning approaches. different ways of learning that accord to different intentions. The key features of deep, surface, and strategic learning approaches are summarized in Table 1 (Entwistle, McCune & Walker, 2001, p. 109).

Table 1. Features of Learning and Studying Approaches

Deep Approach	Seeking Meaning
İntention – to understand ideas for yourself	*By:*
Relating ideas to previous knowledge and experience	
Looking for patterns and underlying principles	
Checking evidence and relating to conclusion	
Examining logic and argument cautiously and critically	
Being aware of understanding developing while learning	
Becoming actively interested in the course content	
Surface Approach	Reproducing
İntention – to cope with course requirements	*By:*
Treating the course as unrelated bits of knowledge	
Memorising facts and carrying out procedures routinely	
Finding difficulty in making sense of new ideas presented	
Seeing little value or mening in either purpose or tasks set	
Studying without reflecting on either purpose or strategy	
Feeling undue pressure and worry about work	
Strategic Approach	Reflective Organizing
İntention – to achieve the highest possible grades	*By:*
Putting consistent effort into studying	
Managing time and effort effectively	
Finding the right conditions and materials for studying	
Monitoring the effectiveness of ways of studying	
Being alert to assessment requirements and criteria	
Gearing work to the perceived preferences of lecturers	

Factors Affecting Students' Learning Approaches

Learning approach is defined as the change in the intention and behaviour of the learnertowards learning task related to context which learner regard.. In this context, relationship between learning environment where students interact and student learning process are conceptualised in the so-called presage, process, and product model (3P) in 1993 by Biggs. Biggs' 3P Model is summarized in Figure 1 (Biggs, 1996, p. 187)

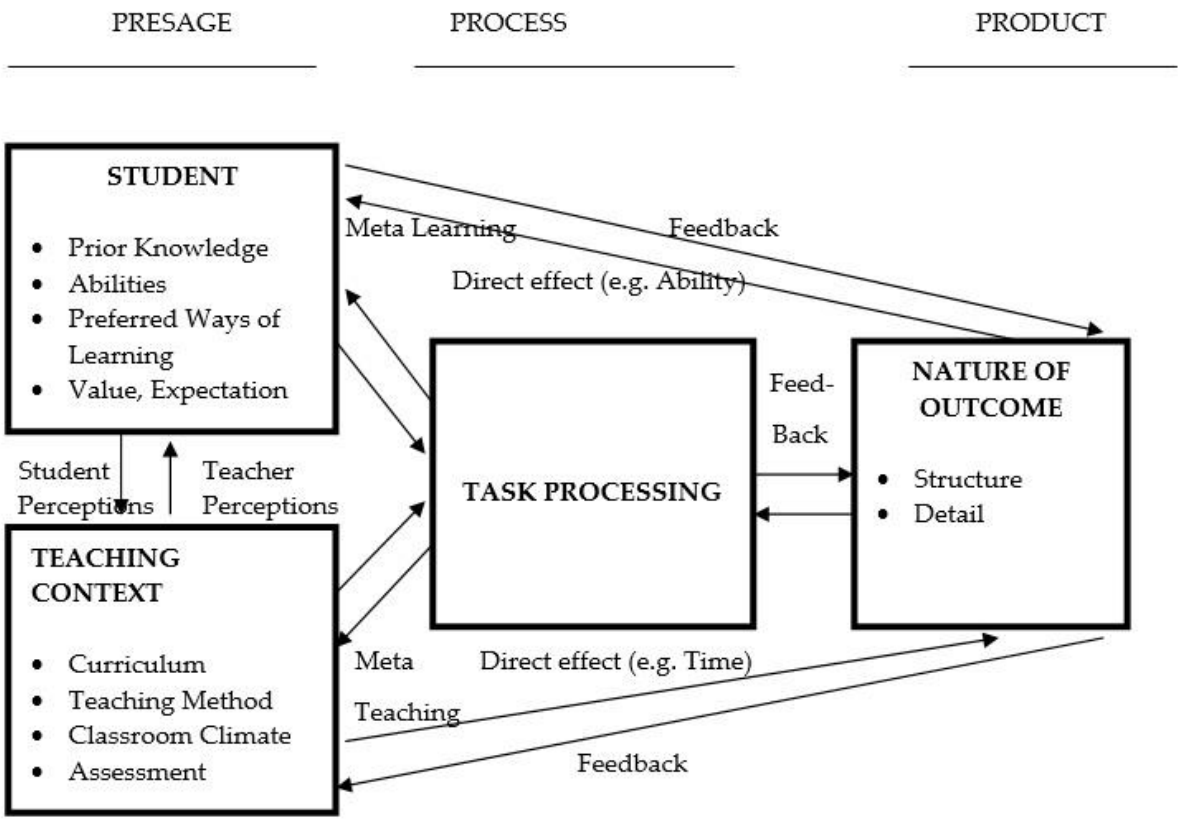

Figure 1. 3P Model (Biggs, 1996, p. 187).

As shown in Figure 1, previous learning is a presage factor. Presage factor reflects the characteristics and features which students bring to the classroom, such as prior knowledge, abilities, preferred ways of learning, expectation about achievement (Biggs, 1996, p. 186, Senemoğlu, 2013). Also, there are factors such as motivation, study habits, self- efficacy, learning styles, social and cultural, (Dart and others, 2000, p. 262, Senemoğlu, 2013, Selçuk, 2012) age, level of development, general state of health (Senemoğlu, 2013, p. 380), confidence, self-esteem and, cognitive enhancement (McLay, Mycroft & others 2010, p. 84, Senemoğlu, 2013). Teaching context includes factors such as course, context, teaching and assessment is a superstructure created by institutions and teachers (Biggs, 1996, p. 186). this structure involves perceptions of teaching and learning, the organization of curriculum, task difficulty, the proper time, allowed level of freedom, classroom management, existing resources, classroom atmoposhere (Dart and others, 2000, p. 262), learner' perceptions about subject (McLay, Mycroft & et. al. 2010, p. 84), students' expectation about content, and organizing content type (Senemoğlu, 2013, p. 381-382).

Process factor arises as a result of interaction between teaching and the learner founded in the presage. In this process, students develop their own prejudices, orientation and expectations. Their perceptions will give direction to the actions of students and includes metacognitive activities focused on the learning process together with cognitive behaviour that depends on the task itself. During this

stage, students admit what direction and behaviour they are following and if they are using a deep, surface, or strategic learning approaches (Biggs, 1996, p. 186-188).

The product factor refers to the outcomes of learning and is mostly determined by students' learning approaches (Dart & et.al., 2000, p. 263).

As stated above, there are many factors affecting students' learning approaches and these approaches are shaped by context. In this sense, social acts are necessary for individuals to be trained in the best way and society gives importance to educational institutions and the educational activities that take place in these institutions. Societies acting with this awareness spend extensive efforts to increase the quality of education and put emphasis on scope of educational process. In this context, the answer to question is "Which is the best way?" should be sought to educate individuals and different and new ideas, methods, techniques and models are presented in studies for this purpose. The common goal of all these studies is to make student learning more effective. To achieve this purpose, courses must be conducted by taking into account the different students' needs, interests, learning and thinking skills (Eggen & Kauchak, 2006, p. 16). In this regard, this study-developing countries' in the context of the need for qualified manpower- is thought valuable as it will help directing the education of more qualified and successful students and enhancement of the low level learner by determining learning approaches (deep, surface, or strategic) among undergraduate students factors that affect and shape students' learning approaches. These benefits may be possible by determining successful students' learning approaches and the factors that influence their learning approaches. In this study, to achieve this goal is to answer the following questions:

1. What are learning approaches of students who are now undergraduate students in the subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) and variously enrolled in faculties of education, law, and medicine?
2. What are the factors affecting their preferred learning approach?

Method

In order to explore learning approaches of successful students' and factors affecting their learning approaches, a descriptive research design was used in this present study.

Population and Sample

The study population of the study consists of freshman students ranked in the top one percent portion in the 2013 University Placement Exam (UPE) in Ankara. . In order to determine students in the first percentile, 2013 undergradute placemement exam results startistics were used. In this context, the 1 % of 1.232.679 students in 2013 undergradute placemement exam were determined and the first percetile in Turkey was calculated as 12.326. In this criteria, the population of the study was determined from the departments of Psychology, psychological counseling and guidance,medicine, law in Hacettepe University, departments of social sciences teaching, law, medicine in Ankara University, departments of psychology, history, economy, business, international relations, computer engineering, electiric and electronic engineering, industrial engineering, aerospace engineering, mechanical engineering in METU, departments of Turkish teaching, law, medicine in Gazi University, department of medicine in Başkent University (full and 25 % scholoarship) , departments of molecular biology and genetics (full scholarship), communication and design (full scholarship), law (full and 50 % scholarship), economy (full scholarship), psychology (full scholarship), international relations (full scholarship), business (full scholarship), computer engineering (full scholarship), electric and electronic engineering (full and 50 % scholarship), industrial engineering (full scholarship), mechanical engineering (full scholarship) in Bilkent University, departments of history (full scholarship), Turkish language and education (full scholarship), law (full and 50 % scholarship), economy (full scholarship), business (full scholarship), international relations (full scholarship),interational initiative(full scholarship), computer engineering (full scholarship), electric and electronic engineering (full and 50 % scholarship), industrial engineering (full scholarship),

mechanical engineering (full scholarship) in TOBB university, department of law (full scholarship) in Turgut Ozal University, department of medicine (full scholarship) in Ufuk University, department of medicine in Yıldırım Beyazıt University, and department of medicine in GATA.

The study sample of the study consists of volunteer 90 freshman students who are now undergraduate students in the subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) and variously enrolled in faculties of education, law, and medicine. Features of the study group are shown in Table 2.

Table 2. Features of the Study Group

Subject Areas	University	Department	Class	Number of students
LS	Gazi Uni.	Faculty of Education	1	30
LM	Ankara Uni. Hacettepe Uni.	Faculty of Law	1	30
MS	Hacettepe Uni.	Faculty of Medicine	1	30

Data Collection Tool

In order to explore learning approaches of successful students and factors affecting their learning approaches, a semi-structured questionnaire was developed by the researchers. The following steps were followed in preparing of questionnaire:

- By searching the literature, on learning, learning approaches, factors affecting learning approaches, key features or factors that influence learning were determined.
- According to these criteria, a draft form consisting of 15 questions was created and applied to 10 (3 LS, 4 LM, 3 MS) freshman students.
- Findings obtained from the literature were compared with the outcome of the interviews, enabling us to revise our questions according to the criteria previously identified via the literature.
- The draft questionnaire was then presented for validation purpose to 5 specialists in subject areas, a Turkish language specialist and an assessment expert. In line with the comments received, necessary changes and arrangements were made to the questionnaire.
- In order to identify whether questionnaire was suitable in terms of intelligibility and for purpose, a further sample of six (3 LS, 4 LM, 3 MS) students were interviewed. According to comments received from students, necessary changes and arrangements were completed. In order to finalize the draft form, the 5 specialists were consulted again and the interview form finalized. Interview form included open-ended question such as “"Overall yourself think, What is your purpose in your studying or to learning something new?”.
- Basic application was completed with 30 students from the Department of Turkish Education, 30 students from the Faculty of Law, and 30 students from the Faculty of Medicine.
- Semi-structure interviews were recorded on audio recorders based on participants’ permissions and were transcribed by the researcher. Once all interviews were transcribed, data were assessed according to content analysis. Content analysis is a scientific approach to investigate social reality by objectively and systematically classifying the message of verbal, written and other materials, and converting these to numbers in terms of meaning and/or grammar (Tavşancıl & Aslan, d.n., p. 22) Also, a descriptive analysis was made to understand the responces better.

- All data were examined and identified as codes and themes for content analysis. These were determined in line with criteria identified within the literature. Data was then read again and organised accordingly.
- In order to be ensure the internal validity of qualitative data, datum were examined with a specialist in the subject area. Thus, the codes and themes were checked by three subject area specialists According to Yıldırım and Şimşek (2008, p. 260) to ensure the external validity of qualitative data and to generalize the result for similar environments, all stages of the research must be informed by detail. In this context, all stages of research are shown in detail.
- To calculate reliability of qualitative data, Miles & Huberman (1994, p. 64) suggest the following formula:

$$\text{Reliability} = \frac{\text{Numbers of agreement}}{\text{Total numbers of agreement plus disagreement}}$$

According to the formula, reliability was found to be 0,81 by reading the data obtained from three students sharing a subject area.

Analysis of Data

In order to identify learning approaches (deep, surface, or strategic) and factors that affect and shape students' learning approaches, semi-structured interviews were conducted with 90 undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS). All datum were transcribed by one of the researchers to enable a more accurate assessment. The excell program was used as the interview written forms were about 20 pages for each student and datum was so broad. All datum were then examined and identifieds temporary codes and themes. The resulting codes and themes were examined again by three specialists in the subject area and re-organized. Once codes and themes were determined, data were read again and organised accordingly. Data were explained and interpreted by using frequency of mention and direct quotations.

Results

Before factors affecting successful students' learning approaches were identified, learning approaches were identified based on the content analysis. To determine students' learning approaches, content analysis of qualitative datum were described as deep learning approach, surface learning approach, and strategic learning approach under the themes. Distribution of learning approaches are shown in Table 3.

Table 3. Learning Approaches of Students who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	CODES	LS (n:30)		LM (n:30)		MS (n:30)	
		F	%	F	%	f	%
Number of students who adopt deep learning approach		11	37	4	13	13	43
DEEP LEARNING APPROACH	Seeking meaning	11	37	4	13	12	40
	Relating ideas each other and organizing	5	17	4	13	10	33
	Using evidence and examining logic	9	30	3	10	10	33
	Being interested in and having desire to learning	11	37	4	43	12	40
	Critical thinking	8	27	2	7	7	23
Number of students who adopt strategic learning approach		19	63	26	87	17	57
STRATEGIC LEARNING APPROACH	Effective on time management	7	23	13	43	9	30
	Organizing their study and making effort	12	40	17	57	11	37
	Focusing achievement	19	63	26	87	17	57
	Being alert to assessment criteria	18	60	18	60	11	37
	Monitoring the effectiveness	12	40	5	17	14	47
	Using features of deep learning approach for achievinghigh grades.	16	53	17	57	12	40
	Using features of surface leaarning approach for achieveing high grades.	19	63	25	83	17	57

With reference to Table 3, While 11 of 30 students (37%) in subject area LS were found to adopt a deep learning approach, 19 of 30 students (63%) in subject area LS were found to adopt a strategic learning approach. In subject area LM, 4 of 30 students (13%) were found to adopt a deep learning approach, also 26 of 30 students (87%) were found to adopt a strategic learning approach. Also, While 13 of 30 students (43%) in subject area MS were found to adopt a deep learning approach, 17 of 30 students (57%) in subject area MS were found to adopt a strategic learning approach. No student was observed to adopt a surface learning approach. Direct quotations related to themes of deep and strategic learning approaches are given below:

Students' Expression about Theme of Deep Learning Approach

LS 6:

"... While I'm learning, I'm enjoying. To learn is important for me. When you learn something, achievement and high grade come true already. What really matters is learning. I'm not directly memorising. I'm trying to understand. If there are concepts connected to the subject that I studied, I keep in my mind theconcepts by establishing relationship with other things or using symbols. Iconstantly repeat to understand, because understanding the subject is very important. First of all, I studynot only to read or to learn but also to contribute for myself. Iam motivated in this direction. Also, I criticize knowledge. I discuss with teacher about knowledge to find if its true or false. I think all relevant perspectives about subject and synthese.

Students' Expression about Theme of Strategic Learning Approach

MS4:

"...Since I was little I have wanted to be a doctor anyway. In general, I've been working for the university placement exam. Also, to get high marks is important. To be successful makes me happy. While you are studying, you have to do a program. Before you do a program, you have to know yourself about how I can study or which subject I can learn. According to this knowledge, you can arrange your lessons. Then, you feel peaceful.. When you want to learn something, you can use this approach. When you don't study, you don't have fun. Students absolutely have to do a program, I would definitely recommend it for students. Also, I study regularly and rehearse lessons. After rehearsing lessons, I solve questions.. If the lesson is Literacy, firstly I read it, also I highlighte the important points that can be asked in the exam. I would say in my mind, which question can be asked, which subject can be important. Then, you can focus on these points. After that, I rehearse this points several days. Then, knowledge can not be forgotten..."

In order to identify factors that affect and shape students' learning approaches (deep, surface, or strategic) among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS), content analysis of qualitative data is identified under the themes of "The methods used in the lesson by teachers", "specification field of teacher ", "The individual and personality traits of teachers", "Teacher's expectation from students ", "Emotion towards teacher ", "Course type", "Assessment", "School' characteristics", "Private teaching intuition", and "Environment of Family and Friends".

The Methods Used in the Lessons by Teachers

Opinions and frequency distribution of student are related to "the methods used in the lesson by teachers" among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given Table 4.

Table 4. Opinions and Frequency Distribution of Students' Related to "the methods used in the lesson by teachers" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	CODES	LS (n:30)		LM (n:30)		MS (n:30)	
		F	%	f	%	f	%
THE METHODS USED IN THE LESSON BY TEACHERS	Teacher-centered methods affect learning approach	0	0	0	0	0	0
	Learner-centered methods affect learning approach	0	0	0	0	0	0
	Teacher-centered methods don't affect learning approach	18	60	18	60	27	90
	Learner-centered methods don't affect learning approach	23	77	21	70	28	93

Table 4 is examined, , three-fifths of those in subject area LS and LM and more than four-fifths of those in subject area MS stated that teacher-centered methods' don't affect their adopted learning approach. Also, four-fifths of those in subject area LS and LM and more than four-fifths of those in subject area MS stated that learner-centered method don't affect their learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and

Math-Science (MS) aresimilar about "the methods used in the lesson by teachers". Direct quotations related to the themes of "the methods used in the lesson by teachers" are given below:

LS26:

"…the teacher making students active is more important for me. As I know that I am also important for hat teacher. She/he wants to know my ideas and develop my attitudes towards that lesson. The course where students are passive means that teachers do not care of the students. They just want to transfer the knowledge without caring if the students learn or not. Thus, these kind of lessons are not valuable for me and I start not to concentrate on that lesson. I spend my time waste. If I learn the lesson at the time of lesson, I can just go over it at my home. But when I do not listen or learn the lesson I have tok spare a nother time to learn that lesson again. This situation does not affect my approach it just affects my time management.

Teacher's Domain Knowledge

Opinions and frequency distribution of students are related to "Specification fields of teachers among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given Table 5.

Table 5. Opinions and Frequency Distribution of Students Related to "Teacher's domain knowledge" among Freshman Students who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	CODES	LS (n:30)		LM (n:30)		MS (n:30)	
		F	%	F	%	f	%
TEACHER'S DOMAIN KNOWLEDGE	Teachers' being or not being master in their subjects affect the learning approach.	0	0	0	0	0	0
	Teachers' being or not being master in their subject area does not affect my learning approach	23	77	22	73	26	87

Examined table 5, more than four-fifths of those in subject area MS and almost three-quarters of those in subject area LS and LM stated that whether teachers have mastered the subject area or not does not affect their adopted learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) is similar about "Teacher's domain knowledge". A sample of direct quotations related to the theme "Teacher's spesification fields" are given below:

LM4:

"…It is effective. If teachers have mastered the subject area, teachers arouse interest. Then, TeacherS can guide you. It is a big advantage for you. If teachers have mastered the subject area, you can't understand anything. Then, I do not want to listen him/her.. But,of course you have to study. It does not affect your studying, because you will have an entrance exam. This situation does not affect my study habits but it affects my motivation in the lesson. If the teacher is not qualified, I think to study on my own.

The Individual and Personality Traits of Teachers

Opinions and frequency distribution of studentsare related to "The Individual and Personality Traits of Teacher " among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given Table 6.

Table 6. Opinions and Frequency Distribution of Students Related to "The Individual and Personality Traits of Teacher" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	CODES	LS (n:30)		LM (n:30)		MS (n:30)	
		F	%	f	%	f	%
THE INDIVIDUAL AND PERSONALITY TRAİTS OF TEACHER	Teachers' age affect the learning approach.	0	0	0	0	0	0
	Teachers' age does not affect the learning approach.	30	100	30	100	30	100
	Teachers' gender affect the learning approach.	0	0	0	0	0	0
	Teachers' age gender does not affect the learning approach.	30	100	30	100	30	100
	Strict, soft, permissive teacher affect the learning approach.	0	0	0	0	0	0
	Strict, soft, permissive teacher don't affect the learning approach.	8	27	20	67	9	30

Table 6 is examined, all of the students in subject area LS, LM, MS stated that teachers' age and gender don't affect their learning approach. Also almost one-quarter of those in subject area LS and MF and almost three-quarters of those in subject area LM stated that the attitudes of teachers' (strict, soft, or permissive) don't affect their learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) is similar about "The individual and personality traits of teacher". Direct quotations are related to themes of "The individual and personality traits of teacher" are given below:

LM1:

"…I think, young teachers are more open to innovation. Their systems are a bit different than older teachers. But, older teachers are always same. Young teachers affect me positively. Their age does not affect my study habitsMy study habits don't change according to teachers' age.

LM5:

"…Oh, no, I have not encountered anything like this until now. Most of my teachers were men. Some of them were women. But, I hadn't any problem related to their gender. It did not matter to me. Their gender does not affect my study habits.

LS9:

"… My teacher was a very nervous woman. She shouted anything. I was always scared of her., Because, I didn't want to fail the class When I saw her outside, I did not want to greet her. Obviously, I did not like her. I need discipline, But, if teacher continuously shouts, teacher can't do anything. If teacher continuously shouts, student can't like lesson. If the teacher isover diciplined and nervous students study just because they are afraid.

Teacher's Expectation from Students

Opinions and frequency distribution of students are related to the "Teacher's expectation from students "among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given Table 7.

Table 7. Opinions and Frequency Distribution of Students Related to "Teacher's expectation from students" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	CODES	LS (n:30)		LM (n:30)		MS (n:30)	
		F	%	F	%	f	%
TEACHER'S EXPECTATION FROM STUDENTS	Teachers' guidance to memorization affects the learning approach.	12	40	22	73	16	53
	Teachers' expections guidance to memorization does not affect the learning approach.	1	3	3	10	2	7
	Teachers' guidance to research affects the learning approach.	11	37	14	47	15	50
	Teachers' guidance to research does not affect the learning approach.	1	3	3	10	2	7

Table 7 is examined, two-fifths of those in subject area LS, almost three-quarters of those in subject area LM and two-quarters of those in subject area MS stated that teachers' expectations towards memorazing and research have an affect on their learning approach. However one in ten of these students also stated that teachers' expectations towards memorazing and research dont affect their learning approach too. In this context, opinions of students who are in the subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) differ in terms of how they respond to "Teacher's expectation from students". Direct quotations related to themes of "Teacher's expectation from students" are given below:

LS5:

"…We had a philosophy teacher. He said to us " Do what I teach you. Don't criticise". However, philosophy is a lesson based on criticise. Then, I was studying only teachers' notes. So, memorization…"

LM9:

"…Teachers' expectations don't affect my study habits. I always study in the same manner . Teacher isn't important for me. In general, Teachers want us tmemoraze, but it is wrong. I'm trying to learn more meaningful…"

LS18:

"…Teacher didn't want us to repeat the same thing. Teacher said to us "share your comments. think critically". For example, I didn't study in syllabus-boundness. Also I studied from different sources…"

LM25:

"…I guess, teachers expect us to study, focus their lesson, know their lesson, and investigate their lesson. Teachers' expectations don't affect my study habits. I study with the same approach…"

Course Type

Opinions and frequency distribution of students' related to "Course type" among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given in Table 8.

Table 8. Opinions and Frequency Distribution of Students' Related to "Course type" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	CODES	LS (n:30)		LM (n:30)		MS (n:30)	
		F	%	F	%	F	%
COURSE TYPE	To be qualitative of content of course affects the learning approach	23	77	24	80	30	100
	To be qualitative of content of course does not affect the learning approach	0	0	0	0	0	0
	To be quantitative of content of course affects the learning approach	24	77	24	80	30	100
	To be quantitative of content of course does not affect the learning approach	0	0	0	0	0	0

Considering Table 8, almost four-fifths of those in subject area LS and LM and all of those in subject area MS stated that course type has an affect on their learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are similar on"Course type". Direct quotations are related to themes of "Course type" are given below:

MS26:

"…In course to be qualitative of content, I didn't ask any questions. Because, if an event happened in 1774, its date can't be changed and its date is same. Teacher can't comment about its date. Namely, I always try to memorize…"

LM4:

"… In mathematics, firstly, I look at the summary. After that, I look at the examples. I move from easy to difficult. Also I try to understand the subject. I think about it and asking some questions such as " What is trying to explain to us?, what can I do for it?, How can I solve this problem?"…"

Emotion Towards Teacher

Opinions and frequency distribution of students' related to "Emotion towards teacher**"** among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given Table 9.

Table 9. Opinions and Frequency Distribution of Students' Related to "Emotion towards teacher" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	CODES	LS (n:30)		LM (n:30)		MS (n:30)	
		F	%	f	%	f	%
EMOTİON TOWARDS TEACHER	Loving the teacher (or not) affect learning approach.	8	27	15	50	3	10
	Loving the teacher (or not) does notaffect learning approach.	13	43	7	23	21	70

Table 9 is examined, , almost one-quarters of those in subject area LS and two-quarters of those in subject area LM, and one tenth of those in subject area MS stated loving or not loving the teacher affects their learning approach. However, in this context, almost half of those in subject area LS, almost one-quarter of those in subject area LM, and three-quarters of those in subject area MS stated that loving or not loving the teacher did not affect their learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) differs on "Emotion towards teacher". Direct quotations related to themes of "Emotion towards teacher" are given below:

LS15:

"… I never liked literature in high school. The reason of this was a teacher. On the other hand, there was a literature teacher named M. A. After I met with him, he made us study lessons very well. He tried to teach literature. I began to enjoy literature. He effected me positively. Thanks to him, I started to love literature. I changed my mind and started to be interested in literature. When teacher asked a question, I wanted to answer quickly I was listening very carefully. I tried to learn everything that teacher say. If I don't like a teacher, then I don't listen her/him, I talk with my friends and I play a game in the lesson.

MS2:

"…Teacher isn't important for me. Because I have to take a exam, I am studying. I don't consider loving the teacher or not…"

School' Characteristics

Opinions and frequency distribution of students' related to "School' Characteristics**"** among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given in Table 10.

Table 10. Opinions and Frequency Distribution of Students' Related to "School' Characteristics" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	**CODES**	**LS (n:30)**		**LM (n:30)**		**MS (n:30)**	
		f	**%**	**F**	**%**	**F**	**%**
SCHOOL' CHARACTERİSTİCS	The physical properties of school affect learning approach.	0	0	0	0	0	0
	The physical properties of school don't affect learning approach.	28	93	18	60	22	73
	School' management features affect learning approach.	0	0	0	0	0	0
	School' management features don't affect learning approach.	28	93	16	53	20	67

When the Table 10 is examined, more than four-fifths of those in subject area LS, three-fifths of those in subject area LM, and almost four-fifths of those in subject area MS stated that the physical properties and management features of school don't affect their learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are similar for "School' characteristics". Direct quotations related to themes of "School' characteristics" are given below:

MS12:

"…Phsysical conditions were pretty low in elementary school. There were not any laboratories. I didn't even usea microscope The student numbers of our class were about 40 or 50. Because of crowd, there was noise. While our teacher was trying to silence the students, it was a waste of time. I listened, but I didn't understand some of pieces. I compensate my lessons in the private teaching intuitions I study with the same approach …"

LS17:

"… Our high school was very disciplined. there were not any bad events in our school. But, elementary school was a little undisciplined and every mistake could be tolerated. When school is disciplined and if you are you afraid of discipline, you are focused on things, You try to study more but if the school is undisciplined, then I don't care. But, I study with the same approach. It does not affect my study habits…"

Private Teaching Instruction

Opinions and frequency distribution of students' related to "Private teaching intuition" among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given Table 11.

Table 11. Opinions and Frequency Distribution of Students' Related to "Private teaching instruction" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

TEMALAR	**KODLAR**	**LS (n:30)**		**LM (n:30)**		**MS (n:30)**	
		F	**%**	**F**	**%**	**f**	**%**
PRIVATE TEACHING INSTRUCTION	Properties of private teaching instution affect learning approach.	19	63	27	90	26	87
	Properties of private teaching instution don't affect learning approach.	7	23	2	7	4	13

When the Table 11 is examined, three-fifths of those in subject area LS, more than three-fifths of those in subject area LM and MS stated that the properties of private teaching instuition affect their learning approach. However, in this context, one-fifths of those in subject area LS, less than one-fifths of those in subject area LM and MS stated that properties of private teaching instruction don't affect their learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) differ in terms of "Private teaching instuition". Direct quotations related to the theme of "Private teaching instuition" are given below:

LS2:

"…I don't think, private teaching instuition gave me a lot. t isn't necessary. It supported me in terms of providing resources and solving test. It does not affect my study habits…"

MS8:

"…I graduated from public elementary school. Public school can't prepare you for the exams. Then, you have to go private teaching instuition. Without it, I couldn't make it. In that private courses Teachers guided and helped us Also, They were preparing us for exams and monitör us constantly. We could compare ourselves with other students from different schools. We could compete with them…"

Environment of Family and Friends

Opinions and frequency distribution of students' related to "Environment of family and friends" among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given Table 12.

Table 12. Opinions and Frequency Distribution of Students' Related to "Environment of family and friends" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	CODES	LS (n:30)		LM (n:30)		MS (n:30)	
		F	%	F	%	F	%
ENVIRONMENT OF FAMILIY AND FRIENDS	Orientation of family for studying lesson affect learning approach.	10	33	14	47	12	40
	Orientation of family for studying lesson don't affect learning approach.	19	63	16	53	17	57
	Friends affect learning approach.	17	57	20	67	18	60
	Friends don't affect learning approach.	5	17	2	7	1	3

When the table 12 is examined, almost two-fifths of those in subject area LS, LM, MS stated that family has an affect on their learning approach. However, in this context, three-fifths of those in subject area LS, LM, MS stated that their family do not affect their learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) differ on the "Orientation of family for studying lesson ". Also, almost three-fifths of those in subject area LS, LM, MS stated that friends affect their learning approach. However, in this context, one-fifth of those in subject area LS, LM, MS stated that friends don't affect on adopted learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) differ on "friends" too. Direct quotations related to the theme of "Environment of family and friends" are given below:

LS12:

My family never made me study or they never made studying rules. My father always advised to study effectively, even half an hour is enough but effectively. As I know that my family trust in me, I think this is more important than everything. I studied more willingly.

LM24:

"…My family never said to me "go and study". I was a responsible and successful student already. My family only wanted me to get high grades. Higher grades are more important than studying for my family. Their criteria is high grade. I was very ambitious student.."

LM21:

"… I was good in class at private teaching instuition my last year. My friends' study habits affect me. When they study lesson, I study, too. I would say to "They can do in pilot exam, Why am I not " …"

LM26:

"…My friends dont affect me much Even if my friend dıes not study, I can study…"

Assessment

Opinions and frequency distribution of students' related to "Assessment" among undergraduate students who are ranked in the top one percent portion according to the results of University Placement Exam in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) are given in Table 13.

Table 13. Opinions and Frequency Distribution of Students' Related to "Assessment" among Freshman Student who are in Subject Areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS)

THEMES	**CODES**	**LS (n:30)**		**LM (n:30)**		**MS (n:30)**	
		f	**%**	**F**	**%**	**F**	**%**
ASSESSMENT TYPE	Essay exam affects learning approach	30	100	30	100	30	100
	Essay exam does not affect learning approach	0	0	0	0	0	0
	Multiple choice exam affects learnin approach	30	100	30	100	30	100
	Multiple choice exam does not affect learning approach	0	0	0	0	0	0
	Gap-filling exam affects learning approach	30	100	30	100	30	100
	Gap-filling exam does not affect learning approach	0	0	0	0	0	0
	T-F exam affects learning approach	30	100	30	100	30	100
	T-F exam does not affect learning approach	0	0	0	0	0	0

Considering Table 13, all LS, LM, and MS students stated that assessment type has an affect on their learning approach. In this context, opinions of students who are in subject areas of Literacy-Social (LS), Literacy-Math (LM), and Math-Science (MS) is similar about "Assessment type". Direct quotations related to the theme of "Assessment type" are given below:

MS2:

If the exam type is multiple choice, I tried to remember important points. I was relax in multiple choice tests but open ended exams were different. Time is not important. When the exam is open ended I tried to learn everything. True False questions exams were the same. I was studying them as if they were multiple choice ones. Gap filling exams were similar to open ended tests.

Discussion, Conclusion and Suggestions

Content analysis showed that 28 students in our sample adopted deep learning approaches and 62 students adopted strategic learning approaches. Analysis of the expressions used in the responses of students is seen that they have adopted deep learning approaches. this indicates that they feel curiosity and they have a desire for he learning process, they look for meaning, and relate the ideas to each other. Students who used this approach in their learnings said that they were able to learn and remember better. Also, it was observed that these students use critical thinking in the learning process, and they do not accept everything correct as they are given, they find evidence by using reliable resources. Such students reported that they used learning strategies, monitored their learning process, and reorganized their learning process in accordance with the feedback from other students. Students who applied strategic learning approach mentioned that their study was success-oriented and tended to express anxiety about the future and achieving a good position. In cocnlusion, ıt was found that students set goals, organize their time and study the learning environment in accordance with these goals, consider assessment criterias for success, and tend to use learning strategies according with the assessment criteria to measure their success. Thus, ıt can be sait that the majority of the sample were seem to apply features of self-regulated learners in learning process.

The findings in this research were supported by the literature show that students are able to enhance their level of success by increased using the deep learning approach and decreased use of the surface approach. Watkins's (2001) meta-analysis of 60 studies addressing learning approaches and academic achievement found a negative relationship between academic achievement and surface learning approaches in 28 studies, a positive relationship between academic achievement and deep learning approaches in 37 studies, and a positive relationship between academic achievement and strategic learning approach in 32 studies. Bernardo (2003 investigated relationship between learning approaches and academic achievement in different cultures and education systems. In this context, in his study of 302 Philippine students, ıt was found a positive relationship between academic achievement and deep and strategic learning approaches. Sadler-Smith (1996) reported a positive relationship between academic achievement and deep learning in 245 business students. Similarly, Ekinci (2008) noted a positive relationship between low academic achievement and use of the surface learning approach. In a study of 3428 students in Turkey, the same study found a positive relationship between high academic achievement and deep and strategic learning approaches. In a study by Senemoğlu (2011) a positive and meaningful relationship was found between Turkish and American students' perceived level of success and learning approaches. This study reported that students who perceived themselves to be successful tended to adopt deep and strategic learning approaches, whereas students who thought they were less successful used surface learning approaches in both countries. Generally such studies indicate tthat as the level of success increases, scores for deep and strategic learning approaches increase. On the contrary, when success decreases, scores of surface learning aproaches increases.

In this study, a semi structured interview was used to identify factors that affect and shape students' learning approaches. Students from all subject areas stated that "subject knowledge of tearchers", "The individual and personality traits of teachers", and "The methods used in the lesson by teachers" affected their listening during lessons but didn't affect the overall learning approach they adopted. However, analysis of students' expression indicated that they spend more time and effort when their teacher is older or has not mastered the subject area and they are more likely to adopt a deep and strategic learning approach in these situations. The majority of students felt that a strict

teacher had a more positive effect than a permissive one on their study habits such as preparing for a lesson beforehand, and they spent more time and effort studying a subject when the teacher was perceived to be strict. A teacher can therefore affect the adoption of deep and strategic learning approaches if their students perceive them to be strict. In their responses regarding lessons using teacher-centered methods, students stated that they couldn't learn anything in the lessons and they have to spend more time and effort to learn the subject out of classroom. In this context, it can be said that using teacher-centered methods is not effective on the adoption of surface learning approach but it can be said that it is effective to use deep and strategic learning approaches to complete their deficiencies. In learner-centered lessons, students stated that their motivation positively increases and they learn easily. It can be said that learner-centered methods positively affect the use of deep learning by increasing students' intrinsic motivation.

This study also supports findings in the literature regarding the relationship between teacher-teaching methods and learning approaches. Studies by Trigwell, Prosser and Taylor (1994, p. 78-83), Sheppard & Gilbert (1991) and Trigwell, Prosser and Waterhouse (1999, p. 60), show that teacher-centered methods correlate with surface learning approach and learner-centered methods with deep learning approach. In our study of students ranked in the top one percent portion according to the results of University Placement Exam, we can attribute their success to being self-regulated learners who set goals, take responsibility for their learning, and focus their effective learning on the achievement of success. Our study also found that 29% of these students tend to to use a deep learning approach when they feel that they are liked by their teacher. In these cases, students spend more time and effort learning they demonstrate- critical thinking skills in relation to the subject, and make more effort to learn. However, 47% of our sample of 90 stated that ttheir feeling for their teacher did not affect the learning approach they adopted. It can be sait that one of the reasons for this situation is the exam anxiety. Also, these students being self regulated is important. The study also found that students tend to use surface learning approach when their teacher has an expectation of memorization based learning. . However, they tend to choose a deep learning approach when the teacher has a research and interrogation based expectation. These results support the findings of Biggs & Tang (2007, p. 23-25), who reported that one of the factors that encourage students to adopt the surface learning approach is thinking that remembering the factual knowledge is sufficient. In contrast, they found that the factor encourages deep learning approach is " organizing an effective learning teaching enviroment to get answers from students such as asking questions instead of presenting the information, and presenting problems to students. Similarly, the study also found that students studying verbal lessons tend to use surface learning approach and when students study quatitative lessons they tend to use deep learning approach. in the literature, it is stated that there is a relationship between perceptions of the subject and preferred learning approaches. Thus, if students think a subject area requires them to study quantitatively, they increase their knowledge or try to remember the knowledge, and students are more inclined to adopt a surface learning approach. When students think a subject area requires them to learn meaning, and to find what is true, they tend to favour a deep learning approach (Prosser & Trigwell, 1999, p. 16).

In our study, students stated that "school' characteristics" don't affect the learning approach they adopt and their listening during the lessons. However, our analysis found that students spend more time and effort out of class in these situations. Also they couldn't learn in the lessons when the classroom is crowded or noisy. Thus, crowded or noisy classrooms can require students to adopt deep and strategic learning approaches. Similarly, these students stated that "School' management features" don't affect their learning approach which indicates that these students are high level thinkers and they are mainly motivated by internal not external factors.

The statements of students indicated that there are differences in terms of the effect of their families on their learning approaches. 58% of 90 students stated that their family environment did not affect their learning approach. It is thought that such students are aware of their responsibility as being self-regulated learners. However, 40% of the sample thought that their family environment can affect their adoption of deep and strategic learning approaches in terms of goal-setting, motivation, organization and monitoring their studies, following their growth.

Additionally, we found that private teaching institutions and group of friends affect the adoption of the strategic learning approach. Specifically, private teaching institution can affect students' preference to use strategic learning approaches. It can be sait that it arises from students need to compete in exams, organise their studies, and setting goalsto be successful. These factors which are consistent with a strategic learning approach are motivated by success and high grades (Newble & Entwistle, 1986, p. 165). Also, strategic learning approach enables students to choose either deep or surface learning approaches with the emphasis being on cognitive processes such as the learning requirement being a search for meaning or facts to remember, and according to their perception of the evaluation process (Entwistle, 1995, p. 47). In this process, students are observed that they exhibit the features of self-regulated learners.

In terms of assessment, our sample is seen to prefer using deep learning approach for essay and gap-filling exams and surface learning approach for multiple choice and true-false exams. This finding is also supported by the studies of Terry (1933), Meyer (1934), Meyer (1935), Marton & Säljö (1976b), Scouller (1998), and Reid, Duvall & Evans (2005).

In summary, ıt is found that teaching-learning environment depends on student understanding of the relationships between prior knowledge, regulating, teacher behaviour and expectation, and type of assessment. Courses that support meaningful learning have a positive affect on students' preference of using a deep learning approach. Whereas, surface learning is encouraged by a teaching-learning environment based on memorization, where the teachers' behaviour and expectation focus on memorization, and assessment is based on these goals. Similarly, competitive teaching-learning and when the teachers' behaviour and expectation are focused on the achievement of high grades, affect student preference for a strategic learning approach. Our sample indicate that they can perceive the features of a teaching-learning environment that requires deep learning and they adapt accordingly. Likewise, when students perceive a surface learning stituation, they are likely to adopt a surface learning approach.

In this study one of the important factors that affect the learning approaches of students is the expectations of teachers in the learning environment. Also, the interaction and affection of the teachers have the similar effect on this matter.

In this regard, teacher and inservice teacher training should be focused on deep learning practices quality of teaching should be improved.

Students state that when they construct the nature of knowledge they learn easily. So, teachers should focus on organizing activities that fosters undertanding of the knowledge. Students state that they are curious about a lot of things about related topics Thus, learning environment should be organised to trigger curiosity and stimulate deeper learning.

The University Placement Exam (UPE) is a key factor influencing student preferences for strategic learning approach rather than deep learning. As the evaluation criteria is highly on the output of the exam, students adapt generally adapt the strategic learning approach. In this context, UPE should be reorganised as to evaluate both process and product. Family environment is also a factor in deep learning, the benefits of which should be promoted to students and ther families so as to develop school-family collaboration. It is also found that the other factor that students choose strategic learning is special courses out of schools. Many prefer going to speacial courses as they may find the education of national schools insufficient. In this context, Schools should be reorganized according to the the students' needs and characteristics. Also, schools should create effecitve and dynamic learning environments such as providimng clues in the lessons, feedback, importance of attendance so as to develop deep learning and to improve the quality of teaching practices.

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