

ANALYSIS OF STUDY HABITS AND LEARNING STYLES IN UNIVERSITY STUDENTS

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Abstract

This study was aimed at investigating the relationship between study habits and learning styles. The sample consisted of 412 university students. The Study Process Questionnaire and Kolb Learning Style Inventory used in this study. Pearson correlation analysis and multiple hierarchical regression analysis were used. The findings showed that the diverging, assimilating, converging, and accommodating learning styles were found to be significantly correlated to deep approach and surface approach subdimensions of study habits and diverging, assimilating, converging, and accommodating learning styles important predictors of deep approach and surface approach subdimensions of study habits.

Keywords: *Deep approach, Kolb learning styles, Learning styles, Study habits, Surface approach*

ÜNİVERSİTE ÖĞRENCİLERİNİN ÖĞRENME STİLLERİ VE ÇALIŞMA ALIŞKANLIKLARININ ANALİZİ

Özet

Bu çalışma ile çalışma alışkanlıkları ve öğrenme stilleri arasındaki ilişkinin incelenmesi amaçlanmıştır. Araştırma grubu 412 üniversite öğrencisinden oluşmaktadır. Üniversite öğrencilerinin çalışma alışkanlıkları ve öğrenme stilleri çalışma süreci anketi ve Kolb öğrenme stili envanteri kullanılarak ölçülmüştür. Çalışmada, pearson korelasyon analizi ve adimsal çoklu regresyon analizi kullanılmıştır. Bulgular, ayırt edici, dönüştürücü, uyum sağlayıcı ve özümleyici öğrenme stillerinin çalışma alışkanlıklarının derin ve yüzeysel alt boyutları ile anlamlı ilişkilere sahip olduğunu ve ayırt edici, dönüştürücü, uyum sağlayıcı ve özümleyici öğrenme stillerinin çalışma alışkanlıklarının derin ve yüzeysel alt boyutlarının önemli yordayıcıları olduğunu ortaya koymuştur.

Anahtar Kelimeler: *Çalışma alışkanlıkları, Derin yaklaşım, Kolb öğrenme stili, Öğrenme stilleri, Yüzeysel yaklaşım.*

1. Introduction

As typically used in the broader literature, study skills refers to the student's knowledge of appropriate study strategies and methods and the ability to manage time and other resources to meet the demands of the academic tasks. Study habits typically denotes the degree to which the student engages in regular acts of studying that are characterized by appropriate studying routines occurring in an environment that is conducive to studying (Credé & Kuncel, 2008).

Study habits and skills are particularly important for postgraduate students, whose needs include time management, notetaking, Internet skill, the elimination of distractions, and assigning a high priority to study. Fielden (2004) states that good study habits help the student in critical reflection in skills outcomes such as selecting, analyzing, critiquing, and synthesizing. Nneji (2002) states that study habits are learning tendencies that enable students work privately. Azikiwe (1998) describes study habits as the way and manner a student plans his or her private reading outside lecture hours in order to master a particular subject or topic. Study habits help students master their areas of specialization.

The use of effective study habits has also been found consistently to be related to academic performance. For example, Jones *et al.* (1992) found that college students with high levels of overall academic achievement tend to have more effective study habits than do low-achieving students with respect to study techniques, time management and attitudes towards learning. Moreover, a positive relationship between study skills and academic performance has been reported consistently in the literature (Al-Hilawani & Sartawi, 1997; Blustein *et al.*, 1986; Jones & Slate, 1992). In fact, based on a series of studies conducted by Jones and Slate (1992), Jones, Slate, Perez, and Marini (1993) estimated that study skills explain approximately 15% of the variance in undergraduate students' grades. Further, a causal link between study habits and academic performance has been suggested via the finding that training in study skills significantly increased the retention rate of at-risk college students (Polansky *et al.*, 1993).

Successful students show a commitment to maximize learning from educational experiences, monitor their progress, and make adjustments in their efforts when necessary to accomplish their goals (Ainley, 2006; Ainley & Patrick, 2006; Miller & Brickman, 2004). These study habits are reflected in the student's ability to organize and plan his or her learning. They also involve clarity of purpose and the use of goal-directed actions in the individual's own learning. It refers to the conscious and purposeful use of one's cognitive skills, feelings, and actions to maximize the learning of knowledge and skills for a given task and set of conditions (Cardelle-Elawar & Nevin, 2003). It is an individual's ability to set goals, evaluate his or her own performance, and adjust behaviors flexibly to achieve those goals in the context of ongoing feedback (Schunk, 2004). Ansari (1980) found that study habits and study attitudes are

both significant variables which determine the academic performance of the students. Russell and Petrie (1992) have cited a research study aimed to find out the relationship between study habits and student attitude and academic performance of college students. Findings of this study indicate a positive correlation between study attitude, study habit, academic achievement, and learning style.

Many researchers are interested in identifying these variables that contribute to the performance of a university student's academic success. Some empirical findings, on the other hand, have demonstrated that a significant number of undergraduates possess inadequate study skills, such as difficulties with time management, note-taking, understanding how to prepare for different types of tests, and managing anxiety. Fortunately, examples of qualities or behaviors such as student motivation, learning habits, study skills and beliefs about success, may be enhanced via external instructions and support (Proctor, et al, 2006). The current study explores effective study habits and learning styles in university students.

The term of style, more than a talent, style is a preference (Fer, 2011). The term *learning style* refers to the way in which an individual concentrates on, processes, internalizes, and retains new and difficult information (Dunn et al., 2009). When students are aware of their own styles they are more likely to take initiatives in their own learning process and make adjustments to learn in ways better suited to their preferences. Students may use knowledge of their own styles to help them do homework, solve problems, and better sort through information (Boström & Lassen, 2006; Burke & Dunn, 2002). In one study, high school students were given their learning style inventory reports and they then used that information to adjust their study techniques and perform better on exams (Callan, 1996). Dunn (1990) discussed the benefits of learning style based instruction in an interview. She expressed that, when shown how to study and do homework through their learning style strengths, many students demonstrated significant increases in academic achievement and improved attitudes. According to (Kolb, 1999; 2005) the concept of learning style describes individual differences in learning based on the learner's preference for employing different phases of the learning cycle. Because of our hereditary equipment, our particular life experiences, and the demands of our present environment, we develop a preferred way of choosing among the four learning modes -diverging, assimilating, converging, and accommodating.

People with diverging learning style are best at viewing concrete situations from many different points of view. It is labeled diverging because a person with it performs better in situations that call for generation of ideas, such as a brainstorming session. People with a diverging learning style have broad cultural interests and like to gather information. They are interested in people, tend to be imaginative and emotional, have broad cultural interests, and tend to specialize in the arts. In formal learning situations, people with the diverging style prefer to work in groups, listening with an open mind to different points of view and receiving personalized feedback. *People*

with assimilating learning style are best at understanding a wide range of information and putting it into concise, logical form. Individuals with an assimilating style are less focused on people and more interested in ideas and abstract concepts. Generally, people with this style find it more important that a theory have logical soundness than practical value. The assimilating learning style is important for effectiveness in information and science careers. In formal learning situations, people with this style prefer readings, lectures, exploring analytical models, and having time to think things through. *People with converging learning style* are best at finding practical uses for ideas and theories. They have the ability to solve problems and make decisions based on finding solutions to questions or problems. Individuals with a converging learning style prefer to deal with technical tasks and problems rather than with social issues and interpersonal issues. These learning skills are important for effectiveness in specialist and technology careers. In formal learning situations, people with this style prefer to experiment with new ideas, simulations, laboratory assignments, and practical applications. *People with accommodating learning style* have the ability to learn from primarily “hands-on” experience. They enjoy carrying out plans and involving themselves in new and challenging experiences. Their tendency may be to act on “gut” feelings rather than on logical analysis. In solving problems, individuals with an accommodating learning style rely more heavily on people for information than on their own technical analysis. This learning style is important for effectiveness in action-oriented careers such as marketing or sales. In formal learning situations, people with the accommodating learning style prefer to work with others to get assignments done, to set goals, to do field work, and to test out different approaches to completing a project (Kolb, 1984; 1999; 2005).

As described by Vermunt (1996, 1998) learning style consists of four aspects: processing strategies, regulation strategies, mental models of learning and learning orientations. Processing strategies are thinking activities students utilize to process information to obtain certain learning outcomes like knowing the most important points in the study material. Regulation strategies are the activities learners use to monitor, to plan and to control the processing strategies and their own learning process. Mental models of learning are conceptions/misconceptions students have about learning processes and learning orientations are personal aims, intentions, expectations, doubts that students may experience during education (Busato et al., 2000). Learning style may be thought of as ways learners concentrate, process, internalize, and remember new and difficult academic information or skills. Learning styles often show variations with age, achievement level, culture, global versus analytic processing preference, and gender (Shaughnessy, 1998). While researchers may not agree with a common definition of learning style, there appears to be some general agreement that a person’s learning style is composed of a number of personality and environmental traits (Williams, 2001).

Educational achievement depends not only on the intellectual ability and skills of

the learner, but also on the individual's learning style (Kolb, 1984) which refers to the consistent way in which a learner responds to or interacts with stimuli in the learning context, as a replacement of cognitive styles theorems from 1970s (Loo, 2004). Learning styles are defined as different ways used by individuals to process and organize information and as a sort of way of thinking, comprehending and processing information (Kolb, 1984; Sadler-Smith, 1996). In this sense, learning style is related to both sensory and the mental. Kolb's Learning Cycle and Learning Style Inventory (Kolb, 1984) are widely used in order to understand the stages of learning and the ways people prefer to receive and process new information.

Finally, it can be seen that learning styles are an important factor that affects study habits. Thus, the purpose of this study is to examine if there are significant relationships between learning styles and study habits and to determine the predictability of study habits by learning styles. The study attempts to give information about the relationships between study habits and learning styles.

2. Research Method

Model

This study is a quantitative and relational study aimed at examining the relationships between study habits and learning styles. The data were collected by Study Process Questionnaire and Kolb Learning Style Inventory.

Participants

The study group is composed by 412 (188 females; 224 males) students studying in different departments of the faculties of education and technical education, and department of physical education and sports teaching of school of physical education and sports at Mugla University by the convenience sampling method. Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher. Students were in 20-23 age range and, average age was 21.71 with a standard deviation of 1.46. 23.1 % of the participants were 1st grade students, 27.3% 2nd grade students, 25.9% 3rd grade students, and 23.7% of them were 4th grade students.

Instruments

The revised two-factor Study Process Questionnaire (R-SPQ-2F) (Biggs, et al. 2001), is a 20-item self-report questionnaire that categorizes students into two different types of learning style approaches termed Deep Approach and Surface Approach, each containing two subscales, Motive and Strategy. The Deep Approach subscale assesses to what extent the student is motivated by intrinsic factors. The Deep Motive scale assesses how much the student is motivated by curiosity, whereas the Deep Strategy scale assesses how much effort the student is willing to put into gaining a satisf-

ying understanding of the material. The Surface Approach scale assesses how much the student is motivated by extrinsic factors. The Surface Motive scale evaluates the extent to which students are motivated out of fear of failure and the desire to complete the task with minimal effort. The Surface Strategy subscale provides an indication of how much the student relies on rote learning and narrowly targeted techniques (Biggs, 1988). Each subscale is composed of five items, for a total of 10 items per learning style approach. Students complete the survey by responding to the written statements on a 5-point Likert scale ranging from 1 to 5. Biggs et al. (2001) reported Cronbach alpha coefficients of .62 for the Deep Motive subscale, .63 for the Deep Strategy subscale, .72 for the Surface Motive subscale and .57 for the Surface Strategy subscale. Turkish version of The scale was adapted by Yilmaz and Orhan (2011). Turkish version is a reliable and valid instrument; internal reliability of two main learning modes and two bipolar dimensions were found to be high with a Cronbach alpha between .73 and .79. For the present study, it was observed that the internal consistencies of two basic learning styles were between .76 and .81.

Kolb Learning Styles Inventory (Kolb, 1985) was used to examine students' individual learning preferences. The KLSI is a self-report instrument designed to examine individual's preference for learning along the four dimensions of experiential learning theory (Kolb, 1985). Kolb developed the KLSI based on his theory of experiential learning on peoples' different approaches to perceiving and processing information. The KLSI is a self-report instrument and is composed of 12 short statements followed by four possible sentence endings. The individuals are required to rank order each of four sentence endings based on their preference for using the four distinct learning modes. Every individual utilizes each of the four learning modes to some extent, but she/he also has a preferred learning style for perceiving and transforming the information. Turkish version of The KLSI was adapted by Askar and Akkoyunlu (1993). Turkish version is a reliable and valid instrument; internal reliability of four main learning modes and two bipolar dimensions were found to be high with a Cronbach alpha between .88 and .73. For the current study, it was observed that the internal consistencies of four basic learning modes were between .73 and .84.

3. Results

In this study, the analysis of relationships between study habits and learning styles was performed by Pearson Product-Moment Correlation analysis and multiple regression analysis. The data were investigated from the point of erroneous or missing values, outlier values, and multicollinearity in data analysis. The values considered to be entered erroneously were corrected in the erroneous values analysis. In the missing values analysis, randomly remaining few blank items were assigned values by Expectation-Maximization algorithm. In the outlier analysis, 11 observations, which have Mahalanobis (1936) distance value greater than the $\chi^2_{11; .001} = 31.26$ table value, were excluded from the data set. The low level bivariate correlation values show that

there is no multicollinearity among the independent variables. It has been seen that Variance Inflation Factor value is less than 5, the tolerance value is greater than .20, the condition index is less than 30, and consequently 412 observations remain in the data set. Results are given below.

The Relationship between Study Habits and Learning Styles

The relationship between study habits and learning styles was tested by using Pearson correlation analysis and results are presented in Table 1.

Table 1. The Correlations between Study Habits and Learning Styles

	Diverging	Assimilating	Converging	Accommodating
Deep Approach	-.29**	.45**	-.32**	.48**
Surface Approach	.34**	-.37**	.42**	-.39**

** $p < .01$

Table 1 shows that deep approach subdimension of study habits positively related to assimilating and accommodating learning styles and negatively related to diverging and converging learning styles. Surface approach subdimension of study habits positively related to diverging and converging learning styles and negatively related to assimilating and accommodating learning styles.

The Prediction of Deep Approach Subdimension of Study Habits by Learning Styles

A multiple regression analysis was performed to predict deep approach subdimension of study habits by learning styles and the results are given in Table 2.

Table 2. The Prediction of Deep Approach Subdimension of Study Habits by Learning Styles

	<i>R</i>	<i>R</i> ²	<i>F</i>	<i>t</i>
Deep Approach	.46	.211	35.917***	
Diverging Learning Styles				-3.608***
Assimilating Learning Styles				4.707***
Converging Learning Styles				-3.871***
Accommodating Learning Styles				4.930***

*** $p < .001$

Table 2 shows that deep approach subdimension of study habits is significantly explained by the learning styles ($R=.46$, $R^2=.21$, $F=35.917$, $p<.001$). All subdimensions

of learning styles significantly explained 21.1% of the total variance in deep approach subdimension of study habits. According to results of a *t* test that was intended to determine which all subdimensions of learning styles predict deep approach subdimension of study habits, it was found that diverging learning styles ($t=-3.608$, $p<.001$), assimilating learning styles ($t=4.707$, $p<.001$), converging learning styles ($t=-3.871$, $p<.001$), and accommodating learning styles ($t=4.930$, $p<.001$) were significant predictors of deep approach subdimension of study habits.

The Prediction of Surface Approach Subdimension of Study Habits by Learning Styles

A multiple regression analysis was performed to predict surface approach subdimension of study habits by learning styles and the results are given in Table 3.

Table 3. The Prediction of Surface Approach Subdimension of Study Habits by Learning Styles

	<i>R</i>	<i>R</i> ²	<i>F</i>	<i>t</i>
Surface Approach	.43	.185	32.796***	
Diverging Learning Styles				3.983***
Assimilating Learning Styles				-4.209***
Converging Learning Styles				4.551***
Accommodating Learning Styles				-4.344***

*** $p<.001$

Table 3 shows that surface approach subdimension of study habits is significantly explained by the learning styles ($R=.43$, $R^2=.19$, $F=32.796$, $p<.001$). All subdimensions of learning styles significantly explained 18.5% of the total variance in surface approach subdimension of study habits. According to results of a *t* test that was intended to determine which all subdimensions of learning styles predict surface approach subdimension of study habits, it was found that diverging learning styles ($t=3.983$, $p<.001$), assimilating learning styles ($t=-4.209$, $p<.001$), converging learning styles ($t=4.551$, $p<.001$), and accommodating learning styles ($t=-4.344$, $p<.001$) were significant predictors of surface approach subdimension of study habits.

4. Discussion and Conclusion

At the end of this study, it was found that there is a significant relationship between study habits and learning styles. According to this result, it can be said that the assimilating, accommodating, diverging, and converging subdimensions of learning styles are important factor that affects deep and surface approach subdimensions of study habits of late adolescents. The results also indicated that the assimilating, accommodating, diverging, and converging subdimensions of learning styles were the most important predictor of the deep and surface approach subdimensions of study habits for late adolescents.

People learn from immediate, here and now experience, as well as from concepts and books. Learning happens in all human settings from childhood to adolescence, to middle and old age. According to Kolb (1984) “a major function of education is to shape students’ attitudes and orientations towards learning to instill positive attitudes towards learning and a thirst for knowledge, and and to develop effective learning skills”. Learning is a process that comes from concrete experience to reflective observation, from abstract conceptualizing to active practice and it is a process of accommodation of a person to the social and physical environment. The physical structure that directs the learning leads to the process that can be changeable for every people. People’s usage of different learning styles together cause observing the circumstances, unifying this with the concepts, making hypotheses and testing them and choosing new lives.

The student must know himself and his learning ways so that the learning actualizes effectively. Learning style concept emerged from the results of studies which have been done for the differences among people. Learning style involves behaviors which are distinguishable and observable or which provides understanding about every people. Learning style emerges from the features that comes from creation or inborn. Learning style is a concept which does not change for life but it chances a person’s life (Kaplan & Kies, 1995). It can be more easily understood what if it is determined that the learning styles of individuals, how individuals learn and how instructional design should be implemented (Babadogan, 2000). Students enter higher education with different interests, expectations, motivation, and cognitive backgrounds. Higher education requires learning in a specified field, which is obviously different from and more demanding than the way students learn in the basic and secondary education levels. The way they study individual subject matter reflects partly their preferences and orientations in the learning process. Individual differences, university environments, and cultural characteristics interact subtly and continuously, and proper understanding of student learning needs to take different elements into account (Abouserie, 1995).

Among the various studies conducted in the field, Marton and Saljo’s (1984) explanation of student learning types seems to have practical aspects in it. They described marked differences in the way students approach the learning task: *deep* understanding of the article (intention to understand, focus on the deeper meaning) and *surface* level processing or surface reproduction (intention to rote learning, focus on the surface information). Students’ learning styles could be context dependent. It is possible to maintain that, though students are influenced by the demands of learning tasks and their contexts, they might also have relatively stable preferences for one approach or the other. Deep learning involves the critical analysis of new ideas, linking them to already known concepts and principles, and leads to understanding and long-term retention of concepts so that they can be used for problem solving in unfamiliar contexts. Deep learning promotes understanding and application for life. In contrast, surface learning is the tacit acceptance of information and memorization as isolated and

unlinked facts. It leads to superficial retention of material for examinations and does not promote understanding or long-term retention of knowledge and information.

Ramsden (1988) has summarised the aspects evident in the learner, according to each approach -deep and surface. Firstly, the deep approach correlates with an intention to understand. Specifically there is a focus on what is signified, for example the author's arguments; there is the occurrence of relation and distinction between new ideas and previous knowledge; the relation of concepts to everyday experience; the organisation and structuring of content and an internal emphasis on learning, including the idea that learning helps the learner construct their view of reality. These aspects suggest a subject focused approach with learning having an intrinsic value for the learner. Whereas the surface approach is related to aspects marked by an intention to complete the task (or learning) requirements. Specifically there is a focus on the 'signs' such as the text itself and on discrete elements, along with the memorisation of information and procedures for assessment. Also evident is the unreflective association of concepts and facts; a failure to distinguish principles from evidence or new from old; the treatment of the task as an external imposition and finally external emphasis, such as the demands of the assessment and knowledge remaining separate to everyday reality (Morgan, 1993). The aspects related to the surface approach suggest a learning which is task focused and more commonly having extrinsic value, for example the value associated to the grade achieved through a particular instance of learning. However, these approaches are analytic categories derived from research and thus only describe the relative prominence of each approach to studying in a student (Entwistle, 2000). This suggests that there may be difficulty in classifying some students, where neither approach is strictly prominent.

It was also found that students tackled the reading tasks with deep or surface approaches to learning. Some students intended to understand what the instructor was saying and so focused more deeply on the underlying meaning. Some students concentrated on the facts likely to form questions and then to memorize them; they focused on the surface level of the text. This approach might be caused by the format of the assessment in the school system or the limitation of students' cognitive ability (Entwistle, 1981). In Kolb's model, a student's learning style is determined according to whether the student's prefers of perceiving information from the concrete to the abstract, and whether the student's prefers of processing information active experimentation to reflective observation. These preferences result in a classification scheme of the student's learning styles. But the student may have discovered that no single mode entirely describes his/her learning style. This is because each person's learning style is a combination of the four basic learning abilities. (Kolb, 1984; 1985). According to Kolb (2005) divergent learners learn by combining concrete experience with reflective observation. They can view concrete situations from various viewpoints. Assimilator learners learn by combining abstract conceptualization with reflective observation. They thrive putting the information in logical form. Convergent learners

learn by combining abstract conceptualization with active experimentation. They take abstract ideas and actively experiment to find practical uses for the information by finding solutions to the problems. Accommodator learners learn by combining concrete experience with active experimentation. They take concrete experiences mixed with active experimentation in a hands-on experience.

Numerous studies have investigated the impact of learning styles in community college courses (Jones, Reichard, & Mokhtari, 2003; Terry, 2001), for educators in public schools (Lemire, 2002), and pre-service student teachers (Raschick, Maypole, & Day, 1998). Study field of university students differ in terms of their learning styles (Fer, 2007). Gursoy (2008) found that university students have generally assimilative learning style, and then divergent, convergent, and accommodative respectively. The researchers found that learning style was correlated with students' perceptions of class enjoyment. Students with the converging style reported the greatest amount of enjoyment followed by those with diverging, accommodating, and assimilating styles. Although the authors did not analyze the distribution of learning styles, they did report the number of participants who were considered divergent, convergent, assimilative, or accommodative. Evaluating this distribution, most students were characterized by either the convergent or assimilative style. Kardemir and Tezel (2010) determined that the most students have the assimilating style, least students have the accommodating style. According to these results of the current research it can be said that, teachers must know about learning styles and their students' particular learning styles. Teachers must apply to their students' lesson plans considering the learning styles. The main responsibility belongs to the teachers and to the educators of the teachers. Teachers must know that learning style affects success and all the teachers and candidates must be aware of all learning styles.

Limitations should be considered when assessing the utility of the data obtained from this study. First, participants for this study were limited to graduate students in the field of education. The experiences and needs of graduate students in other fields may not accurately be reflected by this study. Additionally, the sample size for this study was small and, therefore, may not be wholly representative of graduate students in the field of education. Second limitation of this study is the self-report nature of the instruments utilized. Due to the instruments relying solely on the participants' perceptions, the accuracy of the study could be influenced by imprecise self-reports or mistaken perceptions of a situation. Due to participants trying to anticipate the socially "correct" answer rather than responding honestly, the reliability of the instruments is always a concern in self-report situations. Finally, other cognitive, physiological, and personality factors may contribute along with study habits and learning styles. Therefore, future research may wish to identify these factors and examine the role that they play in addition to learning styles in the prediction of study habits. Despite these limitations, this study identified significant associations between the subdimensions of study habits and learning styles. And this study extends and enhances previous

research and provides useful data on study habits and learning styles, and the results of the study are thought to give important information about the formation of study habits and learning styles in late adolescence period. Thus the results may be used to inform future research and learning strategies as to what aspects of learning styles may be of particular importance.

5. References

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GENİŞLETİLMİŞ ÖZET

Bu çalışma ile çalışma alışkanlıkları ve öğrenme stilleri arasındaki ilişkinin incelenmesi amaçlanmıştır. Dunn ve diğerleri (2009)'ne göre öğrenme stili her bir öğrencinin

yeni ve zor bilgiyi öğrenmeye hazırlanırken, öğrenirken ve hatırlarken ayrı ve kendilerine özgü yollar kullanmasıdır. Kolb (1984)'a göre bir kişinin bilgiyi alış ve işleme şeklinin bileşimi öğrenme stilini belirler. Literatürde Marton ve Saljo (1984) tarafından öğrencilerin belli bir okuma parçasını nasıl algıladıkları ve öğrenme işine nasıl giriştikleri üzerine yapılan çalışmalarda yüzeysel ve derin öğrenme yaklaşımları kavramlarını ortaya koydukları görülmektedir. Derin öğrenme yaklaşımını öğrenmeye istekli olma, içerikle yoğun ve eleştirel bir etkileşime girme, önceki bilgilerle yeni öğrendikleri arasında bağ kurma, kavramları günlük deneyimlerle ilişkilendirme, olaylarla sonuçları arasında ilişki kurma ve konunun mantığını inceleme eğilimi olarak; yüzeysel öğrenme yaklaşımını ise isin gerektirdiklerini tamamlama isteği, sınavlarda gerekli bilgiyi ezberleme, ilkeleri örneklerden ayırt edememe, öğrenme işini dışsal yükleme gibi görme, bütünlük kurmadan ayrı ayrı öğelere odaklanma, amaçlar ya da stratejileri irdelememe eğilimi olarak tanımlamışlardır. Öğretme-öğrenme sürecinin niteliği ve özellikle de öğrenmenin oluşumundaki etkisi nedeniyle bu alanda çalışan bilim insanlarının üzerinde yoğun olarak durdukları değişkenlerden biri de öğrenme stilleridir. İlgili alanyazında öğrenme stillerinin neler olduğu konusunu ele alan birçok öğrenme stili modeli bulunmaktadır. Temeli Yaşantısal Öğrenme Kuramına (Experiental Learning Theory) dayalı Kolb öğrenme stili modeli, yaygın olarak kullanılan modellerden biridir. Kolb öğrenme stili modelinde, dönüştürücü, özümleyici, ayırt edici ve uyum sağlayıcı olmak üzere dört temel öğrenme stilinden söz edilmektedir. Yaşantısal öğrenme diğer bilişsel öğrenme kuramlarından farklı olarak, öğrenme sürecinde deneyimlerin rolünü vurgulamaktadır. Öğrenmenin, bilginin, deneyimlerin dönüştürülmesi yoluyla oluşturulduğu süreç olarak tanımlamakta ve öğrenme sürecinde, kavrama ve dönüştürme olmak üzere iki boyutun olduğu ileri sürülmektedir. Bu iki boyut içerisinde yer alan dört öğrenim bileşkesi sonucunda, bireylerin dört baskın öğrenme stilinden hangisini tercih ettikleri belirlenmektedir. Bunlar; dönüştürücü, özümleyici, ayırt edici ve uyum sağlayıcı öğrenme stilidir. Sorun çözme, karar verme, düşüncelerin mantıksal ve sistematik planlanması, dönüştürücü öğrenme stiline sahip bireylerin belli başlı özellikleridir. Dönüştürücü bireyler, ayrıntıcıdırlar, parçalardan hareketle bütünü anlamaya çalışmaktadırlar. Öğrenme etkinliklerinde basamakları belli bir sıra ile takip etmektedirler. Özümleyici öğrenme stilinin temelinde, tümevarımsal akıl yürütme ve kuramsal modeller yaratma yeterliliği bulunmaktadır. Bu bireyler, öğrenirken soyut kavramlar ve düşünceler üzerinde odaklanmaktadırlar. Özümleyici öğrenme stiline sahip bireyler, yapılandırılmış sistematik bilgiyi tercih etmektedirler. Ayırt edici öğrenme stiline sahip bireyler, olaylara somut bakış açısı ile bakarak birçok ilişki içinde anlamlı bir bütün düzenlemektedirler. Bu bireyler, beyin fırtınasında olduğu gibi düşüncelere odaklanma ve düşünceleri ilişkilendirme konusunda yeteneklidirler. Bu bireyler, öğrenme etkinliklerinde bireysel çalışmayı tercih etmektedirler. Uyum sağlayıcı öğrenme stiline sahip bireylerin, planlama yapma, kararları yürütme ve yeni deneyimler içinde yer alma çabası belirgin özelliklerindedir. Bu bireyler, uygulamaya ve keşfetmeye dayalı öğrenmeyi tercih etmektedirler (Kolb, 1984; 1999; 2005). Bireylerin öğrenme stillerinin ne olduğu belirlenirse, bireylerin nasıl öğrendiği ve nasıl bir öğretim tasarımı uygulanması gerektiği daha kolay bir şekilde

anlaşılabilir (Babadoğan, 2000). Fer (2007) üniversite öğrencilerinin öğrenme stillerinin çalışma alanlarına göre farklılık gösterdiğini belirtmiştir.

Bu araştırma, üniversite öğrencilerinin çalışma alışkanlıkları ve öğrenme stilleri arasındaki ilişkileri incelemeye yönelik niceliksel ve ilişkisel bir çalışmadır. Araştırma grubu Muğla Üniversitesi Eğitim Fakültesi, Teknik Eğitim Fakültesi ve Beden Eğitimi ve Spor Yüksekokulunda öğrenimlerine devam etmekte olan öğrenciler arasında uygun örnekleme yöntemi ile belirlenen toplam 412 (224 erkek, 188 kız) üniversite öğrencisinden oluşmaktadır. Araştırma grubunun yaş ortalaması 21.71, standart sapması 1.46 (20-23) olan araştırma grubunun %23.1'i 1. sınıf öğrencisi iken, %27.3'ü 2. sınıf, %25.9'u 3.sınıf ve %23.7'si 4. sınıf öğrencisidir. Üniversite öğrencilerinin çalışma alışkanlıkları ve öğrenme stilleri çalışma süreci anketi ve Kolb öğrenme stili envanteri kullanılarak ölçülmüştür. Çalışma alışkanlıkları ve öğrenme stilleri arasındaki ilişkileri belirlemek için Pearson Product-Moment Korelasyon analizi; çalışma alışkanlıklarını açıklamak için adimsal çoklu regresyon analizi kullanılmıştır. Araştırmaya ait veriler SPSS 16.00 paket programında değerlendirilmiştir. Veri analizinde veriler hatalı ya da eksik değer, aykırı değer ve çoklu bağlantı açısından incelenmiş, yanlışlıkla hatalı girildiği düşünülen değerler hatalı değer analizinde düzeltilmiştir. Eksik değer analizinde, rastlantısal olarak çok az sayıda boş bırakılan maddelerin yerine beklenti büyüme (Expectation-Maximization) algoritması yoluyla atama yapılmıştır. Aykırı değer analizinde ise χ^2 11; .001=31.26 tablo değerinin üzerinde bir Mahalanobis (1936) uzaklık değerine sahip olan aykırı değerlerin yer aldığı 11 gözlem veri setinden çıkarılmıştır. Regresyon analizinin varsayımsal kriterleri araştırmanın deneysel olup olmamasıyla yakından ilişkilidir. Araştırmaya 412 katılımcı katılmış ve istenen düzeyin fazlasıyla karşılandığı anlaşılmıştır. Bağımsız değişkenler arasındaki ikili korelasyonların düşük düzeyde çıkmış olması değişkenler arası çoklu bağlantının (Multicollinearity) olmadığını göstermiştir. Varyans büyüme faktörü (Variance Inflation Factor) değerinin 5'in altında; tolerans değerinin .20 den yüksek ve koşul indeksinin .30'dan küçük olduğu görülmüş sonuç olarak veri setinde 412 gözlem kalmıştır. Bulgular, ayırt edici, dönüştürücü, uyum sağlayıcı ve özümleyici öğrenme stillerinin çalışma alışkanlıklarının derin ve yüzeysel alt boyutları ile anlamlı ilişkilere sahip olduğunu ve ayırt edici, dönüştürücü, uyum sağlayıcı ve özümleyici öğrenme stillerinin çalışma alışkanlıklarının derin ve yüzeysel alt boyutlarının önemli yordayıcıları olduğunu ortaya koymuştur. Kardemir ve Tezel (2010) tarafından üniversite öğrencilerinin en çok özümseyen, en az ise yerleştiren öğrenme stiline sahip oldukları tespit edilmiştir. Gürsoy (2008)'a göre de üniversite öğrencileri genel olarak özümseme stilindedirler, Bunu ise ayrıştırma, değiştirme ve yerleştirme stilleri izlemektedir. Bu türden çalışmaların, bireylerin sahip oldukları öğrenme stillerine -ayırt edici, dönüştürücü, uyum sağlayıcı ve özümleyici öğrenme stilleri- ilişkin çalışma alışkanlıklarının -derin ve yüzeysel çalışma alışkanlıkları- daha iyi açıklanması bağlamında yararlı olacağı düşünülmektedir. Araştırma sonuçları, önceki bulgular ışığında öğrenme stilleri ve çalışma alışkanlıkları kapsamında başka araştırma ve uygulamalara da yol gösterecek bağlamda tartışılmıştır.