



LEARNING STYLES OF PROSPECTIVE TEACHERS: KOCAELI UNIVERSITY CASE

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Abstract

Learning is the changes at the behaviors of a learner through repetition and experiences. These changes can occur in various ways with the different peculiarities of the individuals. These individual differences can be classified as intelligence, skills, personal traits and learning styles. The purpose of this study is to determine the learning styles of prospective teachers and to analyze whether these styles differ according to type of the programs that the learners are studying, their class levels, their age and their gender. The study is a descriptive study which was carried out in the fall semester of 2012-2013 academic years. The study group is consisted of 487 prospective teachers who are studying in Primary School Mathematics Education (190), Primary School Science Education (140), Primary School Education (157), in Kocaeli University, Educational Faculty. '*Kolb Learning Style Inventory*' was used as the data collection tool. During the analysis of the data obtained as a result of the inventory, %, frequency and chi square were used. As result of the analysis, it was understood that while there was not a significant difference between the program types, age and the learning styles, there was a significant difference between the class level and the learning style which was preferred by the learner.

Keywords: learning styles, Kolb learning style Inventory, prospective teachers

INTRODUCTION

According to the constructive learning theory which is widely accepted in the field of education in recent years, the idea of actively constructing information by the learner caused important changes in the roles of teachers and students. In this sense, the necessity for paying attention to learning styles, previous experiences, the level of readiness of the learners and organizing learning environments accordingly has begun to be one of the important issues (Çelik & Şahin, 2011). If the learning styles which are defined as the tendencies of students in the methods for collecting and organizing information, thinking and interpreting by Fleder (1996), are identified, it will be easier to understand how individuals are learning and what kind of a teaching design should be implemented. For this reason, the researchers who studied on learning styles made various definitions by evaluating the subject from different perspectives. Among these researchers, Kolb (1984) developed experiential learning theory which is about where the information is constructed in the operational cycle of life by defining learning styles as the method preferred by an individual for processing and understanding information.

Kolb classifies learners according to four different learning styles by considering learners' dimensions of understanding and processing information (De Bello, 1990). Kolb who accepts learning process as a cycle defined four types of learning styles in this cycle. These learning styles are named as; *Concrete Experience-CE*, *Abstract Conceptualization-AC*, *Active Experience-AE* and *Reflective Observation-RO* (Aşkar & Akkoyunlu, 1993). Individuals prefer to learn by feeling at the concrete experience, by thinking at the abstract conceptualization, by doing at the active experience and by watching at the reflective observation (Cassidy, 2004). Learning style

of an individual is a combination of two preferred styles from these four learning styles. Diverging learning style is a combination of concrete experience and reflective observation; assimilating learning style is a combination of reflective observation and abstract conceptualization; converging learning style is a combination of abstract conceptualization and active experience; accommodating learning style is a combination of active experience and concrete experience (Demir, 2008; Gencel, 2006; Joy & Kolb, 2007; Kolb, 2000; Kolb & Kolb, 2005; Tuna, 2008; Yamazaki, 2005). This situation can be seen at the following figure.

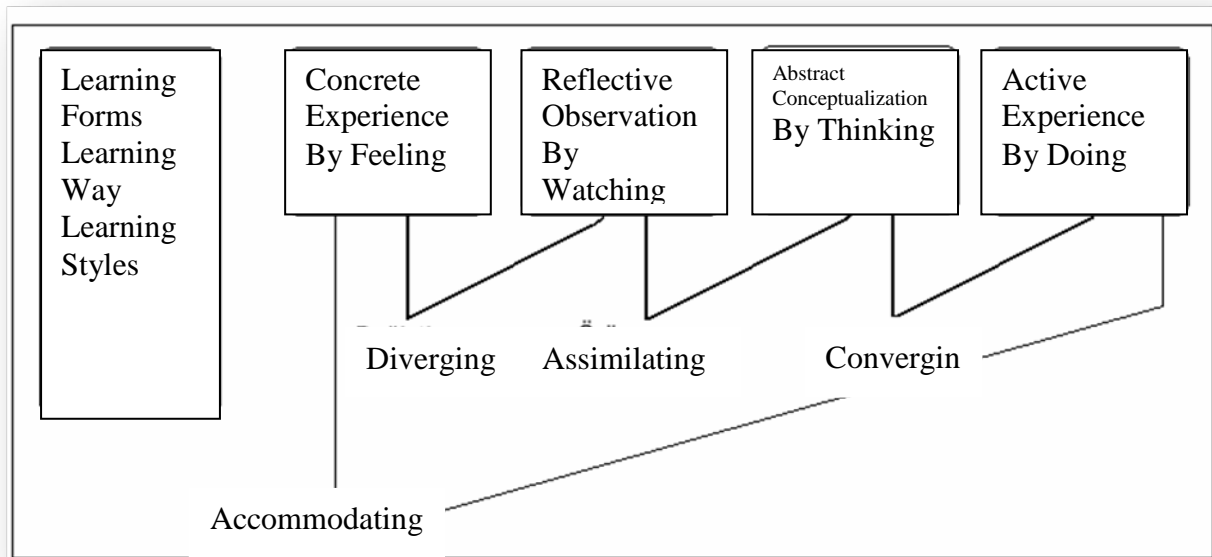


Figure 1: Experiential Learning Theory of Kolb (Aşkar & Akkoyunlu, 1993).

Individuals with a diverging learning style have wide range of imagination and their skills such as to be aware of values and senses, to understand persons, to organize relationships meaningfully and to evaluate different perspectives are strong. The most important characteristic of diverging learners is their thinking skills. Individuals who consider their own thoughts and feelings while shaping their thoughts with a diverging learning style are patient in learning and they do not attempt any actions while they are making objective and careful judgments (Numanoğlu & Şen, 2007). The question which needs to be answered for these learners who learns by listening to ideas and sharing is the question of 'Why?' (Baykara-Pehlivan, 2010).

Individuals with assimilating learning style can understand wide-ranging information and can form a logical format from this information. They are focused on abstract ideas and concepts. Inability in practical applications, not being planned about their work, creating conceptual models, keeping information organized, testing theories and thoughts are characteristics of individuals with this learning style (Numanoğlu & Şen, 2007). The question which individuals with this learning style are asking for an answer is the question of 'what?' Besides, they prefer audio-visual presentations and lectures (Baykara-Pehlivan, 2010).

The characteristics of people with converging learning style are; problem solving, being able to take decisions and making logical and systematic planning from ideas, reasoning, envisioning the results of events (Numanoğlu & Şen, 2007). The individuals with this learning style need to increase information sources by searching different kind of information about any subject and to acquire new skills such as envisioning the results of events by looking at the reasons behind events (Kılıç & Karadeniz, 2004). The question which individuals with this learning style are asking for an answer is the question of 'How to make this?' They prefer simulations, laboratory tasks and practical applications (Baykara-Pehlivan, 2010). These individuals who have quite strong decision-making capabilities take the best and most accurate decisions in situations especially where there is a single solution (Merter, 2009).



The individuals with accommodating learning style prefer to rely on his/her individual knowledge rather than technical analysis while solving problems. The characteristics of these individuals are; leadership, planning, carrying out decisions, taking risks, not completing the tasks on time and not being target oriented (Numanoğlu and Şen, 2007). School is boring for these individuals and they are looking for the answers of 'what if?' (Baykara-Pehlivan, 2010). These open-minded individuals who can adopt themselves to changes learn by doing and feeling. They are successful on risk taking and taking an action (Merter, 2009).

When the studies conducted about learning styles were analyzed, it was seen that a great number of relational studies were carried out about this subject. In these studies, it was looked for relations between several variables (class level, gender, age, way of learning, type of programs in high schools, type of high schools which students were graduated from, type of faculties, critical thinking tendencies) and learning styles (Bahar, Özen & Gülaçtı, 2009; Bahar & Sülün, 2011; Can, 2011; Çaşkurlu & Baykara, 2011; Demir, 2008; Demirbaş & Demirkan, 2003; Ekici & Fettahlıoğlu, 2009; Fowler, 2002; Güven & Kürüm, 2008; Kaf-Hasırcı, 2006; Kılıç, 2002; Loo, 2002; Mutlu, 2008; Numanoğlu & Şen, 2006; Özdemir & Kesten, 2012; Şeyihoğlu, 2010; Tuna, 2008).

Bahar and Sülün (2011) in their studies, worked with 184 prospective teachers from teaching science department. They analyzed the academic achievement according to learning styles and the relation between the learning styles of prospective teachers and gender learning style at their studies. Can (2011) in his study, searched for the relation between some variables and learning styles of 409 prospective teachers who are studying in classroom teacher department of Muğla University, Educational faculty. As a result of the study, while he found a significant relation between class levels and the learning styles of the students, he did not find a significant relation between type of education, gender, age and learning styles of students. Güven and Kürüm (2008) in their studies, analyzed whether or not there is a relation between the learning styles of prospective teachers and their critical thinking tendencies. 251 prospective teachers who are studying at the educational faculty participated at the study. As a result of the study, it is identified that there is a certain level of relation between learning styles of students and their critical thinking tendencies. Mutlu (2008) in his study analyzed the learning styles of students who are studying at the educational faculty in terms of gender and the type of the educational programs. 2645 students in total from 3 sections and 5 departments participated at the research. As a result of the study, it is appeared that students at the educational faculty mostly have 'assimilating' learning style. Özdemir and Kesten (2012) in their studies which they carried out by using Kolb learning style inventory analyzed whether or not there is a relation between learning styles of student social sciences teachers and their gender, age and class levels.

Besides, a study for identifying the studying habits and learning styles of university students was also conducted (Deniz, 2013). In this study, 412 university students participated to the study and university students' studying habits learning styles study process survey and Kolb learning style inventory were used as data collection tools. It was analyzed at the study whether or not there was a relation between studying habits and learning styles.

It is also seen that there are studies which analyzed the effect of learning styles of prospective teachers on their attitudes towards courses, academic achievement and retention of learning (Baykara-Pehlivan, 2010; Evin-Gencil, 2008; Karakuyu & Tortop, 2010; Tatar, Tüysüz, & İlhan, 2008; Tüysüz & Tatar, 2008). Baykara-Pehlivan (2010) studied with 306 prospective-teachers for conducting a descriptive study. It is identified that prospective teachers prefer converging and assimilating learning styles more and they have positive attitudes towards teaching profession. Attitude's average score showed a significant difference in favor of female prospective teachers but it is determined that it is not changing according to type of education and learning styles. Evin-Gencil (2008) in her experimental study analyzed the effect of education which is based on experiential learning theory of Kolb on attitude, academic achievement and the retention of learning. At the end of the research, it is determined that the education which is based on experiential learning theory increases the academic achievement and retention of learning in social studies course and also effected the attitude towards this lesson positively. In a study which was carried out by Tüysüz and Tatar (2008), it is determined that learning styles have positive effects on prospective teachers' successes and attitudes towards the lesson in chemistry lessons.



When relevant literature is analyzed, it is found that in addition to the characteristics of the studies, there are more than one model for learning styles and several testing instruments which belong to these models. Besides, it is thought that these testing instruments still have reliability problems. Although the instruments are accepted as technically sufficient, there are still hesitations about whether or not these testing instruments are testing what they want to test sufficiently (Ekici, 2013). For the reasons stated above, it will be seen once more that whether relevant literature will be supported by carrying out such study or not. Thus, it is thought that this study will contribute positively to the field.

In this sense, the aim of this study is to identify dominant learning styles and whether these learning styles differ according to program type, class level, age and gender. The answers of the following research questions were searched throughout this research.

- i. What is the distribution of the learning styles of the prospective teachers according to the type of the program, class levels, age and gender?
- ii. Is there a significant difference between program types, class levels and age?

METHOD

Design of the Research

This is a descriptive study which was carried out by using a scanning model for identifying how the dominant learning styles of the students showed a distribution according to several variables. In descriptive studies, a given situation is defined completely and carefully as much as possible (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz & Demirel, 2012). In descriptive studies, the researcher do not intervene the events and do not prevent the flow of events. Without presenting a new variable, the researcher takes the event and analyzes it as it is. The researcher does not engage in any activity to ensure its development and change (Sönmez & Alacapınar, 2011)

The Study Group

The study group is consisted of 487 prospective teachers who are studying in Kocaeli University. Among the prospective teachers who participated at the study, 190 (39.01%) of them studying in Primary School Mathematics Education, and 150 of those students are female and 40 of them are male students, 140 (28.75%) of them studying in Primary School Science Education, and 130 of those students are female and 10 of them are male students and 157 (32.24%) of them studying in Primary School Education, and 126 of those students are female and 31 of them are male students.

Data Collection Tools

The data was collected by using 'Kolb Learning Style Inventory' which was developed by Kolb and translated into Turkish by Aşkar and Akkoyunlu in 1993. The inventory is composed of 12 items in which each item has 4 choices. The sum of points which respondents give to each choice differs between 12 and 48. As a result of the validity and reliability studies which was carried out by Aşkar and Akkoyunlu (1993) it is identified that the Cronbach Alpha reliability coefficient of the inventory differs between 0.73 and 0.83.

Data Collection

The inventory was applied to 487 students from freshmen students to seniors in Primary School Mathematics Education, Primary School Science Education and Primary School Education. The data collection process was completed in two weeks during the fall semester of 2012-2013 academic years. Prospective teachers were given 15 minutes for completing the inventory.

Data Analysis

As a result of the classifications made by each prospective teacher who participated at the study regarding each question used in the inventory, at the end of the inventory, sum of Concrete Experience-CE, Abstract Conceptualization-AC, Active Experience-AC and Reflective Observation-RO scores were calculated and the differences between AC-CE and AC-RO were found. The differences between AC-CE and AC-RO change between -36 and +36. The positive score obtained from AC-CE operation shows that learning is concrete, the negative score shows learning is abstract. The positive score obtained from AC-RO operation shows that

learning is active, the negative score shows learning is reflective. The point where AC-CE and AC-RO scores intersect on the x and y-axis is identified as the most suitable learning style for the learner. According to values calculated in this study, the learning style of each prospective teacher is identified as in the following table.

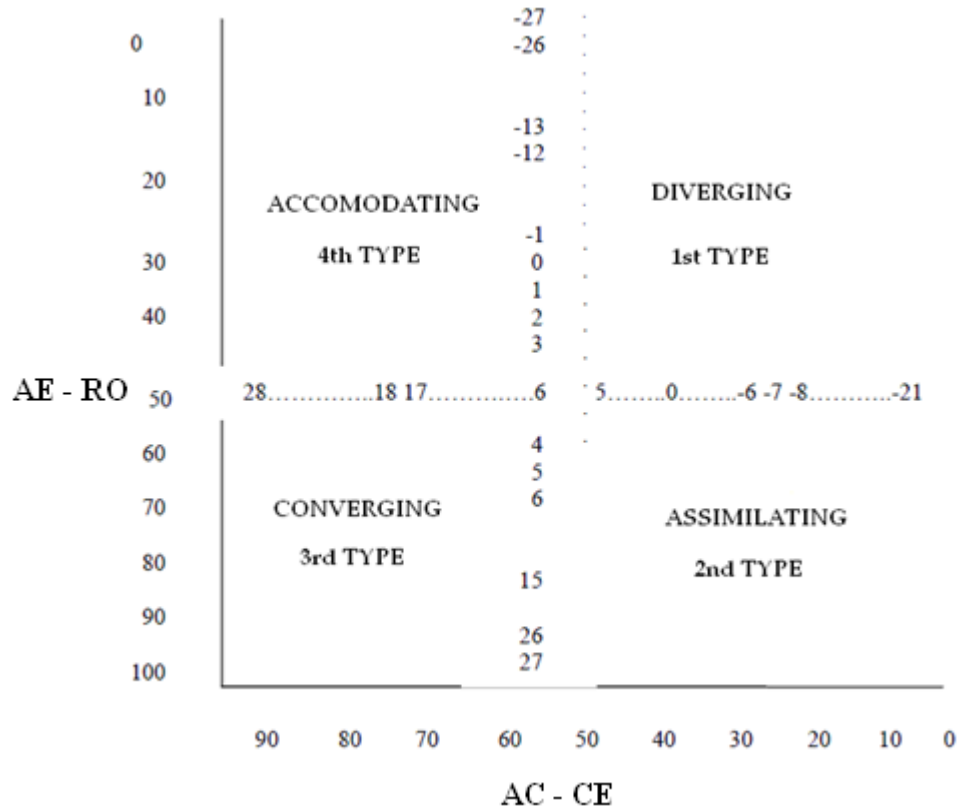


Diagram 1. The Diagram of Learning Styles Inventory Analysis (Çelik & Şahin, 2011)

According to Diagram 1, for example; If the difference between AC-CE is 14 and AE-RO is -23, it can be said that this prospective teacher has assimilating learning style (Çelik & Şahin, 2011).

Frequency (f), percentage (%) and chi-square were used for the analyses for determining whether or not learning styles which were identified in this way differ according to several variables. Together with the dominant learning styles of prospective teachers, the dominant learning styles according to program types, class levels, age and gender presented with frequency and percentage statistics. Whether or not there is a correlation between learning styles of prospective teachers and their program types, class levels, age and gender analyzed with nonparametric chi-square independence test. The data was analyzed with SPSS 15.0 packaged software by accepting the significance level as .05.

FINDINGS AND COMMENTS

Findings and comments regarding how learning styles of prospective teachers differ by their program types are as in the following.

Table 1. Dominant Learning Styles by the Program Type of Prospective Teachers

	Primary School Mathematics Education		Primary School Science Education		Primary School Education		Total	
	f	%	f	%	f	%	f	%
Diverging	35	18,42	25	17,86	29	18,47	89	18,28
Accommodating	16	8,42	22	15,71	24	15,29	62	13,73
Converging	50	26,32	46	32,86	44	28,02	140	28,75
Assimilating	89	46,84	47	33,57	60	38,22	196	40,25

Total	190	100	140	100	157	100	487	100
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When Table 1 is analyzed, it is identified that while 89 (18.28%) prospective teachers have diverging learning styles, 62 (13.73%) of them have accommodating, 140 (28.75%) of them have converging and 196 (40.25%) of prospective teachers have assimilating learning styles. This situation is as in the following for the programs of students. It is seen that 35 (18.42%) of prospective teachers in primary school mathematics education have diverging learning styles, 16 (8.42%) of them have accommodating, 50 (26.32%) of them have converging and 89 (46.84%) of them have assimilating learning styles, 25 (17.86%) of prospective teachers in primary school science education have diverging learning styles, 22 (15.71%) of them have accommodating, 46 (32.86%) of them have converging and 47 (33.57%) of them have assimilating learning styles, 29 (18.47%) of prospective teachers in primary school education have diverging learning styles, 24 (15.29%) of them have accommodating, 44 (28.02%) of them have converging and 60 (38.22%) of them have assimilating learning styles.

Whether or not there is a statistically significant correlation between the learning styles of prospective teachers by their program types was tested with chi-square test. According to the results of the analysis, it is appeared that there is not a significant difference between the learning styles of the prospective teachers by their program types ($\chi^2: 9.581, p = .143 > .05$).

Table 2. The Dominant Learning Style by Class Levels in Each Program Type

		Freshmen		Sophomore		Junior		Senior	
		f	%	f	%	f	%	f	%
Primary School Mathematics Education	Accommodating	1	1,88	4	7,84	4	8,69	7	17,5
	Converging	19	35,84	7	13,72	14	30,43	10	25
	Diverging	7	13,20	10	19,60	12	26,08	6	15
	Assimilating	26	49,05	30	58,82	16	34,78	17	42,5
Total		53	100	51	100	46	100	40	100
Primary School Science Education	Accommodating	6	13,04	4	20	4	12,90	8	18,60
	Converging	12	26,08	3	15	9	29,03	22	51,16
	Diverging	9	19,56	7	35	5	16,12	4	9,30
	Assimilating	19	41,30	6	30	13	41,93	9	20,93
Total		46	100	20	100	31	100	43	100
Primary School Education	Accommodating	3	6,52	4	10	10	34,39	7	23,33
	Converging	11	23,91	11	27,5	13	31,70	9	30
	Diverging	10	21,73	7	17,5	7	17,07	5	16,66
	Assimilating	22	47,82	18	45	11	26,82	9	30
Total		46	100	40	100	41	100	30	100

When Table 2 is analyzed, it is seen that while prospective teachers in primary school mathematics education have assimilating learning style in each class levels, prospective teachers in primary school science education have assimilating learning style in freshmen and junior years and diverging learning style in sophomore year and converging learning style in senior year. This is identified for the prospective teachers in primary school education as they have assimilating learning style in freshmen and sophomore years, converging learning style in junior year and in senior year they have both converging and assimilating learning styles. The general distribution of the study group for class levels can be seen in Table 3.

Table 3. The Dominant Learning Styles by Class Levels

	Freshmen		Sophomore		Junior		Senior	
	f	%	f	%	f	%	f	%
Accommodating	10	6.89	12	10.81	18	15.25	22	19.47
Converging	42	28.97	21	18.92	36	30.51	41	36.28
Diverging	26	17.93	24	21.62	24	20.34	15	13.27
Assimilating	67	46.21	54	48.65	40	33.89	35	30.97

Total	145	100	111	100	118	100	113	100
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When Table 3 is analyzed, it is understood that while they have assimilating learning styles in their freshmen, sophomore and junior years, they have converging learning styles in their senior years.

Whether or not there is a statistically significant correlation between the learning styles of prospective teachers by their class levels was tested with chi-square test. According to the results of the analysis, it is appeared that there is a significant difference between the learning styles of the prospective teachers by their class levels (X^2 : 24.244, $p = .004 < .05$).

How the learning styles of prospective teachers differ by age can be seen in Table 4.

Table 4. The Distribution of Dominant Learning Styles of Prospective Teachers by Age

	17-18		19-20		21-22		23 and over	
	f	%	f	%	f	%	f	%
Accommodating	9	7.43	33	13.15	18	18	2	13.33
Converging	32	26.44	72	28.69	30	30	6	40
Diverging	23	19.00	45	17.92	18	18	3	20
Assimilating	57	47.01	101	40.24	34	34	4	26.67
Total	121	100	251	100	100	100	15	100

When Table 4 is analyzed, it is understood that while prospective teachers have assimilating learning styles in till the age of 23, prospective teachers who are at the age of 23 and over have converging learning styles. Whether or not there is a statistically significant correlation between the learning styles of prospective teachers by age was tested with chi-square test and it is appeared that there is not a statistical significant difference between the learning styles of the prospective teachers by age (X^2 : 8.973, $p = .440 > .05$). How the learning styles of prospective teachers differ by gender can be seen in Table 5.

Table 5. The Distribution of Dominant Learning Styles of Prospective Teachers by Gender

	Female (F)		Male (M)	
	f	%	f	%
Accommodating	49	12.07	13	16.05
Converging	121	29.8	19	23.46
Diverging	77	18.96	12	14.81
Assimilating	159	39.16	37	45.68
Total	406	100	81	100

When Table 5 is analyzed, it is understood that while 159 (39.16%) of female prospective teachers prefer assimilating learning styles, 37 (45.68%) of male prospective teachers who prefer assimilating learning styles. Similarly, while 121 (29.80%) of female prospective teachers prefer converging learning style, only 19 (23.46%) of male prospective teachers prefer this learning style. The diverging learning style preferred by 77 (18.96%) of female prospective teacher becomes the fourth preference of male prospective teachers.

CONCLUSION AND DISCUSSION

According the findings obtained from the study, it is conclude that 196 (40.25%) of prospective teachers prefer assimilating learning style, 140 (28.75%) of them prefer converging, 89 (18.28%) of them prefer diverging and 62 (13.73%) of them prefer accommodating learning style. This conclusion is parallel with many of the studies (Güven & Kürüm, 2008; Kaf-Hasirci, 2006; Kılıç, 2002; Mutlu, 2008; Özdemir & Kesten, 2012). Güven and Kürüm (2008) found in their studies that 44.6 % of the study group students prefer assimilating learning style. Kaf-Hasirci (2006) verified in her study that almost half of the students (41.1%) prefer assimilating and 33.2 % percent of the students prefer converging learning style. Kılıç (200) identified in his



study that among 255 students who participated at the research, 135 (52.9%) have assimilating, 68 (26.7%) have converging, 27 (10.6%) have diverging and 25 (9.8%) accommodating learning style. It was studied with 546 prospective teachers who were in the sample group from 5 departments of three major fields of Niğde University, Educational Faculty. It is determined that 52.6 % of the students (n=287) have assimilating learning style, 27.8% of them (n=152) have converging learning style, 11.9% of them (n=65) have diverging and 7.7% percent of the students (n=42) have accommodating learning style. Özdemir and Kesten (2012) found out in their studied that students have two learning styles (assimilating and converging) dominantly. They identified that 38.4% of the prospective teachers participated at the study have assimilating and 37.9% of them have converging learning style. It is known that teachers often tend to teach their students in a way how they are learning (Sarasin, 2006). When the findings of this study and the examples provided are taken into consideration, it is appeared that prospective teachers generally prefer '*assimilating*' and '*converging*' learning style. In this sense, it can be thought that prospective teachers were raised by teachers who have similar learning styles.

It is concluded that 89 (46.84%) of the prospective teachers from teaching primary school mathematics education department have assimilating, 50 (26.32%) of them have converging, 35 (18.42%) of them have diverging and 16 (8.42%) of them have accommodating learning style. Okur, Bahar, Akgün and Bekdemir (2011) found out in their studies that students from mathematics department mostly have (47.3%) assimilating learning style and on the contrary the merest learning style that they have is accommodating (7.3%). It is seen that both studies have similar findings.

It is seen that 47 (33.57%) of the prospective teachers from primary school science education department have assimilating, 46 (32.86 %) of them have converging, 25 (17.86 %) of them have diverging and 22 (15.71 %) of them have accommodating learning style. Bahar and Sülün (2011) found out in their studies that 39.7% of prospective teachers from teaching science department have converging teaching style, 34.2% of them have assimilating, 15.2% of them have diverging and 10.9% of them have accommodating learning style. The findings of this study are partly similar with the studies of Bahar an Sülün. In Kahyaoğlu's (2011) study, it is appeared that 32.8% of prospective teachers from teaching science department have assimilating teaching style, 31.1% of them have converging, 13% of them have accommodating and 13.1% of them have diverging learning style. This study is parallel with the study of Kahyaoğlu.

It is concluded that 60 (38.22%) of the prospective teachers from primary school education department have assimilating, 44 (28.02 %) of them have converging, 29 (18.47 %) of them have diverging and 24 (15.29 %) of them have accommodating learning style. Can (2011) studied together with 409 prospective classroom teachers in his study. While he identified that 163 (39.9%) of the prospective teachers who participated at the research have assimilating and 145 (35.35 %) of them have converging learning style, accommodating learning style which was preferred by only 37 prospective teachers has the merest percentages. Çaycı and Ünal (2007) studied together with 194 prospective classroom teachers. In the study, it is appeared that 116 (59.8%) of prospective classroom teachers who participated at the research have assimilating teaching style, 44 (22.7%) of them have converging, 22 (11.3%) of them have diverging and 12 (6.2%) of them have accommodating learning style. Karademir and Tezel (2010) found out in their studies that prospective classroom teachers mostly prefer assimilating teaching style and on the contrary the merest learning style that they have is accommodating learning style. It is seen that all these studies are supported with this study.

In the study, it is appeared that there is not a significant difference between learning styles according to program types of prospective teachers ($X^2: 9.581, p = .143 > .05$). This can be related with although prospective teachers are attending different departments; they have same courses related with the pedagogy. Mutlu (2008) made chi-square analysis in his study for testing whether or not department variable is a factor in learning styles. As a result of the analysis, it is appeared that department variable is not a factor for learning styles ($X^2: 9.409, p = .668 > .05$). Zengin and Alşahan (2011) found out in their studies that there is not a significant difference between learning styles and departments of prospective students. However, Kahyaoğlu (2011) found the difference between learning styles and departments of prospective teachers as statistically significant ($X^2: 19.597, p < .01$). While this study is supporting Mutlu (2008), Zengin and Alşahan's (2011) studies, it differs from Kahyaoğlu's (2011) study.



When the learning styles preferred by prospective teachers are analyzed according to their class levels, it is appeared that assimilating learning style is preferred in freshmen, sophomore and junior years, but in the senior year converging learning style is preferred. According to the results of the analysis, it is appeared that there is a significant difference between learning styles and the class levels of the prospective teachers χ^2 : 24.244, $p = .004 < .05$). Özdemir and Kesten (2012) together with Karademir and Tezer (2010) concluded in their studies that the learning styles of prospective teachers differ by class level variable. However, Kaf-Hasırcı stated that learning styles do not differ by class levels.

When the learning style preferred by prospective teacher and age variable is analyzed, it is appeared that prospective teachers prefer assimilating learning style till the age of 23 and prospective teachers at the age of 23 and over prefer converging learning style. It is concluded as a result of the analysis that there is not a statistically significant difference between learning styles of prospective teachers and their age (χ^2 : 8.973, $p = .440 > .05$). Can (2011) claims that there is not a significant correlation between learning styles of students and age variable. Numanoğlu and Şen (2007) and Özdemir and Kesten (2013) found that there is a significant difference between learning styles and age of the participants.

In the study, it is appeared that 159 (39.16%) of female prospective teachers prefer assimilating learning style and 37 (45.68%) of male prospective teachers prefer assimilating learning style. Similarly, while 121 (29.80%) of female prospective teachers prefer converging learning style, 19 (23.46%) of male prospective teachers prefer converging learning style. Bahar and Sülün (2011), Can (2011), Demir (2008), Mutlu (2008), Numanoğlu and Şen (2007), Özdemir and Kesten (2012) and Özen (2011) found out in their studies that there is not a significant difference between learning style and gender. In this study, since the rate between genders of prospective teachers who participated at the study is too much, the learning styles of the prospective teachers only expressed with f and %. In this sense, it is identified that both female and male prospective teachers mostly prefer assimilating learning style. Karademir and Tezer (2010) presented in their studies that there is a significant difference between learning style and gender.

According to the findings and results stated above, the suggestions are as in the following;

- According to the findings of the study, a significant difference between the learning styles of prospective teachers and their program types cannot be found. The reason of this can be seen as the fact that although they are attending different programs, they have the common pedagogic subject field courses. This can be extended as the learning styles of prospective teachers who are attending different programs or students who are studying in different professional fields can be examined.
- This study can be repeated with different variables (type of high school, academic achievement, attitude, etc). Thus, the validity and reliability of the learning style inventories can be supported with these researches.
- This study which was carried out by using Kolb Learning Style Inventory can be carried out as a contrastive study by using other learning style inventories.
- A research can be suggested for understanding whether or not teaching programs in educational faculties have an effect on students' learning styles.
- Analyzing the correlation between the learning styles and teaching skills may provide insights about determining the best teacher profile for transferring information to students.

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