

# Learning Styles and Emotional Intelligence Levels of University Teacher Candidates

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Received 18 August 2017 • Revised 28 January 2018 • Accepted 28 January 2018

## ABSTRACT

The purpose of this research was to examine the learning styles of prospective teachers in terms of emotional intelligence with some other variables. Grasha-Reichmann's learning style scale prepared by Grasha-Reichmann (1994) and Turkish version of which was adapted by Sarıtaş and Süral (2010) was used to measure the learning styles of students who are candidates to become teachers. Their emotional intelligence was measured using this scale. The study group of the research composed of 406 university teacher candidates who were studying in the Education faculty in the academic year of 2016/2017. The research was carried out using the relational screening model. A significant relationship between subscales of learning styles and emotional intelligence sub-dimensions was found. In addition, significant differences were found in the dependent learning style and participative learning style sub-dimensions of learning styles according to the genders of teacher candidates. A significant level of differentiation was seen in the independent learning style, dependent learning style, competitive learning style and avoidant learning style sub-dimensions.

**Keywords:** learning styles, emotional intelligence, teacher candidates, Grasha-Reichmann Scale

## INTRODUCTION

Learning styles can be defined as the different approaches that students use to learn, to process knowledge and to solve problems (Doğanay & Karip, 2006). According to Kolb (1984), learning style is a preferred method that varies from person to person in the process of perception and gathering information. When we look at the common points of definitions in the literature, it is seen that the learning style consists of individual differences in acquisition, processing and interpretation of short information.

The learning experiences of people and the quantity and quality of knowledge they acquire in this life are decisive factors in the learning styles that they use (Ekici, 2003). Awareness of the learning style of the person will help to solve the problems of everyday life more effectively and make life easier (Fidan, 1985).

In this study, the learning style scale developed by Grasha and Reichmann was used. This scale of Grasha-Reichmann is a model based on the interaction of students with other students or students with teachers. The learning styles are categorized according to the participation of the learners in the learning process. Learning styles are grouped as independent, dependent, participative, avoidant, collaborative and competitive as defined by Grasha-Reichmann (Grasha, 2002; Koçak, 2007).

Learners with an independent learning style are those who rely on their own learning skills and like to think by themselves. These people have personal methods and strategies to learn. They have ideas about the subject they learn and try to learn more by their individual efforts. Learners with the dependent learning style aim to learn only the necessary information and prefer environments that do not require them to take responsibility. Learners with a participative learning style are mostly those who are sitting in front of the classroom and are involved in the course activities. These people are eager to learn and love teachers who have the ability to analyze the information

#### Contribution of this paper to the literature

- Teacher candidates who go to the state universities, are intended to show independent learning style behaviors.
- Learning styles directly affect the participation of learners as well as the teacher candidates in the learning process.
- A significant relationship between the independent learning style and the self-control sub-dimension was found among the teacher candidates' answers.

that serve them. Learners with avoidant learning style are closed to in-class activities and are reluctant to learn about course content. Learners with a collaborative learning style learn by collaborating and sharing their views and skills with others. They like the courses and projects that are done in groups. Learners with a competitive learning style learn how well others are doing and want to be better.

The ability to show emotion, to understand and know people's emotions and to regulate emotions is explained by the concept of emotional intelligence (Nettelbeck & Wilson, 2005). According to another definition, emotional intelligence is the ability of an individual to be aware and to understand their own emotions, to motivate people around them and to successfully manage relationships with people (Petrides & Furnham, 2000). Emotional intelligence which is expressed as management of our emotions, awareness and the ability to take advantage of their power is a very important tool that can be used to influence others with its great energy and motivation. Emotional intelligence is simply the recognition, awareness, and management of emotions (Hamarta, Deniz, & Saltali, 2009). Teacher candidates need a balanced level of instructional experience no matter what their learning styles are. The ability to provide effective instruction to their pupils requires that teacher candidates internalize learning styles in themselves (Solis, 2006).

There are four basic elements that constitute emotional intelligence, which is also defined as the ability of the self to effectively manage the relationship with other people and himself. These are: **self-awareness** which means one's awareness of his/her consciousness, ability to self-control and ability to manage expressed as **self-management** or **social awareness** related to others' feelings and **relationship management** that refers to communication skills with other people (Goleman, Boyatzis & McKee, 2002). Precisely self-awareness is the individual awareness of his or her emotion and the situation of being able to understand these emotions by knowing their effects (Goleman, 2000). **Self-management**, another component of emotional intelligence, is expressed by the ability to take initiative in one's decisions, to evaluate events, to produce solutions to problems, and to implement these solutions (Goleman et al., 2002). The social awareness element of emotional intelligence is explained by the concepts of empathy, organizational consciousness and sense of service to others. Finally, the relationship management of emotional intelligence is expressed by the ability to cope with other peoples' emotions (Goleman et al., 2002). Relationship management can also be seen as a sign of emotional awareness in the individual. The notion of emotional awareness in this expression is that one can identify his / her own emotions or feelings and is aware of them. In addition to this, the person's ability to pay attention and control the feelings of others is also evaluated in this phase. This process includes, in some cases, the ability to control and use one's feelings. The ability of the person to pay attention to the feelings of other people also requires the ability to develop empathy. Developing empathy; needs to be aware of other people's feelings and to be able to understand those feelings.

When the literature is examined, there is a limited number of studies that examine the relationship between learning styles and emotional intelligence (Alavinia & Ebrahimpour, 2012; Elizabeth & Chirayath, 2013; Emir & Kaplan Sayı, 2013; Kouhdasht, Mahdian & Naeni, 2013; Shatalebi, Sharifi, Saeedian, & Javadi, 2012). There is no study oriented to teacher candidates. For this reason, it is thought that this research to determine the relationship between emotional intelligence and learning styles of students who are future teacher candidates will contribute to the literature.

The following questions were sought in the general aim of the research:

1. Is there a statistically significant relationship between the emotional intelligence and the learning styles of students who are teacher candidates?
2. Are the learning style scores of teacher candidates different according to gender and education in public-private universities?

## METHOD

The data were collected using a three-part form consisting of personal information, the learning style scale and the emotional intelligence scale. In the personal information section sex, age, and details of graduation were asked.

**Table 1.** Results of Correlation Analysis between Emotional Intelligence and Learning Styles

	Sub Dimensions	Independent Learning Style	Dependent Learning Style	Collaborative Learning Style	Competitive Learning Style	Participative Learning Style	Avoidant Learning Style
Emotional Intelligence	Well being	.360**	.436**	.272**	.240**	.363**	.146**
	Self-control	.190**	.234**	.111*	.037	.204**	.033
	Sensuality	.252**	.378**	.204**	.067	.248**	.077
	Sociality	.273**	.369**	.221**	.150**	.238**	.138**
	Total Emo.Int.	.277**	.362**	.269**	.277**	.284**	.284**

\*  $p < .05$  ; \*\*  $p < .01$ 

## Study Group

The sample of the study consisted of 406 teacher candidates who are were studying in Education faculty in the 2016/2017 education year. When we look at the 406 teacher candidates in the sample group, it is seen that 35.5% of them are male (N = 144) and 64.5% of them are female (N = 262). A total of 36% (N = 146) of the teacher candidates were studying at private universities and 64% (N = 260) were studying at state universities. When looked at the year of education of the teacher candidates, 22.9% (N = 92) of them were first year students, 17.7% second year students (N = 71), 2% third year students (N = 8) and 57.5 % (N = 231) final year students.

## Grasha-Reichmann Learning Style Scale

The adaptation of the learning style scale prepared by Grasha-Reichman (1994) into Turkish was done by Sarıtaş and Süral (2010) and the correlation in the validity of the language was calculated as .62 and the reliability coefficient was .80. On the scale, learning styles were divided into six dimensions as independent, avoidant, collaborative, dependent, competitive and participative. It consisted of 60 items, 10 items in each dimension. Participants rated the items on the scale on a Likert-type 5 rating scale ranging from "Strongly agree" (1) to "Strongly disagree" (5).

## Emotional Intelligence Scale-Short Form

The scale developed by Petrides and Furnham (2000, 2001) was adapted into Turkish by Deniz, Özer and Işık (2013). The 7 point Likert type scale consisted of 20 items. The scale aimed to determine the perception levels of the emotional competencies of the individuals. The high scores on the total of a scale are a sign that emotional competence is perceived as high and the low scores are indicative of low perceived emotional competence.

As a result of exploratory factor analysis made to determine the validity of the scale structure, a four-factor structure of well-being, self-control, sensuality and sociality was obtained. The internal consistency reliability coefficient of this scale was found to be .81 for the whole scale and test-retest reliability was checked with having the coefficient of .86.

## Analysis of Data

To determine the relationships between Learning Styles and Emotional Intelligence, the Pearson Moments Multiplication Correlation Technique Analysis was used.

The significance of the difference between average learning style scores according to the gender and public-private education variables of the students were tested with the t test.

## FINDINGS

This part of the study included findings and evaluations as a result of analysis of the data we have collected.

The Pearson Moments Multiplication Correlation technique was used to analyze whether there was a significant relationship between learning styles and emotional intelligence, and the analysis results are shown in **Table 1**.

There were significant positive relationships between Independent, Dependent, Collaborative, and Participative Learning Styles and Well-being, Self-control, Sensuality, Sociality of Emotional Intelligence and Total Emotional Intelligence scores of the teacher candidates. There was also a significant positive relationship between the Competitive and Avoidant Learning Style of prospective teachers and their Well-being, Sociality and Total Emotional Intelligence scores of emotional intelligence, but there was no significant relationship between the Self-Control and Sensuality sub-dimensions of emotional intelligence.

**Table 2.** Findings of t-Test Comparison Between Teacher Candidates' Learning Style Level Scores According to the Gender Variable

Learning Styles Sub-Dimensions	Gender	N	$\bar{X}$	Ss	sd	t	p
Independent Learning Style	Male	144	16.47	5.07	404	-.549	.583
	Female	262	16.71	3.71			
Dependent Learning Style	Male	144	21.51	6.79	404	-5.185	.000**
	Female	262	24.44	4.55			
Collaborative Learning Style	Male	144	11.99	4.04	404	-1.019	.309
	Female	262	12.39	3.64			
Competitive Learning Style	Male	144	18.83	7.22	404	-1.895	.059
	Female	262	20.19	6.70			
Participative Learning Style	Male	144	12.38	4.27	404	-3.174	.002**
	Female	262	13.60	3.37			
Avoidant Learning Style	Male	144	16.63	6.16	404	.847	.398
	Female	262	16.13	5.33			

\*\*p < .01

**Table 3.** Findings related to the t-test comparison between Learning Style Level Scores of Teacher Candidates' according to School Type Variable

Learning Styles Sub-Dimensions	University Type	N	$\bar{X}$	Ss	sd	t	p
Independent Learning Style	Private	146	15.53	5.43	404	-3.995	.000**
	State	260	17.25	3.24			
Dependent Learning Style	Private	146	20.70	7.13	404	-7.764	.000**
	State	260	24.91	3.81			
Collaborative Learning Style	Private	146	12.10	4.26	404	-.592	.554
	State	260	12.33	3.49			
Competitive Learning Style	Private	146	21.18	7.75	404	3.253	.001**
	State	260	18.88	6.25			
Participative Learning Style	Private	146	12.97	4.67	404	-.772	.440
	State	260	13.27	3.14			
Avoidant Learning Style	Private	146	15.14	6.46	404	-3.164	.002**
	State	260	16.96	5.01			

\*\*p < .01

As a result of the t-test analysis conducted to understand whether the learning styles of teacher candidates varied according to gender, a high level of significant difference was found in the dependent learning style and the participative learning style sub-dimensions. According to this, it is noteworthy that in the participative learning style sub-dimension as well as the dependent learning style, the male teacher candidates have a lower average score.

It was analyzed by the t-test that the opinions of teacher candidates' learning styles differed according to the type of school in which they studied. The results are shown in **Table 3**.

The results of the t-test analysis show that the teachers' opinions statistically differed significantly in the independent learning style, dependent learning style, competitive learning style and avoidant learning style sub-dimensions according to the type of university variable in which they studied. The mean scores in the independent learning style, dependent learning style and avoiding learning style subscales of the teacher candidates who were studying in private schools were lower than the teacher candidates who were studying in public schools. However, in the competitive learning style sub-dimension, the average score of the teacher candidates who were studying in the public schools was lower than the average scores of the teacher candidates who were studying in the private schools.

## DISCUSSION & CONCLUSION

As a result of the correlation analysis, it was found that there was a significant and positive relationship between nearly all of the learning style sub-dimensions and close to all of the emotional intelligence sub-dimensions. Students' independent learning styles (which can be described as someone who has access to resources without the help of any adult, who develop their own way of doing their jobs) and who have the ability to plan their own goals and objectives (Cassidy, 2006) and the well-being dimension which is expressed as to be satisfied with life, were found to be quite related to each other. There also was found a significant relationship between the independent

learning style and the self-control sub-dimension. The self-control sub-dimension was also found to have a significant relationship with the self-control subscale (Petrides & Furnham 2001), which expresses the skills of the individual to manage their emotions, make decisions, cope with stress, and have an independent learning style. Another parallel significant relationship with Petrides and Furnham's (2001) was found between the independent learning style and self-control sub-dimension expressing the skills of persons to manage their own emotions, decision-making, and coping with stress. Independent learning style was also significantly related to the emotional, social, and total emotional intelligence subscales of emotional intelligence. A significant and positive relationship was found between the dependent learning style sub-dimension and all subscales of emotional intelligence. Students with a dependent learning style need an authority figure that tells them what to do (Diaz & Cartnal, 1999). In other words, these people need someone else's help in the learning process. There is a noteworthy relationship of teacher candidates who need someone else in the learning process and all dimensions of emotional intelligence. A statistically significant relationship was found between the collaborative learning style and all the sub-dimensions of emotional intelligence. The collaborative learning style involves the process of contributing to learning through the help and cooperation of more talented students, teachers or other peers (Oxford, 1997). Students actively learn from each other and benefit from each other's experiences in the cooperative learning style. Students with a collaborative learning style contribute to their own and their peers' learning by helping and guiding each other. There is a meaningful and positive relationship between the competitive learning style sub-dimension based on rivalry, competition with other students and well-being, sociality and total emotional intelligence sub-dimensions of emotional intelligence. There was no substantial relationship between other sub-dimensions, namely self-control and the emotional sub-dimension and competitive learning style. Another learning style sub-dimension, participant learning style, had a significant relationship with all sub-dimensions of emotional intelligence. These students were not only confined to the school but also took the responsibility of obtaining knowledge from outside and sharing it with the class. Students with participative learning styles seemed to be more willing to learn lessons, love school and attend school (İkikardeş & Şentürk, 2011). It is noteworthy that all sub-dimensions of emotional intelligence, which has characteristics such as being satisfied with life in general, self-regulation of emotions, sensuality and sociality, of learners who are more eager to learn, was related to the participative sub-dimension of learning style. Finally, there was a significant and positive relationship between the avoidant learning style dimension of the learning style and well-being, sociality and total emotional intelligence subscales of the emotional intelligence. However, there was no substantial correlation between the other two subscales of emotional intelligence, which were the self-control and sensuality sub-dimensions, and avoidant learning style. Students with an avoidant learning style were students who preferred the traditional teaching environment and who were not very interested in lessons or course handling, and who were not sharing with others in the classroom learning process. A significant and positive relationship attracted attention between these students who were indifferent to goings-on (İkikardeş & Şentürk, 2011) and who were satisfied with life and were sensual within the frame of emotional intelligence and the students who were not able to distinguish emotions and had difficulties in showing their feelings.

A significant degree of differentiation was found in the dependent learning style and participative learning sub-dimensions according to gender of teacher candidates. According to the results of the t-test analysis, it was noted that the mean scores of male teacher candidates in both the dependent learning and participative learning styles were higher than the average scores of female teacher candidates. These results show that the male teacher candidates needed to be more directed in the learning process than the female teacher candidates, and that they were more interested in the lessons organized in detail (Vural, 2003). It was seen that the participative learning style scores of female teacher candidates were higher than those of the male candidates. The participative learning style average scores of female teacher candidates, which can be expressed as performing the work required at courses, doing optional homework, being aware of their responsibilities, fulfilling their duties and performing their assignments in a desired and timely manner (Vural, 2003) was higher than the scores of male teacher candidates. According to the gender variable of teachers, there was no statistically significant difference in the sub-dimensions of learning style, namely independent learning style, collaborative learning style, competitive learning style and avoidant learning styles.

According to the type of university where teacher candidates studied, there was seen to be a significant difference in the independent learning style, dependent learning style, competitive learning style and avoidant learning style sub-dimensions. The findings indicated that the average scores of the independent learning style, dependent learning style and avoidant learning style subscale of teacher candidates who go to state universities were higher than those in private universities. In the competitive learning style average scores, the average score of the teacher candidates who go to the private universities was higher than the teacher candidates who go to the public universities schools. With these findings it can be understood that, teacher candidates who go to the state universities have more intense independent learning style behaviors.

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