Analysis on the Effect of the Thinking Styles of Prospective Social Studies and Classroom Teachers on Their Attitudes towards Learning in Terms of Different Variables

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Abstract

The purpose of this study is to determine whether there is a relationship between the thinking styles of prospective teachers and their attitudes towards learning. Relational screening model was used in this research analyzing the relationship between the thinking styles of prospective social studies and classroom teachers and their attitude towards learning. The research sample is composed of 191 prospective social studies and classroom teachers studying in a state university located in Central Anatolia Region for academic year. Rational-Experiential Thinking Styles Questionnaire and The Scale of Attitudes towards Learning chosen as purpose-oriented were used in the study. Unrelated samples t test, one-way analysis of variance and pearson correlation analysis were performed in the data analysis. A negatively significant relation was ascertained between the cognitive requirement sub-dimension of the thinking styles questionnaire of prospective teachers and the sub-dimensions of the nature of learning, expectations about learning and openness to learning belonging to the scale of attitudes towards learning. There was no significant relation observed between the intuitive belief sub-dimension of the thinking styles questionnaire and the sub-dimensions of the nature of learning, expectations about learning, openness to learning and concern about learning belonging to the scale of attitudes towards learning.

Keywords: Attitudes towards learning, Prospective teachers, Thinking styles.

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INTRODUCTION

Undoubtedly, education takes its share from this transformation in a changing and developing world. Although innovations and technology provide simplicity for human life, they bring many problems. Individuals must possess some thinking skills in seeking solutions for the problems of daily life. These thinking skills are implanted in education environment. Creating the appropriate learning environments may have an effect on both the thinking skills and the attitudes of students towards learning. Positive or negative attitudes of students towards learning not only become effective in bringing in the desired behaviors, but also can ensure formation of positive class climate and strengthened in-class communication.

Thinking Styles

Thinking has a considerably complex structure and stands as a skill that can be learned, practiced and developed (Çubukçu, 2004; Dinçer, Saracaloğlu, 2011). Many mental processes such as analysis, synthesis and evaluation are included in the action of thinking (Baloglu, Yüksel, Karadağ, 2010). The differences of individuals reflect on their thoughts and thinking styles (Demir, Erginsoy Osmanoğlu, 2013; Güven, Azkeskin, 2018; Oflar, Yıldız, 2016; Yaşar, Erol, 2015). In other words, thinking style can be defined as the combination of personality traits that create the human (Belousava, 2014). Likewise, personal and environmental factors are also effective in individual’s self-formation (Cheng, Sin, 2019). These differences lead to different styles (Çelik, Kumral, 2016). Sternberg (1997) has expressed that styles are the ways of people’s using their skills (as cited in Zhang, 2004). Thinking style denotes the mental processes applied by individuals to any situation they come across (Başol, Türkoğlu, 2009; İnci, Erten, Çitil, 2012). This process plays an important role in the emergence of the talents of individuals (Çoşkun, Gacar, Yanlıç, 2012). According to Epstein et al. (1992), people use analytical-rational thinking style and intuitive-experiential thinking style (as cited in Buluş, 2003). Thinking style plays an important role in the education process as well as being effective in the daily life of the individual (Özbaş, Uluçınar Sağer, 2014). Every educator has their own thinking style and this thinking style can apply a direct effect on the student (Kaygaoğlu, Altun, 2016). Since, it is necessary to understand the thinking styles of students in order to discover their learning (Akkuş İspir, Ay, Saygı, 2011). Teachers should not be content with transferring certain information to students. They should also upskill the students with such skills as creative thinking, critical thinking and problem solving (Eryaman, 2007; Duman, Çelik, 2011). The teacher must take into account the individual differences of students after creating the appropriate learning environment. These individual differences also cause differentiations in the behaviors of students directed to learning (Kızılaslan Tuñer, Kınal, Şahin, 2015). Students have their own unique ways of thinking like every individual in the society (Başol, Türkoğlu, 2009). Only learning environments, materials, teaching methods and techniques are not sufficient alone in order to bring the student in a skill, value or a desired behavior. Changes in educational programs lead to the diversification of qualifications the teachers must possess (Eryaman & Riedler, 2010; Esmer, Altun, 2015). An effective education-training environment can only be created this way. Teachers should keep pace with the necessities of the time so that an individual complying with the requirements of this era can arise. Thinking styles of teachers reflect on their teaching styles (Zhang, 2005). There should be an interactive relation between the thinking styles of teachers and students (Betoret, Artiga, 2014). Teachers can encourage the interpersonal behaviors valued by students in class and this can enable them to apply the thinking styles used in realization of learning (Yu, Chen, 2012).

Attitude Towards Learning

Many factors can be effective in learning. In order for learning to realize, not only the teacher but also the student must actively participate in this learning process (Tay, 2005). Another important factor related to learning is the attitudes of individuals towards learning. The individuals with different characteristics use different methods and strategies during the learning process (Sapancı, 2014). The attitude towards learning can be defined as the tendencies of individuals towards learning (Komşu, 2011).
Samırkaş Komuş, Boz, 2018). Cognitive structure of the individual, purpose and other factors can be effective in the development of attitude towards learning (Altunsoy, Çimen, Gökmen, Ekici, 2011). The students must have positive feelings and thoughts directed to learning in their attitudes towards learning, finding a solution to the problems encountered in daily life or for self-development (Komuş, Samırkaş Komuş, Boz, 2018). In a developing and changing society, individuals must be provided with not only transfer of knowledge, but also the ability to search for information (Kuo, Hwang, Lee, 2012). Positive attitudes should be provided in order to bring individuals in these skills, values and talents. Thus, individuals can adopt to new situations and find solutions to the problems (Kara, 2010). On the other hand, the attitudes of teachers being the important constituent of teaching process towards learning reflect on class climate (Kara, Uysal, p.37, 2015). The attitudes and behaviors of teacher in education environment may affect student gain and success (Sönmez, 2010, p.143). Taking into account all of these, the attitudes of teachers towards learning in learning environment should be reflected in a way to affect students positively.

Looking at literature and the studies conducted on thinking styles, there are researches found directed to prospective teachers (Başol, Türkoğlu, 2009; Buluş, 2016; Çubukçu, 2004; Dinçer, Saracaloğlu, 2011; Esmer, Altun, 2016; Güven, Kürüm, 2008; İnci, Erten, Çitil, 2012; Sökmen, Kılıç, 2016; Yaşar, Erol, 2015; Yıldızlar, 2010) while there are also researches directed to teachers (Baloğlu, Yüksel, Karadağ, 2010; Duman, Çelik, 2011; Güven, Azkeskin, 2018; Kavgaoğlu, Altun, 2016; Oflar, Yıldız, 2016; Özbaş, Uluçınar Sağır, 2014). Other studies conducted on students are also observed (Çelik, Kumral, 2016; Siyer, Tarım, 2016). There are researches in the literature discussing prospective teachers and teachers in attitudes towards learning (Çağlar, 2017; Sapancı, 2014).

The purpose of this study is to determine whether there is a relationship between the thinking styles of prospective Social studies and Classroom teachers and their attitudes towards learning. In this regard, thinking styles of prospective teachers and their attitudes towards learning were also analyzed in terms of gender, the department studied and grades.

MATERIAL AND METHODS

The research model, population and sample, data collection tools, data analysis and data collection are discussed in this part.

The Research Model

Relational screening model was used in this research analyzing the relationship between the thinking styles of prospective social studies and classroom teachers and their attitude towards learning. The relational research aims to establish the relations and types between variables (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, Demirel, 2017; Sönmez, Alacapınar, 2017). The relational research ensures knowing different situations through a variable basically (Karasar, 2006).

Population and Sample

The research sample is composed of 191 prospective Social Studies and Classroom teachers studying in a state university located in Central Anatolia Region for 2018-2019 academic year. Random sampling among the sampling methods based on probability was used in the study. In random sampling, each sampling unit has equal chances during the research process and the preference of individuals does not affect each other (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, Demirel, 2017; Ekiz, 2015). The demographic characteristics of prospective teachers are given in table 1.

| Table 1. Demographic characteristics of prospective teachers |
|-------------------------------------------------------------|
| Gender | f  |
| Female | 133 |
| Male   | 58  |
| Total  | 191 |
Data Collection Tools

The Personal Information Form, Rational-Experiential Thinking Styles Questionnaire and The Scale of Attitudes towards Learning chosen as purpose-oriented were used in the study. Required permissions were taken for the use of scales in the research (Buluş, 2003; Kara, 2010). Personal information form includes demographic characteristics of prospective teachers such as age, gender, grade and the department studied.

Rational-Experiential Thinking Styles Questionnaire was developed by Epstein et al. (1996). Its Turkish adaptation was performed by Buluş (2003). Rational-Experiential Thinking Styles Questionnaire used in the research and adopted into Turkish culture by Buluş (2003) is composed of 29 items and 2 sub-dimensions of cognitive requirement and intuitive belief. The scale consists of 5-point Likert-type rating scale. The answers are given as completely wrong, partially wrong, neutral, partly true and completely true. In the analyses conducted for test re-test reliability of the Rational-Experiential Thinking Styles Questionnaire, Pearson Correlation Coefficient was found as r: .85 for cognitive requirement and r: .86 for intuitive belief.

The Scale of Attitudes towards Learning was developed by Kara (2010). The scale is composed of 40 items and four sub-dimensions namely the nature of learning, expectations about learning, openness to learning and concerns about learning. The scale consists of 5-point Likert-type rating scale. Cronbach Alpha value of the sub-dimension of the nature of learning was found .77, Cronbach Alpha value of the sub-dimension of expectations about learning was found as .72, Cronbach Alpha value of the sub-dimension of openness to learning was found as .78 and Cronbach Alpha value of the sub-dimension of concerns about learning was found as .81. Cronbach Alpha value of the whole scale was determined as .73.

Data Analysis

In the analysis part of this research analyzing the effect of the thinking styles of prospective Social studies and Classroom teachers on their attitudes towards learning through different variables, SPSS package program was used. Unrelated samples t test, one-way analysis of variance (Anova) and Pearson correlation analysis were performed in the data analysis.

Data Collection

Required permissions were taken for the use of scales in the research (Buluş, 2003; Kara, 2010). The data collection process was carried out by the researcher on different days and hours academic year. The application of scales lasted for 20 minutes approximately. A total of 70 scales considered to be missing and invalid were excluded from the analysis period after the application.

FINDINGS

In this part of the study, there are findings relevant to t-test, one-way analysis of variance (Anova) and Pearson correlation analysis.

Table 2. Independent groups t-test results of the scores of prospective teachers obtained from the thinking styles questionnaire by gender

| Scale Sub-dimension   | Gender | N   | x   | .S | sd  | t    | p  |
|-----------------------|--------|-----|-----|----|-----|------|----|
| Cognitive Requirement | Female | 133 | 2.65| .673 | 189 | .437  | .663 |
|                       | Male   | 58  | 2.61| .690 |     |      |    |
| Intuitive Belief      | Female | 133 | 3.39| .852 | 189 | .937  | .350 |
|                       | Male   | 58  | 3.25| .936 |     |      |    |
Looking at table 2, mean cognitive requirement score of the female prospective teachers was found as $\bar{x}: 2.65$ while it was found as $\bar{x}: 2.61$ for male prospective teachers in the analysis performed to determine the level of thinking styles of prospective teachers. In the intuitive belief sub-dimension of the scale, mean score of the female prospective teachers was determined as $\bar{x}: 3.39$ while this score was established as $\bar{x}: 3.25$ for male prospective teachers. No significant difference has been found between the groups following the analysis conducted to determine whether thinking styles exhibit statistically significant difference by the gender factor.

Table 3. Independent groups t-test results of the scores of prospective teachers obtained from the scale of attitudes towards learning by gender

| Scale Sub-dimension   | Gender     | N   | $\bar{x}$ | S  | sd | t     | p    |
|-----------------------|------------|-----|-----------|----|----|-------|------|
| Nature of Learning    | Female     | 133 | 2.10      | .512 | 189 | .860  | .391 |
|                       | Male       | 58  | 2.17      | .561 |     |       |      |
| Expectations About Learning | Female | 133 | 2.87      | .523 | 189 | .849  | .397 |
|                       | Male       | 58  | 2.80      | .512 |     |       |      |
| Openness to Learning  | Female     | 133 | 2.33      | .498 | 189 | .579  | .564 |
|                       | Male       | 58  | 2.37      | .487 |     |       |      |
| Concerns about Learning | Female | 133 | 2.12      | .527 | 189 | .243  | .808 |
|                       | Male       | 58  | 2.14      | .446 |     |       |      |

In table 3, mean score of the nature of learning belonging to female prospective teachers was found as $\bar{x}: 2.10$ while it was found as $\bar{x}: 2.17$ for male prospective teachers in the analysis performed to determine the attitude levels of prospective teachers towards learning. In the scale’s sub-dimension of expectations about learning, mean score of female prospective teachers was found as $\bar{x}: 2.87$ while the same score was determined as $\bar{x}: 2.80$ in male prospective teachers. In the sub-dimension of openness to learning, mean score of female prospective teachers was found as $\bar{x}: 2.33$ while the mean score of male prospective teachers was determined as $\bar{x}: 2.37$. In the sub-dimension of concern about learning, mean score of female prospective teachers was found as $\bar{x}: 2.12$ while the mean score of male prospective teachers was determined as $\bar{x}: 2.14$. No significant difference has been found between the groups following the analysis conducted to determine whether the attitudes of prospective teachers towards learning exhibit statistically significant difference by the gender factor.

Table 4. One-way Anova results of the scores of prospective teachers obtained from the thinking styles questionnaire by the department studied

| Scale Sub-dimension   | Department          | $\bar{x}$ | Source of Variance | Sum of Squares | sd  | Mean Squares | F    | p    |
|-----------------------|---------------------|-----------|--------------------|---------------|-----|--------------|------|------|
| Cognitive Requirement | Social Studies      | 2.64      | Between groups     | .004          | 1   | .004         | .009 | .924 |
|                       | Classroom Instruction Education | 2.63 | Intra-groups       | 87.228        | 189 | .462         |      |      |
| Intuitive Belief      | Social Studies      | 3.32      | Between groups     | .093          | 1   | .093         | .120 | .729 |
|                       | Classroom Instruction Education | 3.37 | Intra-groups       | 146.412       | 189 | .775         |      |      |

Looking at table 4, regarding the cognitive requirement sub-dimension of the thinking styles questionnaire of prospective teachers, mean score of social studies education was found as $\bar{x}: 2.64$ while the mean score of classroom education was found as $\bar{x}: 2.63$. For the intuitive belief sub-dimension of the scale, mean score of social studies education was found as $\bar{x}: 3.32$ while the mean score of classroom education was found as $\bar{x}: 3.37$. No significant difference was found when it was analyzed whether there was a significant difference between the department of prospective teachers and their thinking styles.
Table 5. One-way Anova results of the scores of prospective teachers obtained from the scale of attitudes towards learning by the department studied

| Scale Sub-dimension       | Department          | \( \bar{x} \) | Source of Variance | Sum of Squares | sd   | Mean Squares | F    | p       |
|--------------------------|---------------------|----------------|--------------------|----------------|------|--------------|------|---------|
| Nature of Learning       | Social Studies      | 2.00           | Between groups     | 1.923          | 1    | 1.923        | 7.133| .008    |
|                          | Classroom Instruction Education |               | Intra-groups      | 50.958         | 189  | .270         |      |         |
| Expectations About Learning | Social Studies   | 2.20           | Between groups     |               |      |              |      |         |
|                          | Classroom Instruction Education |               | Intra-groups | .032           | 1    | .032         | .120 | .730    |
| Openness to Learning     | Social Studies      | 2.83           | Between groups     |               |      |              |      |         |
|                          | Classroom Instruction Education |               | Intra-groups      | 51.287         | 189  | .271         |      |         |
| Concerns about Learning  | Social Studies      | 2.46           | Between groups     | 1.489          | 1    | 1.489        | 6.269| .013    |
|                          | Classroom Instruction Education |               | Intra-groups | 44.902         | 189  | .238         |      |         |
|                          |                     | 2.04           | Between groups     | .891           | 1    | .891         | 3.572| .060    |
|                          |                     | 2.18           | Intra-groups       | 47.157         | 189  | .250         |      |         |

In table 5, regarding the nature of learning sub-dimension of the scale of attitudes of prospective teachers towards learning, mean score of social studies education was found as \( \bar{x} \): 2.00 while the mean score of classroom education was found as \( \bar{x} \): 2.20. For the sub-dimension of expectations about learning, mean score of social studies education was found as \( \bar{x} \): 2.83 while the mean score of classroom education was found as \( \bar{x} \): 2.86. In the sub-dimension of openness to learning, mean score of social studies education was found as \( \bar{x} \): 2.46 while the mean score of classroom education was found as \( \bar{x} \): 2.42. In the sub-dimension of concerns about learning, mean score of social studies education was found as \( \bar{x} \): 2.04 while the mean score of classroom education was found as \( \bar{x} \): 2.18. No significant difference was found when it was analyzed whether there was a significant difference between the department of prospective teachers and their attitudes towards learning.

Table 6. One-way Anova results of the scores of prospective teachers obtained from the thinking styles questionnaire by the grade

| Scale Sub-dimension       | Grade | \( \bar{x} \) | Source of Variance | Sum of Squares | sd   | Mean Squares | F    | p       |
|--------------------------|-------|---------------|--------------------|----------------|------|--------------|------|---------|
| Cognitive Requirement    | 1     | 2.50          | Between groups     | 2.050          | 3    | .683         | 1.500| .216    |
|                          | 2     | 2.66          | Intra-groups       | 85.183         | 187  | .456         |      |         |
|                          | 3     | 2.77          |                    |                | 2.61 |              |      |         |
|                          | 4     | 2.61          |                    |                |      |              |      |         |
| Intuitive Belief         | 1     | 3.39          | Between groups     | 1.286          | 3    | .429         | .552 | .648    |
|                          | 2     | 3.43          | Intra-groups       | 145.220        | 187  | .777         |      |         |
|                          | 3     | 3.31          |                    |                | 3.18 |              |      |         |
|                          | 4     | 3.18          |                    |                |      |              |      |         |
Looking at table 6, mean score of the prospective teachers for the first grade in cognitive requirement sub-dimension of the thinking styles questionnaire was found as $\bar{x}$: 2.50 while the mean score of the second grade as $\bar{x}$: 2.66, the mean score of the third grade was found as $\bar{x}$: 2.77 and the mean score of the fourth grade was found as $\bar{x}$: 2.61. In the intuitive belief sub-dimension of the scale, the mean score of the first grade was found as $\bar{x}$: 3.39, the mean score of the second grade was found as $\bar{x}$: 3.43, the mean score of the third grade was found as $\bar{x}$: 3.31 and the mean score of the fourth grade was found as $\bar{x}$: 3.18. No significant difference was found when it was analyzed whether there was a significant difference between the department of prospective teachers and their thinking styles.

Table 7. One-way Anova results of the scores of prospective teachers obtained from the scale of attitudes towards learning by the grade

| Scale Sub-dimension | Grade | $\bar{x}$ | Source of Variance | Sum of Squares | sd | Mean Squares | F | p | Sign. Difference |
|---------------------|-------|-----------|--------------------|---------------|----|--------------|---|---|-----------------|
| Nature of learning  | 1     | 2.14      | Between groups     | 3.487         | 3  | 1.162        | 4.401 | .005 | 3-4             |
|                     | 2     | 2.11      | Intra-groups       | 49.394        | 187| .264         |     |     |                 |
|                     | 3     | 1.96      |                    |               |    |              |     |     |                 |
|                     | 4     | 2.39      |                    |               |    |              |     |     |                 |
| Expectations about  | 1     | 2.98      | Between groups     | 5.283         | 3  | 1.761        | 7.153 | .000 | 1-3             |
| learning            | 2     | 2.92      | Intra-groups       | 46.037        | 187| .246         |     |     |                 |
|                     | 3     | 2.58      |                    |               |    |              |     |     |                 |
|                     | 4     | 2.96      |                    |               |    |              |     |     |                 |
| Openness to learning| 1     | 2.52      | Between groups     | 7.441         | 3  | 2.480        | 11.909 | .000 | 1-3             |
|                     | 2     | 2.33      | Intra-groups       | 38.950        | 187| .208         |     |     | 3-4             |
|                     | 3     | 2.06      |                    |               |    |              |     |     |                 |
|                     | 4     | 2.56      |                    |               |    |              |     |     |                 |
| Concerns about      | 1     | 2.12      | Between groups     | 1.406         | 3  | .469         | 1.879 | .135 |                 |
| learning            | 2     | 2.15      | Intra-groups       | 46.643        | 187| .249         |     |     |                 |
|                     | 3     | 2.01      |                    |               |    |              |     |     |                 |
|                     | 4     | 2.28      |                    |               |    |              |     |     |                 |

In table 7, mean score of the prospective teachers for the first grade in the nature of learning sub-dimension of the scale of attitudes towards learning was found as $\bar{x}$: 2.14 while the mean score of the second grade as $\bar{x}$: 2.11, the mean score of the third grade was found as $\bar{x}$: 1.96 and the mean score of the fourth grade was found as $\bar{x}$: 2.39. In the sub-dimension of expectations about learning, the mean score of the first grade was determined as $\bar{x}$: 2.98, the mean score of the second grade as $\bar{x}$: 2.92, the mean score of the third grade as $\bar{x}$: 2.58 and the mean score of the fourth grade was found as $\bar{x}$: 2.96. In the sub-dimension of the openness to learning, the mean score of the first grade was determined as $\bar{x}$: 2.52, the mean score of the second grade as $\bar{x}$: 2.33, the mean score of the third grade as $\bar{x}$: 2.06 and the mean score of the fourth grade was found as $\bar{x}$: 2.56. In the sub-dimension of concerns about learning, the mean score of the first grade was determined as $\bar{x}$: 2.12, the mean score of the second grade as $\bar{x}$: 2.15, the mean score of the third grade as $\bar{x}$: 2.01 and the mean score of the fourth grade was found as $\bar{x}$: 2.28. When it was analyzed whether there was a difference between the grades of prospective teachers and their attitudes towards learning, it was established that the significant differences were observed between the third grade and the fourth grade in the sub-dimension of the nature of learning, between the first grade and the third grade in the sub-dimension of the expectations about learning and between the first grade and the third grade as well as between the third grade and the fourth grade in the sub-dimension of openness to learning.
Table 8. Correlation between the Thinking Styles of Prospective Teachers and Their Attitude towards Learning

| Thinking Styles | The Nature of Learning | Expectations about Learning | Openness to Learning | Concerns about Learning |
|----------------|------------------------|-----------------------------|----------------------|------------------------|
| Cognitive Requirement | r = -0.224 | -0.169 | -0.260 | -0.048 |
| p | 0.002 | 0.190 | 0.000 | 0.508 |
| n | 191 | 191 | 191 | 191 |
| Intuitive Belief | r = -0.022 | 0.102 | -0.042 | -0.129 |
| p | 0.759 | 0.159 | 0.561 | 0.076 |
| n | 191 | 191 | 191 | 191 |

In Table 8, a negatively significant relation was ascertained between the cognitive requirement sub-dimension of the thinking styles questionnaire and the sub-dimensions of the nature of learning (r = -0.224), expectations about learning (r = -0.169) and openness to learning (r = -0.260) belonging to the scale of attitudes towards learning. However, it was determined that no significant relation existed between the cognitive requirement and the concern about learning (r = -0.048). It was also established that there was no significant relation between the intuitive belief sub-dimension of the thinking styles questionnaire and the sub-dimensions of the nature of learning, expectations about learning, openness to learning and concern about learning belonging to the scale of attitudes towards learning.

DISCUSSION AND CONCLUSION

No significant difference was found when analyzing the effect of thinking styles questionnaire of prospective social studies and classroom teachers on gender. This result complies with (Çubukçu. 2004; Fırat Durdukoça 2011; Yaşar Erol. 2015) while conflicts with (Dinçer. Saracaoğlu. 2011). Investigating the effect of the scale of attitudes of prospective teachers towards learning on gender, no significant difference was found. According to these findings of the research, there isn’t any relationship between the attitudes and thinking styles directed to learning and gender of prospective teachers. No significant relation was found when it was analyzed whether there was a significant difference between the department of prospective teachers and their thinking styles. No significant difference was found when it was analyzed whether there was a significant difference between the intuitive belief sub-dimension of the thinking styles questionnaire and the department they studied. No significant difference was found in the relationship between the attitudes of prospective teachers towards learning the department they studied. No significant difference was found when it was analyzed whether there was a significant difference between thinking styles by the grade levels. When it was analyzed whether there was a difference between the grades of prospective teachers and their attitudes towards learning, it was established that the significant differences were observed between the third grade and the fourth grade in the sub-dimension of the nature of learning, between the first grade and the third grade in the sub-dimension of the expectations about learning and between the first grade and the third grade as well as between the third grade and the fourth grade in the sub-dimension of openness to learning. With reference to this finding, it is possible to state a relationship between the grades of prospective teachers and their attitudes towards learning. A negatively significant relation was ascertained between the cognitive requirement sub-dimension of the thinking styles questionnaire of prospective teachers and the sub-dimensions of the nature of learning, expectations about learning and openness to learning belonging to the scale of attitudes towards learning. This condition denotes that learning is based on thinking (Güven. Azkeskin. 2018). No significant relation was found between cognitive requirement and concerns about learning. There was no significant relation observed between the intuitive belief sub-dimension of the thinking styles questionnaire and the sub-dimensions of the nature of learning, expectations about learning, openness to learning and concern about learning belonging to the scale of attitudes towards learning.

Thinking styles play an important role in the realization of learning for individuals. The teachers having an effective role in learning process must create their own thinking styles and design
the education and training process, accordingly. Different teaching styles of teachers stem from the fact that they have different thinking styles (Kavgaoğlu, Altun, 2016). In this regard, teachers must design the teaching process by considering the fact that each individual has different thinking style. Not only thinking styles, but also the attitudes towards learning are special to individuals. In designing the education and training process, teachers must consider that every student has different thinking styles for some desired behaviors brought through cognitive, affective and psychomotor skills and this can affect their attitudes towards learning.

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