

# Role of Emotional Intelligence in Way of Thinking and Teaching Styles for Remodeling Teaching Behavior of Prospective Teachers: An Exploration

By

**Amarjoyti Bharali**

Assistant professor, Department of Education, Bahona College, Jorhat, Assam

Email: [amarjyotib20@gmail.com](mailto:amarjyotib20@gmail.com)

**Prof. Thensei Lhungdim,**

Department of Education, Rajiv Gandhi University, Rono Hills, Doimukg, Itanagat, Arunachal Pradesh

## Abstract

Rising education quality is dependent on changing ways of thought and teaching. It is really important to recognize thought patterns and the emotional intelligence play an important role for remodeling teaching behavior of the prospective teachers in light of variations in people's thinking and teaching styles. This is a study on future mathematics teachers. This research seeks to establish the correlation between teachers' thought and teaching styles and to study the way they learn and teach by taking those demographic characteristics into account. The article involved 80 prospective Mathematics teachers teaching at government higher secondary schools of Assam with special reference to Jorhat district. In the analyses of the results, a model of relative screening was used. In the course of the study the following methods were used. 'Thinking Styles Scale' developed by Sternberg & Wagner (1992) and adopted by Buluş in Turkish (2013) and 'Teaching Styles Inventory' invented by Grasha (1994) and adapted to the Turkish language by Uredi (2006). The thesis concluded that there was a strong link between way of thinking and teaching styles of potential mathematical teachers.

**Keywords:** Prospective Mathematics Teacher, Emotional Intelligence, way of Thinking Styles, Teaching Styles

## 1. Introduction

### *1.1 Introducing the Problem:*

Thought is the defining trait of people that distinguish them from others, and it is a mechanism that aims for the most specific outcome. Individuals need to think during feeding, reading, learning, dreaming or other activities. According to Ozden (2005), this means that the knowledge extracted from observations, practice and logic can be evaluated and measured in discipline. Thought is characterized as an aggressive, goal-oriented, and ordered way of mind (Canbolat, 2011). Nickerson (1988) indicates that thought is a problem solving, decision making, critical and logical thought mechanism. Established cultures are made up of people who are using these measures in every field of thought. This method varies between people. This demonstrates the development of the idea of thought types. Thought types are not skills, nor skill expectations. In addition to thought patterns, they deal with mechanisms of socialization that shift by mission, circumstance and most notably personal distinctions and vary over the lifespan. Sternberg ve Zhang (2005) described thinking styles as thoughts that are created when one uses talent or choice. People in their day-to-day routines use various styles. They determine the most appropriate for them when picking the designs. Types are not

good or poor to describe. The "Mental Self Government Theory" of Sternberg is the most detailed analysis on thought forms (1997). In his philosophy, Sternberg suggests that people ought to rule and coordinate their everyday lives. The theory suggests that thought patterns are not talents, but expectations for the application of skills. Synergy and skill develop out of the unity of style. There is no style, but there is a profile of style and these types are different in the case. Furthermore, it is stressed that types can be learned, measured, modified and are not good or bad in life (Dincer, 2009). The World Education Journal Vol. <http://wje.sciedupress.com>. Strandberg has published 13 thought types in philosophy, in five fundamental dimensions as functions (legislatory, ruling or judgmental), modes (hierarchical, monarchical, olive-like, anarchic), levels (global, local), realms (intrinsic, extrinsic), tendencies (hierarchical, monarchic, oligarchical), levels (global, local), fields (external, intrinsic) (liberal, conservative).

1. Functions: Persons who rely on imagination and preparation in a legislative context deserve to be free to communicate their thoughts. The person with the executive thought style is more interested in getting a regular collection of guiding principles and engaging in the work to be completed. You like to operate in a structured manner. Evaluation and contrast is the subject of people with judgmental thought.
2. Forms: The one who takes a perfectionist style of monarchical thought is delighted to take part in the entirely concentrated work. In a hierarchical way of thinking, one person deals with several things, but operates with goals. A person with an oligarchic way of thinking aims at the same time for multiple goals but does not want to identify the targets. Persons of the anarchic thought-style are based on works which are nothing reliant and which create no fear.
3. Levels: If one thinks globally, he loves dealing with works by paying attention to specifics and, opposite; he tries to pay attention to a concept in a global thought-style.
4. Fields: A person with an inherent way of thought likes working in work that can work freely without someone. The participant enjoys intra-group collaboration in the style of extrinsic thought.
5. Tendencies: A conservative individual desires to do the job by upholding the rules. A person with a liberal style of thought is open to creativity, does not resist ambiguity and unknown jobs.

Research shows that thought styles are properties which influence and change the person as he or she realizes things (Bulus, 2005). To establish an appropriate and strong understanding of the idea of the way of thought is also a need for education. That a teacher who cares about the teaching process can instruct pupils, who are innovative and troublesome and who can consider and comment critically. Zhang (2003) describes the way a person thinks as a way to learn knowledge and how to use it. Thus, it is important that both teachers and students know the kind of way of thinking they think. As a person uses these thought styles in all respects of life, the use of thinking style instruction by a teacher in the education system is often difficult to ignore.

Some teachers prefer a method of teaching that is appropriate for their personality, for teaching psychology and thought. But teachers can also use teaching styles that attract the diverse personalities, requirements and styles of education of students resulting from such variations. The teaching styles are the key influences that form the learning experience and play a major role in the progress of the students. Teachers must use diverse instructional methods in order to deliver high quality educational programmes taking note of the unique variations between pupils.

The way teachers learn, interact with students, and socialise is a result of the way students do their schooling. In the teaching learning method teachers are approached with a style of teaching. According to Dunn & Dunn (1979) the mindset and actions of teachers vary with respect to teaching services, procedures, teaching experiences and the materials they use. The teaching style, according to Cooper (1999), covers teachers' activities in the course administration. The style of teaching is described as the complementary action that the teacher uses to accomplish the target behaviour and success (Fischer & Fischer, 1979). Heimlich & Norland's (2002) teaching style is an established attempt to connect the principles and values of teachers with their actions in the learning process. Conti (1985) notes that a teacher's instructional style is the standard teaching. Maden (2012) says teaching methods apply to subjects such as knowledge exchange in a classroom and communicate with pupils. Grasha (2002) says that an instructor does or does not do the systemic sense of dress. Namely, we might assume that the instructor is compliant with the experiences in the teaching process. Teachers can use various teaching styles according to their circumstances. An instructor cannot however only have one type of teaching. According to Grasha teaching style trends are as follows:

- 1) Expert teaching style: Teachers who provide detailed information and knowledge and experience the needs of the students, develop and prepare their knowledge well. However, just the exchange of knowledge cannot be enough to achieve the student's desired target behavior.
- 2) Formal authority teaching style: Teacher's purpose is to provide guidance to pupils, to determine the way. It is about right, agreed and normal ways of doing things. The standards are apparent at the moment that tasks are done using appropriate approaches. Teachers do not alter this style and treat students in rigid, traditional ways, and their needs are neglected by this type.
- 3) Personal teaching style: This teaching is unique to the individual concerned with thought and behavior. Teachers of this type encourage pupils to learn and practice the teacher's method by explaining how tasks are done. The trainer watches and teaches them the way and advises them. It is necessary to keep track of and follow a model. Some teachers consider that their solution is best and only, or that if this approach is not used, they accept that students would be ineffective.
- 4) Facilitator teaching style: The key objective of teachers of this type is that they are able to handle and grow an understanding of their duty individually. The teacher leads you by inquiries and studies the ideas of the students. He or she's a student guide. This style is a time-consuming one, as teachers interpret and incorporate various teaching methods, and if it is not positively implemented, the outcomes sought will not be reached.
- 5) Delegator teaching style: The instructor, who addresses the question and manages the activities of the students on a daily basis, by granting students their own skills to handle their individual progress or by planning an acceptable atmosphere as a group for their individual work. However, if students are not trained to work individually, they might be worried. 10 teaching tasks have been defined by Grasha, taking into account the relationship between teachers and students. Those functions were also taken into account in teaching types. So Grasha's methods of teaching are favoured. Grasha further stresses that each of these types of learning is not equivalent to the other (Grasha, 1994; Grasha, 1996; Grasha, 2002).

Peter Salovey and John Mayer described emotional intelligence as "the capacity to track one's own and other people's emotions, to discriminate and properly mark various emotions,

and to use emotional data to direct one's thought and behavior." This description was subsequently broken down into four suggested abilities: perceive, use, grasp and manage emotions. There are separate but associated talents. Emotional intelligence further represents the ability to combine intelligence, empathy and feelings to improve the way people think and perceive each other. There is, however, some discrepancy with regard both to terms and operationalization's about the concept of EI. Three key EI versions currently exist:

1. Ability model
2. Mixed model (usually subsumed under trait EI)
3. Trait model

Various models of EI have driven the creation of different instruments for the evaluation of the building. Most scholars believe that although some of these measures will correlate, they are using separate structures.

Specific models of capability address how feelings make thinking and learning easier to comprehend. Emotions, for example, will interfere with thought and make it possible for people to make better decisions. The most critical part of his or her existence is addressed by an individual who is more emotionally aware of crucial problems. Aspects of the relational facilitator often mean how feelings should be used or excluded based on their contexts and circumstance. This usually has to do with emotional thinking and perception about people, the world and the situations in one's daily life.

### ***1.2 Literature Review:***

There was no study of both subjects together while the literature was studied. These two subjects were, however, tested separately according to the multiple variables. Studying Zhang and Sternberg (2002) of their teachers' traits and modes of thought determined that teachers' way of thinking varies according to their personalities and the philosophy of their schools. As a result of his work in deciding teacher applicants Cubuchcu's thought styles (2004), a large proportion of students favour laws and hierarchical styles of thinking while a low preference is given to conservative and local thought styles. No major variation was noticed even with respect to gender, thought types. Whether thought types are conditioned to assess research trends or not has been explored in another study from Cubukcu (2004a). Analysis found that the instructor applicants had a significant proportion of the laws and types of hierarchy. The branch and gender are defined to be successful according to those thought patterns. Thought modes were also determined to be successful in evaluating learning habits.

Thinking types have been studied in several experiments in multiple variables. For example, some variables, such as age, sex, history and a substantial relationship were explored in the study conducted on classroom teachers but no significant connection was identified (Tuzer, 2016). Celik (2016) contrasted thought patterns and learning methods of eleventh grade students in his work. As a part of the research, the association between thought styles and learning methods was negatively influenced by all kinds of schools and the positive relationship between judicial thinking, repeat thinking and organizational approach and a global way of thinking and comprehension was identified when the forms of schools were tested separately. Besides these, there are studies in the literature which look at variables such as self-sufficiency in literacy, reflective thoughts and thought needs. Among those, Cinar analyzed the association between thought styles and reflective thinking patterns. In the analysis conducted in 2016 it was concluded that the highest link was between legal thinking and investigative thinking, between hierarchical thinking and research-reflective thinking, and between hierarchical thinking and intrinsic thinking.

The link between thought styles and literacy in mathematics was explored in Yildirim (2016) study. The study findings show that the numbers of thought types of teachers of mathematics are "high," while the global thinking styles are "low," the oligarchical and the traditional thinking are usually "high." The Uyanik research (2017) analyzed the relationship between thought needs and thinking types and found that they vary significantly. In comparison, legislative, executive and conservative thought styles respectively were the most favorites thinking styles for mathematical instructor candidates. Ince, Cenberci & Yavuz (2018) wanted to decide the relationship between attitudes and style of thought among mathematics professors. And they observed no relevant connection between the teachers' thought styles and their approach to science study.

The findings in the fields of teaching are typically focused on the study of instructor types based on divisions. The teacher's styles of study were decided by artvinli (2010), who determined that teachers used passive styles of teaching focused on memorization and concentrated on teachers. Maden (2012) revealed in his research on the teaching styles of Turkish teachers that Turkish teachers are highly personally trained, facilitated and inadequately skilled. Ahmethan found an important correlation between the teaching styles of potential teachers and the teaching styles of school counsellors in his review of prospective Music Teachers 2016. Along with the work in 2017, it was found that teachers have specialist, structured authoric types of teaching while prospective teachers do have a model of teaching that encourages their teaching. In the Beyhan study (2018), the impression of potential music teacher teachers' teaching styles was examined, and the most common styles were found to be specialists, demonstrators, and the students only modified the expectations of teachers in the delegated teaching style. He addressed teacher teaching styles in regard to methods by US and Hong Kong students and examined the teaching styles were favoured by students and noticed that the students favoured more such teaching styles rather than conventional thought styles.

### ***1.3 Explore Importance of the Problem:***

The efficient development of mathematics relies on a variety of factors, including the teacher's instruction and class behaviour. Because the first approach to improve learning relies on the actions of the teacher in the classroom, analysing the way teachers are taught is an exceedingly significant matter. Given that many factors affect teaching styles, it is also intended to explore whether thought styles are successful when deciding the teaching styles for future teachers of mathematics. The findings of this research are important to improve the validity and reliability of the literature available studies and to fill the gap in this area. Such a review in the literature has not been identified. This thesis is also considered to be a guide to future research.

### ***1.4 Research Questions:***

The purpose of this research is to investigate whether way of thinking and teaching styles are related by determining thought styles and emotional intelligence for prospective teachers and to investigate the influence of population characteristics including gender and high school graduates. The problem in this context: "Do the modes of thought and the styles of teaching of potential mathematics teaching practitioners correlate? The problem sentence was determined and the following sub-problems were explored for this reason.

1. What are the ways of thinking of prospective mathematics teachers?
2. Do the demographic characteristics of prospective mathematics teachers have effect on thinking styles?
3. What are the teaching styles of prospective mathematics teachers?

4. Is there any effect on the way of teaching and emotional intelligence of the demographic characteristics of the prospective mathematics teachers?
5. Is there a significant relationship between the teaching styles and way of thinking of prospective mathematics teachers?

## 2. Method

In this analysis the teaching methods and way of thinking of the potential mathematics teachers are sought. In the study, since the condition is pursued to be as it was, the general screening model was used as a descriptive research. An analysis of the research practices, in which the skills or views of the participants about a situation are decided, is described (Buyukozturk et al., 2017). It should also be remembered that the teaching methods and thought styles of prospective mathematics teachers are tested for demographic attributes. This thesis is therefore a model of connection analysis.

### 2.1 Sample of study:

The research involves 80 prospective Mathematics teachers teaching at government higher secondary schools of Assam with special reference to Jorhat district.

### 2.2 Data Collection Tool:

Grasha (1994) and Uredi (2006) and Sternberg & Wagner (1992) created the "Thinking Styles Scale" adapted to the Turkish language, as a knowledge gathering technique, using a tool. Teachers Teaching Styles Scale is a likert-type metric composed of five measures that include 40 questions: "Styles of teachings expert," the "Styles of teaching authority formal," personal styles of teaching, the "Learning style facilitator" and the "Style of teaching delegator." In order to decide the teaching style, each style is determined using 8 inventory posts. The data were evaluated using the ranking scales and five choices on the scale match the applied scale. Interval coefficient (4/5) is 0, 80 at four intervals in the quinary scale (5-1 = 4). I agree with 3.40-4.19, I agree with 4.20-5 absolutely (Definitely do not agree with 1-1.79, do not support 1.80-2.59, neutral 2.60-3.39). The size of the thought style is a likert type of 65 questions, 13 variables. There are five questions to assess the thought style of each style. There are 7 alternatives on the scale matching the scale applied. Coefficients are (6/7) 0.85 for 6 intervals in the interval range (7-1=6). (ÇUD: Not quite applicable, BU: Fairly fine, CU: Quite valid, TU: absolutely applicable). (HUD: Non applicable).

### 2.3 Analysis of Data:

The computer and the SPSS 22 computer paquet software were used for data analyses. For future Mathematics teachers teaching at government higher secondary schools of Assam the average and standard deviation values of way of thinking, teaching styles and EQ scores were calculated. Furthermore, a coefficient of correlation was determined to demonstrate that there is an essential connection between way of thinking and the teaching styles of prospective mathematics teachers.

## 3. Findings

### 3.1 First Sub-Problem:

In order to respond to this sub-problem, the descriptive statistical details and the arithmetic mean and standard deviation values of the way of thinking of prospective teachers from the table 1 were analyzed. The first sub-problem of the analysis is: "What is the way of thinking of prospective mathematics teachers?"

**Table 1.** *Descriptive Statistical Data of Prospective Mathematics Teachers Own ways thinking. Ways of Thinking N □ LSS*

|                       |    |        |         |
|-----------------------|----|--------|---------|
| Legislative           | 80 | 5,6775 | 91375   |
| Executive             | 80 | 5,3425 | 1,11931 |
| Judgmental            | 80 | 5,1950 | 1,13894 |
| Monarchic             | 80 | 4,7325 | 1,17093 |
| Hierarchical          | 80 | 5,2475 | 1,06604 |
| Oligarchic            | 80 | 4,3675 | 1,22276 |
| Anarchic              | 80 | 4,7375 | 1,17467 |
| Global                | 80 | 4,3750 | 1,36331 |
| Local                 | 80 | 4,5275 | 1,27815 |
| Intrinsic             | 80 | 4,8475 | 1,26980 |
| Extrinsic             | 80 | 4,7200 | 1,14896 |
| Open minded (Liberal) | 80 | 5,3000 | 1,18086 |
| Conservative          | 80 | 3,6600 | 1,52495 |

Table 1, when tested, shows that imagination and strategy centered "legislative," "Executive" thinking, "open minded" thinking, and a preceding research oriented "hierarchical" thinking are the most favoured form of thought for prospective mathematics teachers. The "conservative" way of thought is the least favoured. According to Table 1, the prospective math teachers are open to creativity and growth, and are inclined to pursue them, besides having to move beyond the conventional definition of education.

In order to answer this issue, descriptive statistics were examined, and since, according to Kolmogorov-Smirnov, normality test outcomes points are of regular distribution, independent groups test were used to assess if there was a normal distribution. The second sub-problem sentence of the research is 'do the demographic characteristics of prospective mathematics teacher's influence thinking styles?' Tables 2 and 3, respectively, provide the details.

**Table 2.** *Statistical Data on Gender and ways of Thinking Prospective Mathematics Teachers Ways of Thinking by Gender N □ LSS p Legislative Female 55 5,6109 ,91280 ,337*

|              |        |    |
|--------------|--------|----|
| Male         | 25     |    |
| Executive    | Female | 55 |
| Male         | 25     |    |
| Judgmental   | Female | 55 |
| Male         | 25     |    |
| Monarchic    | Female | 55 |
| Male         | 25     |    |
| Hierarchical | Female | 55 |
| Male         | 25     |    |
| Oligarchic   | Female | 55 |
| Male         | 25     |    |
| Anarchic     | Female | 55 |
| Male         | 25     |    |
| Global       | Female | 55 |
| Male         | 25     |    |
| Local        | Female | 55 |
| Male         | 25     |    |
| Intrinsic    | Female | 55 |
| Male         | 25     |    |
| Extrinsic    | Female | 55 |
| Male         | 25     |    |

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|         |      |
|---------|------|
| ,91710  | ,340 |
| 1,14496 | ,342 |
| 1,06145 | ,330 |
| 1,16484 | ,281 |
| 1,07393 | ,268 |
| 1,18750 | ,761 |
| 1,15539 | ,760 |
| 1,07129 | ,392 |
| 1,05987 | ,392 |
| 1,23181 | ,208 |
| 1,18648 | ,204 |
| 1,16569 | ,019 |
| 1,08240 | ,017 |
| 1,36673 | ,480 |
| 1,36957 | ,482 |
| 1,25048 | ,175 |
| 1,31646 | ,186 |
| 1,31751 | ,344 |
| 1,15799 | ,322 |
| 1,07248 | ,001 |
| 1,08738 | ,001 |
| 1,21707 | ,028 |
| ,98975  | ,019 |
| 1,53753 | ,371 |
| 1,50231 | ,368 |
| ,64813  | ,027 |
| ,78958  | ,043 |

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Open Minded (Liberal) Female

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|                 |        |    |
|-----------------|--------|----|
| Conservative    | Female | 55 |
| Male            | 25     |    |
| Thinking Styles | Female | 55 |
| Male            | 25     |    |

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According to the results of the independent party evaluation in the ratings of the potential teachers of mathematics, the "anarchy," "extrinsic" thinking styles and "open minded" thought styles as well as the "think styles of prospective mathematical teachers generally" are substantially different

Table 2 concluded, that male mathematical prospects instructor in "open minded," "anarchic," "extrinct" and "thinking styles of prospective mathematics teachers in general" have a higher average score than female prospectively mathematics professors.

**Table 3.** *Statistical Data on higher secondary Schools and ways of Thinking of Prospective Mathematics Teachers Thinking Styles Graduated High Schools N □ LDS.S p. Legislative Other 38 5,6842 ,99472 ,951*

|                       |         |      |
|-----------------------|---------|------|
| Anatolian High School | 42      |      |
| Executive             | Other   | 38   |
| Anatolian High School | 42      |      |
| Judgmental            | Other   | 38   |
| Anatolian High School | 42      |      |
| Monarchic             | Other   | 38   |
| Anatolian High School | 42      |      |
| Hierarchical          | Other   | 38   |
| Anatolian High School | 42      |      |
| Oligarchic            | Other   | 38   |
| Anatolian High School | 42      |      |
| Anarchic              | Other   | 38   |
| Anatolian High School | 42      |      |
| Global                | Other   | 38   |
| Anatolian High School | 42      |      |
| Local                 | Other   | 38   |
| Anatolian High School | 42      |      |
| Intrinsic             | Other   | 38   |
| Anatolian High School | 42      |      |
| Extrinsic             | Other   | 38   |
| Anatolian High School | 42      |      |
| Open Minded           | Other   | 38   |
| Anatolian High School | 42      |      |
| Conservative          | Other   | 38   |
| Anatolian High School | 42      |      |
| Thinking Styles       | Other   | 38   |
| Anatolian High School | 42      |      |
|                       |         |      |
|                       | ,84602  | ,951 |
|                       | 1,24382 | ,403 |
|                       | ,99808  | ,408 |
|                       | ,99497  | ,211 |
|                       | 1,24746 | ,206 |
|                       | 1,27826 | ,757 |
|                       | 1,07891 | ,759 |
|                       | 1,22031 | ,709 |
|                       | ,91757  | ,713 |
|                       | 1,25413 | ,918 |
|                       | 1,20876 | ,919 |
|                       | 1,23276 | ,854 |
|                       | 1,13408 | ,855 |
|                       | 1,44053 | ,086 |
|                       | 1,25500 | ,089 |
|                       | 1,26895 | ,239 |
|                       | 1,28018 | ,239 |
|                       | 1,29971 | ,233 |
|                       | 1,23522 | ,234 |

|         |      |
|---------|------|
| 1,11681 | ,390 |
| 1,18065 | ,389 |
| 1,16414 | ,573 |
| 1,20533 | ,572 |
| 1,57801 | ,968 |
| 1,49449 | ,968 |
| ,75894  | ,994 |
| ,67688  | ,994 |

When Table 3 was examined, it was seen that there was no significant difference when examining prospective mathematics teachers' thinking style scores according to graduated high school ( $p > 0.05$ ).

### 3.3 Third Sub-Problem:

In order to address this following problem, descriptive statistical statistics is analyzed and the arithmetic mean and standard deviation of the pupils' teaching styles are seen in Table 4. The third phrasing of this sub-problem is the following: "What are the teaching styles of prospective mathematics teachers?"

**Table 4.** *Descriptive Statistical Data of Prospective Mathematics Teachers' Own Teaching Styles*

| Teaching         | Styles | N      | LDSS   |
|------------------|--------|--------|--------|
| Expert           | 80     | 40422  | 56568  |
| Formal Authority | 80     | 3,8188 | ,58728 |
| Personal         | 80     | 4,0500 | ,59984 |
| Delegator        | 80     | 4,0500 | 59984  |
| Facilitator      | 80     | 4,2172 | 63668  |

Table 4 revealed that "facilitator" styles, "expert," "personal" and "delegator" are the most common styles of training, while "formal authorities" are the less popular styles of teaching.

### 3.4 Fourth Sub-Problem:P

The fourth sub-problem sentence of the studies is "Do the demographic characteristics of the prospective mathematics teachers have an effect on teaching styles?" In order to answer this sub-problem, descriptive statistical data were examined. In order to decide whether there was a substantial gap between gender and graduate school of prospective mathematics instructors, Kolmogorov-Smirnov test results were used, in separate group's t-test. The details are displayed respectively in Table 5 and Table 6.

**Table 5.** *Statistical Data on Gender and Teaching Styles of Prospective Mathematics Teachers Teaching Styles Gender N □ LDSS p*

|                 |           |        |        |        |       |     |
|-----------------|-----------|--------|--------|--------|-------|-----|
| Expert          | Female    | 55     | 40386  | 51923  | 934   |     |
| Male            | 25        | 40500  | 66829  |        | 940   |     |
| Formal          | Authority | Female | 55     | 55593  | 731   |     |
| Male            | 25        | 3,7850 | ,66195 |        | 749   |     |
| Personal        | Female    | 55     | 40659  | 57022  | 727   |     |
| Male            | 25        | 40150  | 67152  |        | 744   |     |
| Facilitator     | Female    | 55     | 4,2477 | ,49622 | 528   |     |
| Male            | 25        | 41500  | 87945  |        | 607   |     |
| Delegator       | Female    | 55     | 3,9591 | ,51598 | ,211  |     |
| Male            | 25        | 37750  | 77055  |        | 284   |     |
| Teaching Styles | Female    | Female | 55     | 4,0291 | 44051 | 552 |
| Male            | 25        | 39550  | 65128  | 608    |       |     |

When Table 5 was examined, no significant difference was found between gender and teaching styles of prospective mathematics teachers ( $p > 0.05$ ).

**Table 6.** *Statistical Data on Teaching Styles and the Prospective Mathematics Teachers Graduated School: Teaching Styles Graduated High School N □ LQSS p*

|                       |       |        |          |        |      |
|-----------------------|-------|--------|----------|--------|------|
| Expert Other          | 38    | 4,0033 | 38,54640 | 562    |      |
| Anatolian High School | 42    | 4,0774 | ,58692   | ,560   |      |
| Formal Authority      | Other | 38     | 3,7763   | ,63416 | ,542 |
| Anatolian High School | 42    | 3,8571 | ,54631   | ,545   |      |
| Personal              | Other | 38     | 3,9737   | ,62477 | ,282 |
| Anatolian High School | 42    | 4,1190 | ,57511   | ,284   |      |
| Facilitator           | Other | 38     | 4,2566   | ,58842 | ,602 |
| Anatolian High School | 42    | 4,1815 | ,68254   | ,599   |      |
| Delegator             | Other | 38     | 3,8750   | ,57319 | ,713 |
| Anatolian High School | 42    | 3,9256 | ,64396   | ,711   |      |
| Teaching Styles       | Other | 38     | 3,9770   | ,50321 | ,634 |
| Anatolian High School | 42    | 4,0321 | ,52552   | ,633   |      |

When Table 6 was examined, no significant difference was found between graduated high school and teaching styles of prospective mathematics teachers ( $p > 0.05$ ).

### 3.5 Fifth Sub-Problem:

In order to answer this under problem descriptive statistics were examined, and a correlation measurement was done in Table 7 to decide whether prospective mathematical teachers had any meaningful connection between them. The fifth sub problem sentences of the analysis were "Is there a significant relationship between the prospective mathematics teachers' teaching styles and thinking styles?"

**Table 7.** *The Correlation Matrix Belonging to the Prospective Mathematics Teachers' ways of Thinking and Teaching Styles:*

| Thinking Styles | Teaching Styles |
|-----------------|-----------------|
| Thinking Styles | 1               |
| 80              |                 |
| ,374**          | Teaching Styles |
| ,001            | 1               |
| 80              | 80              |

As shown in Table 7, a positive moderate relationship was found between thinking styles and Teaching styles ( $p < 0.05$ ).

**Table 8.** *The Correlation Matrix Belonging to the Prospective Mathematics Teachers' scores of emotional quotients:*

| Variables           | N  | min  | max  | Mean | SD    | Range |
|---------------------|----|------|------|------|-------|-------|
| Self-awareness      | 80 | 1.50 | 5.00 | 3.58 | 0.681 | 3.60  |
| Empathy             | 80 | 1.40 | 5.00 | 3.06 | 0.682 | 3.50  |
| Self-motivation     | 80 | 1.67 | 5.00 | 3.57 | 0.619 | 4.00  |
| Managing relations  | 80 | 1.00 | 5.00 | 2.46 | 0.625 | 3.33  |
| Integrity           | 80 | 1.67 | 5.00 | 3.47 | 0.687 | 3.50  |
| Self-development    | 80 | 1.33 | 5.00 | 3.54 | 0.771 | 3.67  |
| Value orientation   | 80 | 1.50 | 5.00 | 3.53 | 0.819 | 4.00  |
| Commitment          | 80 | 1.00 | 5.00 | 3.48 | 0.944 | 4.00  |
| Altruistic behavior | 80 | 1.00 | 4.58 | 3.40 | 0.464 | 2.47  |
| Emotional stability | 80 | 2.31 | 5.00 | 3.67 | 0.796 | 3.50  |

## 4. Conclusion and Discussion

The study has seen how students think in styles under 13 classes: 'legislative,' 'executive,' 'judgmental,' 'monarchical,' 'hierarchical,' 'oligarchical,' 'global,' 'local,' 'intrinsic,' 'free spirit' and 'conservative.' However, as a "expert," "formal authority" and "personal," "facilitator" and "delegator. There are five more teaching styles. Based on the findings obtained from the future instructor mathematics, favored modes of thought are "legislative," "executive," "open minded", "hierarchical," "judgmental," "intrinsically," "anarchical," "monarchical," "extrinsic," "local." The most commonly adopted styles are "legislative," "leading-edue" and "open-minded" thinking styles, which indicate that potential mathematics instructors are open to creativity and growth, are likely to study, whereas the "conservative" thought style used in at least prospective mathematics teachers does not adopt a conventional approach to e-making. The findings of our research on the at least chosen way of thought are comparable for Cubukcu (2004) and Yildirim (2016). When considering the impact of thinking types separately, the influences of gender on the sub dimensions of "anarchic," "extrinsic," "open-minded" and "thought-out" modes of prospective math teachers were noticed. This research matches Uyanik (2017) and Cubukcu's (2004a) findings. The study explores learning styles in terms of their effect on thought styles in general, not solely for thinking styles. Then it can be said that gender-based thought styles can differ. But no influence on thought patterns was discovered by graduate high school. When analyzing teaching styles for future mathematical educators, it was found that the most favored teachers were "facilitating," "expert," "personal," "delegator," and "formal authority". It is crucial that future teachers in mathematics choose the teaching style, at least "formally authorized," which might indicate prospective teachers in mathematics do not abide by the rules and standards and teachers who care about students' interests. This is close to the outcome of Maden's 2012 report on teaching strategies. The style "facilitator" and "personal" was widely common in teaching styles as a result of two studies. The fourth underproblem of the report "The demographics of future mathematics teachers was shown.

The topic was investigated and it was determined at the conclusion that Gender and graduate school had little effect on the form of types of instruction. Lastly, we find that the relationship between the thought and teaching styles of prospective mathematics teachers has been favorable and mild because human behaviors in both cases will be influenced by individual modes of thought and contact with or toward people, and this will affect the teaching style as well. Environments can be developed where potential mathematics teachers ways of thinking and teaching styles.

## 5. Recommendations

The potential models and instructional styles of the instructor must be elevated. Knowledge of this topic should be improved by giving similar courses if appropriate. On separate samples, related analysis can be performed. The influence on the progress of students in mathematics can be studied by the types of mathematics teachers.

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