**Personality Traits and Thinking Styles: A Case Study of Arab Teachers as Members of a Minority in Israel**

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**Abstract**

This exploratory study examines the connection between personality traits and thinking styles among Arab teachers, as members of a minority, in the Arab education system in Israel.

Teachers play a critical role in developing their students’ skills, as well as their perspectives, conceptions, and personality traits. Teachers’ own personality traits and thinking styles play an important role and are reflected in their professional performance as educators.

The Arab minority in Israel is undergoing rapid processes of change on the social, economic, political, and cultural levels, and its members live in a society considered a modern one (with clear traditional characteristics). Nevertheless, to the best of my knowledge, no studies have been carried out which examine the relationship between personality traits and thinking styles among minority teachers in the Arab school system in Israel. In light of this, there is great importance in examining this subject and investigating the connections between personality traits and thinking styles among Arab teachers in the Arab education system in Israel.

A total of 205 Arab teachers participated in this study. Descriptive statistics and calculation of the Pearson correlation coefficient were used through the statistical analysis program SPSS.

The research findings show a positive relationship between personality traits and thinking styles among teachers.

**Keywords:** teachers, minority, personality traits, thinking styles.

**Preface**

One of the central purposes of a school in the 21st century is the formation of an educational and learning environment that enables students to learn and to develop cognitively, socially, and emotionally. The teacher plays an important role in developing students’ capabilities and inclinations, as well as in shaping their character. Teachers’ personality traits and thinking styles influence their professional conduct in the school (Diener and Lucas, 1999; Ozer and Benet-Martinez, 2006;Kotov, Gamez, Schmidt and Watson, 2010).

The profession of teaching demands specific personal attributes, skills, and capabilities, as well as appropriate thinking and perspective and a professional knowledge base. The teacher plays an important role in developing the capabilities and inclinations of students, as well as forming their worldviews and personal characteristics. The personality traits and thinking styles pf teachers play an important role and are reflected in their professional conduct throughout their work in the school.

Studies that examine the relationship between personality traits and thinking styles have found that the former explain a high proportion of variation in the latter.

The Arab minority in Israel is undergoing rapid processes of change on the social, economic, political, and cultural levels, and its members live in a society considered a modern one (with clear traditional characteristics). Nevertheless, to the best of my knowledge, no studies have been carried out which examine the relationship between personality traits and thinking styles among minority teachers in the Arab school system in Israel.

**1. Theoretical Background**

**1.1 Personality Traits**

Every individual possesses invariable personality traits that influence his or her behavior. Personality traits play an important role in various realms, including behavior at work, satisfaction with work, and others (Diener and Lucas, 1999; Ozer and Benet-Martinez, 2006; Kotov, Gamez, Schmidt and Watson, 2010).

Several different definitions of personality traits can be found in the professional literature. According to Eysenck (1967), personality traits are a group of behaviors and the differences between people are found at the level of each trait and not the types of traits.

The five-factor model, sometimes known as the ‘Big Five’ model (Costa and McCrae, 1992) defined five super-traits which serve to describe each personality. According to this model, one can ascribe a variety of behaviors and emotions to these five broad traits. The five traits are: neuroticism, extroversion, openness, conscientiousness, and agreeableness. Each trait can be described in terms of two poles: for example, extroversion vs. introversion (Gosling, et al., 2003; Zhang, 2002). Various studies have found this model to be robust and consistent across different cultures, examining it in a wide range of fields, including personality assessment, behavior at work, work satisfaction, and others (Kotov, Gamez, Schmidt and Watson, 2010).

**A neurotic person** is inclined toward feelings of inferiority, tension, anxiety, anger, sentimentality, and insecurity. Individuals who rate low on this scale are characterized by emotional stability, the opposite of neurotic individuals, who are characterized by dissatisfaction with themselves and struggle to adapt to life’s requirements (Zhang, 2006; Judge & Ilies, 2002).

**An extroverted person** is involved socially, respectful of tradition and authority. At the level of thought, such a person tends to interpret the external world by means of logic and to live according to rules. In contrast, an introverted individual directs his thoughts and emotions inward and does not display them to others. He or she is contemplative, cautious, and quiet (De-Raad, 2000, Zhang, 2006).

**An open person** is interested in new ideas and open to new experiences. Individuals with a high level of openness are characterized by imagination, intellectual openness, and the ability to adopt a future-oriented perspective. Such people are curious about the external and internal worlds (Zhang, 2006). On the opposite pole, one finds the conservative individual who holds fast to tradition and feels comfortable with the familiar (Alsalem, 2006).

**An agreeable person** is characterized by courteousness, flexibility, trust, collaborativeness, and patience. The contrasting pole on this scale is the individual characterized by hostility, indifference, and lack of care for others. Such a person cares for his own needs and norms, at the expense of group norms, and in social situations is liable to behave in a manner informed by selfishness and suspicion (Alsalem, 2006; De-Raad, 2000; Zhang, 2006).

**A conscientious person** is characterized by responsibility, ambition, organization and planning, hard work, persistence, and self-discipline. A conscientious individual controls his emotions, possessing will-power, self-control and responsibility, along with a high level of organization and a focus on achieving goals (Zhang, 2006). On the opposing side of the scale one finds the unconscientious individual, characterized by lack of focus and spontaneity (Alsalem, 2006; Kotov, Gamez, Schmidt and Watson, 2010).

The professional literature points to a relationship between personality traits, on one hand, and physical and mental health, on the other (Diener and Lucas, 1999; Hampson and Friedman, 2008). It further shows that personality traits play an important role in emotional regulation, as the trait of emotional stability is largely predictive of positive emotions and successful emotional regulation (Hassani, Azadfallah, Tabatabaie and Ashayeri, 2008; Kokkonen and Pulkkinen, 2001).

Personality traits are predictive of educational achievement and functionality at work, with the trait of conscientiousness being found consistently to correlate positively with these variables (Fallan, Kudisch and Fortunato, 2000; Noftle and Robins, 2007; Paunonen, 2003). Moreover, a positive correlation has been observed between conscientiousness and integrity at work (Kotov, Gamez, Schmidt and Watson, 2010).

Personality traits have a significant impact on individuals’ behavior – Mehl, Gosling, and Pennebaker (2006) found that personality traits are predictive of the manner in which subjects spend their time. It has also been found that highly agreeable and conscientious people tend to volunteer more (Carlo, Okun, Knight and DeGuzman, 2005), as opposed to people with low levels of agreeableness and conscientiousness, who tended more toward criminal behavior (Wiebe, 2004).

**1.2 Thinking Styles**

A thinking style is an individual’s preference for employing his or her cognitive abilities in a particular fashion in order to solve problems and carry out tasks (Sternberg, 2002; Sternber and Zhang, 2006). This includes the manner in which a person perceives, absorbs, processes, and conceptualizes information. Sternberg (2002) notes that individuals act in accordance with a particular thinking style in specific contexts – an individual possesses a dominant thinking style and also has the ability to switch between thinking styles depending upon the situation. Students’ thinking styles are affected by the thinking styles of their teachers.

Zhang and Sternberg (2005) note that the culture in which a person lives influences his or her capabilities, inclinations, and preferences: a culture that encourages creative thinking thus strengthens such thinking styles as the legislative and the liberal. Smith (2002) adds that different cultures give preference to different thinking styles: for example, American culture prefers innovativeness and a liberal thinking style, while Japanese culture gives preference to a conservative thinking style. Arab culture gives preference to the executive, local, hierarchical, and conservative thinking styles (Alkudat and El-Mekdadi, 2008; Abu-Hashem, 2015; Abu-Hussain & Abu-Hussain, 2018).

According to the theory of “self-government” proposed by Sternberg (1997), there are five categories that reflect the inner world of an individual, and each category includes a number of thinking styles. This theory attempts to explain how we carry out our daily cognitive activities.

Sternberg’s theory incorporates five main categories, which in turn include a total of 13 thinking styles: **Functions** – legislative, judicial, executive; **forms** –monarchic, hierarchic, oligarchic, anarchic; **levels** – global, local; **scope** – internal, external; **leanings** – liberal, conservative. On the basis of this division, it is possible to characterize and assess individuals in relation to each of these styles. People’s thinking styles can change, in terms of both their extremity and their flexibility. For example, people might be liberal in certain situations and conservative in others.

Zhang (2000; 2004) proposed classifying Sternberg’s thinking styles into three groups: (1) Type 1 thinking styles, which include those styles directed toward creative and complex cognitive activities. This group includes the legislative, judicial, global, liberal, and hierarchic thinking styles. (2) Type 2 thinking styles, which include activities carried out according to clear standards, entailing a lower level of cognitive complexity. This group includes the executive, local, conservative, and oligarchic thinking styles. (3) Type 3 thinking styles, which include the monarchic, anarchic, internal and external. Individuals with Type 3 thinking styles possess traits from Type 1 and Type 2 and employ them according to the demands of their work and the situations in which they find themselves. For the present study, we have adopted the classification proposed by Zhang (2000; 2004).

**1.3 The Relationship between Personality Traits and Thinking Styles**

Personality traits and thinking styles are both important in the prediction of an individual’s behavior in various situations, including professional situations. Researchers are of the view that personality traits and thinking styles overlap to a certain extent, though each has its own unique contribution and clear structures (Roodenburg, Roodenburg and Rayner, 2012). With respect to the possibility of changing one’s personality traits and thinking styles, researchers have noted that the latter are more changeable than the former (Chamorro-Premuzic and Furnham, 2009).

Several studies by Zhang (2002; 2006; 2008) examined the relationship between the ‘Big Five’ personality traits and the various thinking styles, showing that personality traits explain up to 35 percent of variation in thinking styles. Other studies have shown that personality traits explain even higher percentages of variation in thinking styles (Chamorro-Premuzic, Furnham and Lewis, 2007; Rosander and Backstrom, 2012). A positive correlation was found between openness and extroversion, on one hand, and creative thinking styles, on the other (Kwang and Rodrigues, 2002).

Fjell and Walhovd (2004) carried out a study among students at the University of Texas, in the USA, and volunteers working at hospitals and football players, in Norway. Among the American participants, they found a positive correlation between the personality trait of agreeableness and liberal, external, and hierarchic thinking styles; and between the personality trait of openness and legislative, external, and hierarchic thinking styles. They also found a positive correlation between the personality trait of conscientiousness and hierarchic, executive, local, conservative, and judicial thinking styles; a negative correlation between the personality trait of neuroticism and external and liberal thinking styles; and a negative correlation between the personality trait of openness and executive, oligarchic, and local thinking styles. Among the Norwegian participants, they found a positive correlation between the personality trait of neuroticism and a conservative thinking style; between the personality trait of agreeableness and liberal, monarchic, external, and hierarchic thinking styles; and between the personality trait of openness and monarchic and liberal thinking styles; and between the personality trait of conscientiousness and hierarchic and liberal thinking styles. Moreover, they found a negative correlation among the Norwegian participants between the personality trait of neuroticism and a judicial thinking style; between the personality trait of openness and local and internal thinking styles; and between the personality trait of openness and executive, local, and conservative thinking styles (Fjell and Walhovd, 2004).

A study by Zhang (2006), which examined the relationship between personality traits and thinking styles among parents of high school students in Hong Kong, found that the personality trait of openness predicts legislative, judicial, and liberal thinking styles; neurotic and conscientious personality traits predict local thinking styles; the personality trait of neuroticism predicts a conservative thinking style; and the personality trait of extroversion predicts an external thinking style. The findings do not show any connection between the personality trait of agreeableness and an external thinking style; nor between extroversion and either a global or local thinking style.

Zhang (2002) examined the relationship between thinking styles as defined by Sternberg (1997) and the five personality traits among students at the University of Hong Kong, finding a positive correlation between the personality trait of neuroticism and executive and local thinking styles; a positive correlation between the personality trait of extroversion and judicial, liberal, external, and hierarchic thinking styles; a positive correlation between the personality trait of openness and legislative, judicial, and liberal thinking styles, and a negative correlation with a conservative thinking style; a positive correlation between the personality trait of agreeableness and an external thinking style, and a negative correlation with an internal thinking style; and a positive correlation between the personality trait of conscientiousness and legislative, executive, judicial, global, local, external, hierarchic, and monarchic thinking styles.

Alsukari (2009) examined the relationship between personality traits and thinking styles among teachers-in-training in Egypt, finding a positive correlation between the personality trait of extroversion and judicial, hierarchic, liberal, and external thinking styles, and a negative correlation with local and internal thinking styles; a positive correlation between the personality trait of agreeableness and legislative, liberal, and external thinking styles, and a negative correlation with an internal thinking style; a positive correlation between the personality trait of conscientiousness and executive, judicial, hierarchic, and local thinking styles, and a negative correlation with a monarchic thinking style; a positive correlation between the personality trait of neuroticism and executive and local thinking styles, and a negative correlation with external, conservative, and liberal thinking styles; and finally, a positive correlation between the personality trait of openness and legislative, liberal, and external thinking styles, and a negative correlation with local and conservative thinking styles.

A more recent study by Albaqii (2012) examined the relationship between the five personality traits and thinking styles among teachers-in-training in Jordan, finding a positive correlation between the personality trait of neuroticism and legislative, hierarchic, and external thinking styles; a positive correlation between the personality trait of extroversion and legislative and liberal thinking styles; a positive correlation between the personality trait of conscientiousness and legislative, judicial, liberal, hierarchic, and internal thinking styles; a positive correlation between the personality trait of openness and legislative, global, and monarchic thinking styles; and finally, a positive correlation between the personality trait of openness and a legislative thinking style.

**1.4 The Context: The Arab Education System in Israel**

The Arab population in Israel is an ethno-national minority group which constitutes approximately 20 percent of the population (Israel Central Bureau of Statistics, 2018). This minority is undergoing societal, educational, and cultural shifts, as well as transformation in the status of women, as a result of exposure to other cultures. Arab society in Israel has characteristics of a developing society undergoing a process of modernization while still showing clear signs of conservatism. This conservatism entails a number of basic features: a high value ascribed to customs and traditions; belief in the irrational nature of humanity; faith in a supernatural force guiding human affairs; acceptance of human inequality and social hierarchy; and recognition of the need for a sense of community among individuals (Abu Hussain, 2015).

At the same time, many members of this minority wish to undergo a process of modernization. This creates a conflict for the individual between the values of the conservative society of the past, on one hand, and those of contemporary society, on the other. Teachers in this society, despite the desire of many to change and evolve, are themselves the product of traditional Arab education, and thus often retain many of the traditional teaching methods and find it difficult to adopt educational perspectives that are different from those of the teachers who taught them. Indeed, most Arab teachers continue to employ traditional pedagogical approaches (Abu-Hussain & Essawi, 2014).

The Arab minority in Israel emphasizes the collective and individual identities shaped by familial, ethnic, and national identities, and places less emphasis on personal identity per se. Social values are expressed in the form of commitment to family and the fulfillment of others’ needs through sacrifice of one’s personal needs (Jaraisy, 2013). This society promotes values associated with social interdependence, encouraging the individual to serve the needs of society, consider the other, and respect authority. Qualities such as shyness and introversion are highly valued.

Most teachers in the schools of the Arab minority in Israel do not promote creative thinking among their students (Abu Hussain, 2015), do not enable them to realize themselves and do not present them with challenges. These teachers do not enable student learning through trial and error. The teacher himself or herself does not refresh his or her knowledge and practice, and is not curious to know more (Mahamid, 2012; Abu-Hussain, 2015). Studies have similarly found that teacher-student relations are characterized by authoritarianism. The qualities desired in students are obedience, conformity, and a sense of respect for the teacher. A student who demonstrates creativity and critical thinking is liable to be perceived as impertinent and undermining the authority of the teacher.

The results of the studies presented above show a connection between the five personality traits and thinking styles. In each study, the relationship between each trait and the various thinking styles differs to some degree. These findings have further established a considerable ability to predict thinking styles on the basis of personality traits.

The relationship between personality traits and thinking styles of Arab teachers, as a minority in Israel, has not yet been researched. This is despite the fact that the Arab minority is undergoing rapid processes of change in the social, economic, political, cultural, and familial realms, and despite the importance of examining this relationship and its impact on the day-to-day work of teachers in schools. In light of this, it is very important to study this subject and examine the relationship between personality traits and thinking styles among Arab teachers as members of a minority in Israel - and for this reason, the present study is significant.

On the basis of the scholarly literature surveyed above, the research hypothesis for this study is that positive correlations will be identified between the personality traits of Arab teachers in Israel and their thinking styles.

**2. Research Method**

**2.1 Participants**

A total of 205 teachers from the Arab education system in Israel participated in the study. They teach students across the range of ages: preschool, elementary school, and high school. The teachers were a randomly selected sample from school lists of the Ministry of Education.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **N=205** |  |  |  |  |  |  |  |
| Male teachers  | Female teachers | Preschool | Elementary school | High school | Years of teaching |  | Education |
| 72 | 133 | 66 | 84 | 55 | 1-3=27 |  | 76 M.A. |
|  |  |  |  |  | 4-15=85 |  | 129 B.A. |
|  |  |  |  |  | 15+=93 |  |  |

**2.4 Research Instrument**

The study is based on data obtained by means of self-report questionnaires. The questionnaire was divided into three sections:

1. **Social-demographic characteristics:** Education, gender, years of teaching, educational stage.
2. **Personality traits:** Personality traits were measured by means of the ‘Big Five’ traits questionnaire of Costa and McCare (1992). The questionnaire deals with the five personality traits:

***Extroversion:*** This segment included eight items. Its level of reliability in El Ansari (1997) was (α=.80) and in the present study its reliability was (α=.76).

***Emotional stability:*** This segment included eight items. Its level of reliability in El Ansari (1997) was (α=.81) and in the present study its reliability was (α=.71).

***Agreeableness:*** This segment included nine items. Its level of reliability in El Ansari (1997) was (α=.68) and in the present study its reliability was (α=.73).

***Conscientiousness:*** This segment included nine items. Its level of reliability in El Ansari (1997) was (α=.73) and in the present study its reliability was (α=.75).

***Openness to experience:*** This segment included ten items. Its level of reliability in El Ansari (1997) was (α=.76) and in the present study its reliability was (α=.83).

The questionnaire was translated into Arabic by El Ansari (1997). In the present study, researchers utilized the Arabic version, which comprises 44 items dealing with the various personality traits. Participants were asked to rank their degree of agreement with different characterizations of their own personalities on an ordinal scale of five degrees, with ‘1’ signifying “I do not agree at all” and 5 signifying “I agree strongly.”

1. **Thinking Styles:** Thinking styles were measured by means of the questionnaire by Sternberg (1997). This questionnaire comprises 46 statements which test five groups of thinking styles: **functions –** legislative, judicial, executive; **forms** – monarchic, hierarchic, oligarchic, anarchic; **levels** – global, local; **scope** – internal, external; **leanings –** liberal, conservative. Participants’ answers are measured on a scale of seven degrees, with ‘1’ signifying “I do not agree at all” and 7 signifying “I agree very strongly.” The reliability of these thinking styles is high, with Cronbach alpha values between 0.64 and 0.88.

**2.5 Research Procedure**

The study was carried out in the month of March, during the 2017-2018 academic year. It was carried out on a school-by-school basis. I distributed the questionnaires to teachers personally, explaining the purposes of the study. I emphasized that the data collected would be anonymous and would serve research purposes alone. All of the teachers agreed to participate and returned the questionnaires during the meeting.

**2.6 Analysis**

The data were processed by means of the statistical analysis software SPSS. Use was made of descriptive statistics and the Pearson correlation coefficient for examining the research hypotheses.

**3. Findings**

**Research hypothesis**: That positive correlations will be identified between the personality traits of Arab teachers in the Arab education system in Israel and their thinking styles.

**Table: Relationship between Personality Traits and Thinking Styles among Teachers** (N=205)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  **Style Type** |  **Style/Trait** | **Emotional Stability** | **Extroversion** | **Openness** | **Agreeableness** | **Conscientiousness** |
| **Type 1**  | **Legislative**  | .68\*\* | .21 | .31\* | .24 | .33\* |
| **Judicial** | .75\*\* | .61\* | .28\* | .25 | .23\* |
| **Hierarchic** | .59\*\* | .54 | .44 | .08 | .62\*\* |
| **Global** | .07 | .53\*\* | .48\*\* | .4\*\* | .27 |
| **Liberal** | .34\*\* | .48\*\* | .37\*\* | .14 | .27\* |
| **Type 2**  | **Executive** | .42\*\* | .37 | .57\*\* | .03 | .5\*\* |
| **Oligarchic** | .53- | .15 | -.06 | .24 | .18 |
| **Conservative** | .26\* | .52 | -.65\*\* | .21 | .31\* |
| **Local** | .28\* | -.38\*\* | -.3\* | .05 | .58\*\* |
| **Type 3** | **Introversion** | .38- | -.14 | -.32\* | -.51\*\* | -.1 |
| **Extroversion** | .44\*\* | .2\* | .39\*\* | .34\*\* | .34 |
| **Monarchic** | .27 | .03 | .09 | .1 | .19 |
| **Anarchic** | .4 | .27 | .17 | .23 | .47\*\* |

**Note:** \*p<0.05; \*\*p<0.01

The findings in the table above show a positive correlation between the personality trait of emotional stability and the legislative (r=.68, p<.01), judicial (r=.75, p<.01), hierarchic (r=.59, p<.01), liberal (r=.34, p<.01), executive (r=.42, p<.01), conservative (r=.26, p<.05), local (r=.28, p<.05), and external (r=.44, p<.01) thinking styles; a positive correlation between the personality trait of extroversion and the legislative (r=.61, p<.05), global (r=.53, p<.01), liberal (r=.48, p<.01), and external (r=.2, p<.05) thinking styles, and a negative correlation with the local thinking style (r=-.38, p<.01); a positive correlation between the personality trait of openness and the legislative (r=.31, p<.05), judicial (r=.28, p<.05), global (r=.48, p<.01), liberal (r=.37, p<0.1), executive (r=.57, p<.01), external (r=.39, p<.01) thinking styles, and a negative correlation with the conservative (r=-.65, p<.01), local (r=-.3, p<.05), and internal (r=-.32, p<.05) thinking styles; a positive correlation between the personality trait of agreeableness and the global (r=.4, p<.01) and external (r=.34, p<.01) thinking styles, and a negative correlation with the internal thinking style (r=-.51, p<.01); and, finally, a positive correlation between the personality trait of conscientiousness and the legislative (r=.33, p<.05), judicial (r=.23, p<.05), hierarchic (r=.62, p<.01), liberal (r=.27, p<.05), executive (r=.5, p<.01), conservative (r=.31, p<.05), local (r=.58, p<.01), and anarchic (r=.47, p<.01) thinking styles.

**4. Discussion**

The **research hypothesis** was that a relationship would be found between personality traits and thinking styles among Arab teachers in the Arab education system in Israel. This hypothesis was supported by the identification of clear statistical correlation between personality traits and different thinking styles. In interpreting the findings, I will focus primarily on the relationship between personality traits and Type 1 thinking styles, which are uncommon among Arab teachers, despite being highly sought and preferred. I will also focus on the findings regarding the relationship between the personality traits of emotional stability and openness (since these, too, are uncommon among teachers) and Type 1 thinking styles.

The findings showed a positive correlation between the personality trait of extroversion and the judicial, global, and liberal thinking styles (Type 1) as well as the external style, and a negative correlation with the local thinking style. They showed a positive correlation between the personality trait of agreeableness and the global thinking style (Type 1) as well as the external style, and a negative correlation with the internal style. They showed a positive correlation between the personality trait of conscientiousness and the legislative, judicial, hierarchic, and liberal thinking styles (Type 1) as well as the executive, conservative, local, and anarchic styles. They showed a positive correlation between the personality trait of openness and the legislative, judicial, global, and liberal thinking styles (Type 1) as well as the executive and external styles, and a negative correlation with the conservative, local, and external thinking styles. Finally, they showed a positive correlation between the personality trait of emotional stability and the legislative, judicial, hierarchic, and liberal thinking styles (Type 1) as well as the executive, conservative, local, and external styles.

These findings demonstrate a positive relationship between personality traits and Type 1 thinking styles. The significance of this finding is that, as the measure of a particular personality trait rises, so too will the measure of the corresponding thinking styles. This is especially notable in light of the finding that Type 1 thinking styles are uncommon among Arab teachers in the Arab education system in Israel. The above findings show a relationship between personality traits and Type 1 thinking styles among Arab teachers, and they show that personality traits contribute in the development of Type 1 thinking styles that are uncommon among Arab teachers, despite their importance in processes related to teaching, learning, and assessment in their work with students.

The findings in line with the hypothesis are further supported by the findings of an earlier study by Zhang (2002), which examined the relationship between personality traits and thinking styles among students in Hong Kong. Zhang’s study found a positive correlation between the personality trait of extroversion and the judicial, liberal, and hierarchic thinking styles (Type 1); a positive correlation between the personality trait of conscientiousness and the legislative, judicial, global, and hierarchic thinking styles (Type 1); and a positive correlation between the personality trait of openness and the legislative, judicial, and liberal thinking styles (Type 1). The findings are similarly supported by those of Alsukari (2009), who examined the relationship between personality traits and thinking styles among teachers-in-training at schools of education in Egyptian universities. Alsukari found a positive correlation between the personality trait of extroversion and the judicial, hierarchic, and liberal thinking styles (Type 1); a positive correlation between the personality trait of agreeableness and the legislative and liberal thinking styles (Type 1); a positive correlation between the personality trait of conscientiousness and the judicial, hierarchic, and liberal thinking styles (Type 1); a positive correlation between the personality trait of emotional stability and the liberal thinking style (Type 1); and a positive correlation between the personality trait of openness and the legislative and liberal thinking styles (Type 1).

In addition, these findings are supported by those of Albaqii (2012), who found a positive correlation between the personality trait of extroversion and the judicial, liberal, and hierarchic thinking styles (Type 1); a positive correlation between the personality trait of openness and the legislative, judicial, and liberal thinking styles (Type 1); and a positive correlation between the personality trait of conscientiousness and the legislative, judicial, global, and hierarchic thinking styles (Type 1).

Sternberg (1997) argued that, in order to foster effective learning processes, we must provide the learner with a variety of activities and teaching methods, so that at least some of these activities and methods will be appropriate for his or her thinking style. There are methods and manners of teaching that are more appropriate for certain thinking styles than for others. For example, direct frontal teaching is appropriate for an executive thinking style; asking questions is appropriate for the legislative and judicial thinking styles (Type 1); work in groups is appropriate for the external thinking style; learning through projects and inquiry-based learning are appropriate for the legislative thinking style (Type 1); problem solving is appropriate for the executive thinking style; work in small groups to give answers to fact-based questions is appropriate for the external and executive thinking styles; reading is appropriate for an internal thinking style; and so on. The significance of this is that, when a teacher does not possess the Type 1 thinking styles (legislative, judicial, hierarchic, global, and liberal) appropriate for certain manners of teaching, he or she will struggle in employing these particular methods (such as asking questions, learning through projects, inquiry- and discovery-based learning; dialogical teaching, etc.); and when he or she does possess Type 2 and Type 3 thinking styles, which better match more traditional teaching methods, he or she will be more likely to utilize the latter methods, which may come more easily.

**5. Recommendations**

We recommend carrying out further studies in future that include a larger sample size of Arab teachers – Muslims and Christians – as well as Jewish teachers in Israel. Furthermore, we recommend a comparative analysis with other societies in the world (traditional, developing, and modern), in light of the differing perceptions of personality traits and thinking styles in different societies. Similarly, we recommend examining the relationship between personality traits and thinking styles and other, additional variables. Our recommendation is that such studies combine qualitative and quantitative paradigms.

We further recommend that institutions training teachers for the Arab education system in Israel take into account the relationship between personality traits and thinking styles among candidates for teaching. Finally, we recommend to decision-makers in the Ministry of Education that they, too, take the matter of correlation between personality traits and thinking styles of teachers into account when recruiting teachers to work in schools.

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