Examination of the Characteristics of Spiritual Intelligence of Turkish Education Students in Terms of Different Variables

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ABSTRACT

The purpose of this study is to examine the characteristics of spiritual intelligence in the students of a Department of Turkish Language with respect to their gender, grade level, self-regulation skills, academic success, book-reading habits and social media usage habits. The relationship between spiritual intelligence and the self-regulation skills of the students is also examined in this study. The study is a quantitative study carried out in the relational screening model. The study was carried out with data obtained from 183 preservice teachers, 59 of whom were male and 124 female, who were receiving education at a Department of Turkish Language in an Education Faculty in the 2015-2016 academic year. The data necessary to carry out the research were collected by using a personal information form, the “Spiritual Intelligence Characteristics’ Scale” and the “Self-Regulation Scale”. The independent t-Test, single-factor ANOVA, and Pearson Product-Moment Correlation Coefficient were used in the analysis of the data. As a result of this study, it was concluded that the spiritual intelligence characteristics of the students did not vary depending on their gender and grade level. Along with this, while a significant relationship at a low level was found between spiritual intelligence and book-reading habits and self-regulation skills, no relationship was found between the academic success and social media usage habits. When the study results are taken into consideration, making the students gain the habit of reading books may be beneficial to increase the spiritual intelligence levels. Furthermore, the spiritual intelligence data may benefit from making students acquire skills in self-regulation.

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Keywords: intelligence types, self-regulation, academic success, book reading habit, social media

Introduction

On examining the definitions of intelligence, it can be seen that certain researchers have used intelligence as a synonym for ‘aptitude’ (Gage and Berliner, 1998; Gardner 2004), while others assess it as involving different areas (Ardila, 1999; Ceci, 1996; Zohar, 2004). Studies on the brain and the new information about the structure of the brain revealed as a result of these studies have led to the discovery of new definitions and approaches to the concept of intelligence. Studies on intelligence have brought about the grouping of different forms of intelligence, and different skills have also been named as intelligence. Gardner (2004) determined eight different intelligence areas in the multiple intelligence theory. Gardner also says that existentialist intelligence and moral intelligence can also be considered areas of intelligence in addition to these areas of intelligence. “However, the discovery of emotional intelligence by Danah Zohar showed the necessity of addressing the concept of intelligence by the way of functioning of the brain, and not adding each skill as a new type of intelligence.” (Üstten, 2008: 49).

The type of intelligence that ensures that people retain the information they encounter and are able to maintain their daily life is the intelligence quotient (IQ). However, when rational intelligence fell short in
explaining the emotions and spiritual characteristics of human beings (Goleman, 1995; Salovey and Mayer, 1990) researchers thought that intelligence may have different aspects, and as a result of the studies conducted, they found a new type of intelligence they called the emotional quotient (EQ). Emotional intelligence is defined as the ability to understand emotions and the meanings to which they are related (Mayer, 2000: 267). Emotional intelligence revealed that people cannot explain the non-material aspects of the world and the idea of spiritual characteristics led to the notion that intelligence may also have a spiritual aspect.

The first difficulty encountered in terms of the definition of spiritual intelligence is that spiritual intelligence and spirituality are considered synonymous, and these concepts are also associated with a religion. It can be said that the term ‘spirituality’ can be derived as a form of intelligence from the multiple intelligence theory of Gardner (Koening, 2009: 1). Spiritual intelligence is not one of the eight fields of intelligence in the multiple intelligence theory put forth by Gardner. Gardner (2004) claimed that an existentialist intelligence or moral intelligence may exist. Then researchers claimed that spiritual intelligence may be the equivalent of the measurable and definable fields of intelligence of Gardner (Emmons, 2000a; Emmons, 2000b; King, 2008; King and DeCicco, 2009; Vaughan, 2002).

While the terms “spirituality” and “morality”, which constitutes one of the most significant parts of human life, is defined in many different ways, recent studies have started to focus on an applicable definition of this term that differs from the terms associated with religiousness and ethics (Emmons, 2000b; King and DeCicco, 2009; Vaughan, 2002). That spiritual intelligence focuses on the non-material aspect of human life leads to its association with religious beliefs, whether or not this is desired.

Spiritual intelligence is generally conceptualised as a different form of moral/religious identity and practice than religiosity. In addition to this, having spiritual intelligence does not require a belief system or defining a person as religious (King, 2008). King and DeCicco (2009: 69) define spiritual intelligence as certain spiritual abilities that play a part in one’s adaptation to non-material aspects that go beyond the rational human mind such as awareness and integration. According to the criteria of Gardner (2004), the people’s quality of can be improved by using these spiritual skills. In addition to these, using spiritual intelligence in difficult times in our lives may be important since it may make our approach towards changes in our life more reasonable and logical (Vaughan, 2002).

There is dissent between researchers in terms of the definition of spiritual intelligence. Certain researchers think that the intelligence areas within the multiple intelligence theory of Gardner meet spiritual intelligence (Amram, 2007; Emmons, 2000a; Emmons, 2000b; King and DeCicco, 2008; Montgomery, 2013; Vaughan, 2002; Wolman, 2001). While some researchers say that spiritual intelligence does not have a full and exact definition (Mayer, 2000), some prefer using the definition of existentialist intelligence as the equivalent of spiritual intelligence (Gardner, 2000; Halama and Strizenc, 2004).

Spiritual intelligence seems as it provides a path that will help us understand the world and ourselves in a more in-depth way. Moreover, certain aspects of spiritual intelligence, such as thinking critically about the existence of life, may render our thoughts more complex (Montgomery, 2013: 3).

Spiritual intelligence requires thinking critically and producing meaning that includes one’s beliefs. We should consider our failures as well as our successes in order to produce meaning and apply it to our lives (Yerushalmi, 2003). Spiritual intelligence is a type of intelligence that ensures that people accept that they can have failures as well as success, accept themselves as they are, and consider failures as experiences on the way to success. Spiritual intelligence is a type of intelligence that will reveal the spiritual distress individuals feel in cases of failure or crisis and ensure that they show more mercy to themselves and act more prudently in solving the problems they encounter.

Spiritual intelligence means that individuals become aware of the meanings they ascribe to things. It is our spiritual intelligence that makes us question what the work we do in our daily life means for us and the degree to which it coincides with our values, and many people ask themselves these questions at some point in their working lives. This is the assessment of the extent of consistency between what they are and do. It ensures that they feel at ease with themselves and do the right thing (Üstten, 2008: 76).

One of the most significant studies on spiritual intelligence is that of Zohar and Marshall (2000). Zohar and Marshall (2004) placed spiritual intelligence at the top of the intelligence hierarchy, i. e. above emotional intelligence.
quotient (EQ) and intelligence quotient (IQ), and defined it as the highest form of intelligence. Relying on neurological findings, they claimed that spiritual intelligence represents the third process of integrative thinking in the brain. This third process is to integrate the lower level of operations of rational and emotional intelligence in order to reconceptualise our experiences and order them, and thus it allows us the ability to understand and grasp our spiritual and moral nature at a higher level.

Nasel (2004) proposed his own definition of spiritual intelligence that defines it as sources for the conditions and environment for its implementation. According to him, people use spiritual intelligence in order to solve problems in daily life, think about subjects and make reasonable decisions.

Mayer (2000) claims that what is considered as spiritual intelligence would be better defined as ‘spiritual consciousness’. He defines consciousness as the ability to be aware and establish awareness. According to Mayer, it is more suitable to define spiritual intelligence as states of awareness and existence rather than a cognitive skill.

Vaughan (2002) believes that spiritual intelligence exists in all human beings, and it can be developed through various activities and practices. He also points to the relationship between spiritual intelligence and coping with stressful events. King (2008) says that it would be a better approach to define spiritual intelligence as awareness, integration, adaptation to non-material practices and certain mental skills that contribute to the metaphysical aspects of human existence.

Wolman (2001) draws attention to the existentialist elements in spiritual intelligence. He defines spiritual intelligence as the ability to ask ultimate questions about the meaning of life. He also defines it as the ability to simultaneously form a perfect connection between the life we live and ourselves. Wolman (2001) also adds the ability to understand the spiritual/non-material aspect of life to the emotional intelligence model. Spiritual intelligence also allows people to solve certain type of problems and especially spiritual and moral problems.

Consequently, spiritual intelligence is a type of intelligence that ensures that we understand ourselves and the world better, encourages people to question their thoughts about their existence and the meaning of life, and helps people overcome the problems and spiritual distress they encounter in life. Spiritual intelligence also ensures that people become aware of the values they have, and that they thus feel more comfortable and at peace with themselves.

Objective of the Study

The main objective of this study is to investigate the characteristics of spiritual intelligence characteristics in students studying in a Department of Turkish Language at a Faculty of Education. The sub-problems of the study are as follows:

1. Do the students’ spiritual intelligence characteristics vary by gender?
2. Do the students’ spiritual intelligence characteristics vary by their level of the grade in which they study?
3. Is there any relationship between academic success and the students’ spiritual intelligence characteristics?
4. Is there any relationship between the students’ book-reading habits and their spiritual intelligence characteristics?
5. Is there any relationship between students’ social media usage and their spiritual intelligence characteristics of the students?
6. Is there any relationship between the students’ skills of self-regulation and their spiritual intelligence characteristics?

Method

The relational screening model was selected for use in this study from among general screening models, with the aim of investigating the spiritual intelligence characteristics of students studying in a Department of
Turkish Language in a Faculty of Education in terms of gender, grade level, academic success, book-reading habits, social media usage habits and self-regulation skills. Relational screening models are research models that aim to determine the existence and/or level of the joint change between two or more variables (Karasar, 2005: 81).

**Study Group**

The universe of the study consisted of students studying at a Department of Turkish Language in a Faculty of Education. The convenience sampling strategy was not used in the study as all of the students in the study universe were reached. The study was performed with the data obtained from 183 pre-service teachers studying at the Department of Turkish Language during the spring semester of the 2015-2016 academic year.

**Data Collection Tools**

The data required for the research were collected with a personal information form developed by the researcher, the “Spiritual Intelligence Characteristics Scale” developed by the researcher, and the “Self-Regulation Scale” adapted into Turkish by Aydın et al. (2014).

**Personal information form.** This was prepared in order to collect data about the independent variables of the research and it consisted of five questions. They include; gender, department, academic achievement, reading habit and habit of using the social media. In order to determine the reading habit of students, they were asked about the number of books they would read in a month and also asked to choose one of the options of 1-5, 6-11, 12-20 and 21 and more. In order to determine their habit of using the social media, they were asked about the average hour they would spend in the social media in a day and also asked to choose one of the options of 1 hour, 2 hours, 3 hours, 4 hours and 5 hours and more.

**Spiritual intelligence characteristics’ scale.** This is a five-point Likert-type scale consisting of 26 items developed by the Karadeniz and Aydin (2016) and gathered under 5 factors. The first factor “the ability to understand the spiritual/non-material aspect of life” consists of 8 items, the second factor, the “metaphysical awareness” sub-dimension, consists of 6 items, the third factor, “entering into heightened states of consciousness and awareness” consists of 5 items, the fourth factor, the “awareness” sub-dimension, consists of 4 items, and the fifth factor, the “personal meaning production” sub-dimension, consists of 3 items. A literature review and expert opinions contributed to the naming of these factors. The options (1) Always, (2) Most of the time, (3) Sometimes, (4) Rarely and (5) Never were placed before the items in the scale.

The Spiritual Intelligence Characteristics’ Scale was applied to 257 university students outside the sample to determine the fitness of the model. Model fitness values were determined using confirmatory factor analysis by the researcher. The results obtained were as follows: \( \chi^2/df = 2.32; \) RMSEA = 0.085; SRMR = 0.086; GFI = 0.89; AGFI = 0.89; CFI = 0.96; IFI = 0.94 and NNFI = 0.97. Furthermore, the internal consistency level of the scale was examined with the Cronbach’s Alpha coefficient, and it was found to be \( \alpha = 0.927. \)

**Self-regulation scale.** The Self-Regulation Scale that was developed by Brown, Miller and Lawendowski (1999) in order to measure behavioural self-regulation was adapted into Turkish by Aydin et al. (2014). The scale consists of three factors and 51 items. The first factor, “self-reinforcing”, consists of 29 items, the second factor, “self-monitoring”, consists of 18 items, and the third factor, “self-assessment” consists of 4 items. The Self-Regulation Scale was applied to 321 university students to determine the fitness of the model. The fitness value of the model was tested with confirmatory factor analysis by the researcher. The results obtained were as follows: \( \chi^2/df = 1.93; \) RMSEA = 0.072; SRMR = 0.065; GFI = 0.88; AGFI = 0.89; CFI = 0.94; IFI = 0.93 and NNFI = 0.95. Furthermore, the internal consistency level of the scale was examined with Cronbach’s Alpha coefficient, and it was found to be \( \alpha = 0.831. \)

**Data Analysis**

First, the fitness of the data for normal distribution was examined in order to determine the statistical method to be used in the research. The Kolmogorov-Smirnov normal distribution test was performed as the number of data was higher than 50 in order to test the fitness of the data for a normal distribution (Wright, 2006: 94). As a result of the normal distribution test, it was found that the level of significance was higher than 0.05, and it was decided that the data showed normal distribution considering the kurtosis/skewness
coefficients and histogram graph. The independent t-test was used in order to determine the relationship between the mental intelligence of the students studying in the Department of Turkish Language and the gender variable, the single factor ANOVA test was used for the classroom level, and the Scheffe test was used when needed. The Pearson product moment correlation coefficient (r) was used in the determination of the relationship between the spiritual intelligence levels and academic success, book-reading habits, social media usage habits and the self-regulation skills of the students.

The formula of $a = \text{Range} / \text{Number of Groups to be Formed}$ was used in the determination of the group value interval of the scale when interpreting the arithmetic mean values of the students’ spiritual intelligence characteristics and self-regulation skills (Taşdemir, 2003). Accordingly, the value intervals were as follows: Always, 4.20-5.00; Most of the time, 3.40-4.19; Sometimes, 2.60-3.39; Rarely, 1.80-2.59; Never, 1.00-1.79. The IBM SPSS 20 program was used in the analysis of the data, the LISREL 8.80 program was used in the confirmatory factor analysis of the Spiritual Intelligence Characteristics’ Scale and the significance level of 0.05 was sought in the interpretation of the data.

**Findings**

This part of the research focuses on findings based on the data collected in line with the sub-problems of the research. Table 1 includes statistical values between the gender of the students studying in the Department of Turkish Language and their mean spiritual intelligence characteristics.

**Table 1.** Independent t-test analysis results between the genders of the students and the mean from the spiritual intelligence characteristics’ scale

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>$\bar{X}$</th>
<th>Ss</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>59</td>
<td>4.03</td>
<td>.579</td>
<td>.590</td>
<td>.556</td>
</tr>
<tr>
<td>Female</td>
<td>124</td>
<td>3.98</td>
<td>.509</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On examining Table 1, it is seen that the average of the Spiritual Intelligence Characteristics’ Scale of the students does not vary statistically significantly by gender ($p > 0.05$). Table 2 includes the single factor ANOVA results of the scores that students received from the Spiritual Intelligence Characteristics’ Scale by their class level.

**Table 2.** Variance analysis results of students’ scores from the spiritual intelligence characteristics’ scale by their class level

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>$\bar{X}$</th>
<th>Ss</th>
<th>F</th>
<th>P</th>
<th>Significant difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade/Class Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Grade</td>
<td>51</td>
<td>4.00</td>
<td>.482</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Grade</td>
<td>45</td>
<td>4.03</td>
<td>.443</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Grade</td>
<td>57</td>
<td>4.01</td>
<td>.537</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th Grade</td>
<td>30</td>
<td>3.89</td>
<td>.708</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>Sum of squares</th>
<th>sd</th>
<th>Mean of squares</th>
<th>F</th>
<th>P</th>
<th>Significant difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intergroup</td>
<td>.399</td>
<td>3</td>
<td>.133</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intragroup</td>
<td>51.061</td>
<td>179</td>
<td>.285</td>
<td>.466</td>
<td>.706</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>51.460</td>
<td>182</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 2, it is seen that spiritual intelligence characteristics of the students did not vary significantly by the class level ($p > 0.05$). This gives the result that the spiritual intelligence characteristics of the students do not vary by the class level. Table 3 includes statistical values between the Spiritual Intelligence Characteristics’ Scale average scores of the students and other variables.
Table 3. Correlation table between spiritual intelligence characteristics’ scale and other variables

<table>
<thead>
<tr>
<th></th>
<th>Spiritual Intelligence Characteristics</th>
<th>Book-Reading Habits</th>
<th>Academic Achievement</th>
<th>Self-Regulation</th>
<th>Social Media Usage Habits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>r</strong></td>
<td>1</td>
<td>.225**</td>
<td>.041</td>
<td>.184**</td>
<td>-.132</td>
</tr>
<tr>
<td><strong>p</strong></td>
<td>.002</td>
<td>.586</td>
<td>.013</td>
<td>.068</td>
<td></td>
</tr>
<tr>
<td><strong>r</strong></td>
<td>.225**</td>
<td>1</td>
<td>.323**</td>
<td>.125</td>
<td>-.090</td>
</tr>
<tr>
<td><strong>p</strong></td>
<td>.002</td>
<td>.000</td>
<td>.093</td>
<td>.227</td>
<td></td>
</tr>
<tr>
<td><strong>r</strong></td>
<td>.041</td>
<td>.323**</td>
<td>1</td>
<td>.002</td>
<td>-.020</td>
</tr>
<tr>
<td><strong>p</strong></td>
<td>.586</td>
<td>.000</td>
<td>.954</td>
<td>.785</td>
<td></td>
</tr>
<tr>
<td><strong>r</strong></td>
<td>.184**</td>
<td>.125</td>
<td>.002</td>
<td>1</td>
<td>-.089</td>
</tr>
<tr>
<td><strong>p</strong></td>
<td>.013</td>
<td>.093</td>
<td>.954</td>
<td>.233</td>
<td></td>
</tr>
<tr>
<td><strong>r</strong></td>
<td>-.132</td>
<td>-.090</td>
<td>-.020</td>
<td>-.089</td>
<td>1</td>
</tr>
<tr>
<td><strong>p</strong></td>
<td>.068</td>
<td>.227</td>
<td>.785</td>
<td>.233</td>
<td></td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level. n=743
**Correlation is significant at the 0.01 level.

On examining Table 3, it is seen that there is a low-level and significant relationship between spiritual intelligence characteristics and the habit of reading books (r=.225, p<.01) and self-regulation skills (r=.184, p<.01). There is no relationship between academic success and the habit of using social media.

Discussion and Results

The results obtained in this study, that aims to examine the spiritual intelligence characteristics of students studying in a Department of Turkish Language in terms of different variables can be summarised as follows.

On examining the scores attained by the students studying in the Department of Turkish Language from the “Spiritual Intelligence Characteristics’ Scale” in terms of gender, it was seen that the difference was not statistically significant (p>0.05). This shows that spiritual intelligence characteristics do not vary by gender.

In a study performed on 540 10th-grade students, Üstten (2008) found that the skills of using spiritual intelligence are more advanced in female students than in male students. Kilcup (2014) also states that the spiritual intelligence characteristics of female students are higher. Amram and Dryer (2008) also concluded that the spiritual intelligence levels of adult females are higher than those of males. On the other hand, King and DeCicco (2009), and Smartt (2014) concluded that spiritual intelligence characteristics do not vary significantly by gender.

No significant difference could be found between classes when the spiritual intelligence characteristics of students were examined by their grade level (p>0.05). On examining the results, it is seen that the grade level averages are very close to each other. Kilcup (2014) and Amram and Dryer (2008) concluded that there is no significant difference between the spiritual intelligence levels of people between the ages of 18 and 65. This can be interpreted as showing that spiritual intelligence does not vary by age group.

It was seen that there is a low level of significant relationship between spiritual intelligence characteristics and the book reading habits (r=0.225) and self-regulation skills (r=0.184) of the students. While there is a reverse relationship between the spiritual intelligence characteristics and the habit of using social media among the students, this relationship is not significant (r=0.136). No relationship could be found between spiritual intelligence characteristics and academic success. Smartt (2014) also could not find any relationship between spiritual intelligence characteristics and academic success in a study carried out on secondary school students.
In conclusion, if it is considered that spiritual intelligence is a new field of study, it is necessary to investigate the relationship between variables that can be related to the spiritual intelligence. For instance, the relationship between the characteristics of the spiritual intelligence and other areas of intelligence of students in multiple intelligence theory can be investigated. In this context, the question whether an individual with mathematical intelligence or an individual with verbal intelligence has a higher spiritual intelligence could be a subject of study. Along with this, the relationship between rational intelligence, emotional intelligence and spiritual intelligence could be investigated.

A relationship between spiritual intelligence and a Literary Studies can be established. When it is considered that the purpose of an education in literature is to train people who can examine and analyse the texts they encounter and interpret them, who have problem-solving, critical and creative thinking skills, it can be suggested that data regarding spiritual intelligence data could be used in Literary Studies. In this regard, data regarding spiritual intelligence could be beneficial in ensuring that students develop their skills in describing, interpreting and understanding the deeper structures of texts from the surface structures.

References


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