PRINT: ISSN 0972-0073 ONLINE: ISSN 2456-6802
Anthropologist, 22(1): 39-43 (2015)
DOI: 10.31901/24566802.2015/22.01.04

An Examination of the Thinking Styles of Undergraduates who Study at Universities that Provide Sports Training

Atalay Gacar

Firat University, Department of Physical Education and Sport Science, Elazig, Turkey

KEYWORDS Thinking Styles. Physical Education and Sports Teaching. Sports Management. Coaching. Recreation

ABSTRACT In this study, the researchers examined "The Thinking Styles of Undergraduates Who Study at Universities That Provide Sports Education". A total of 330 students from various universities participated in the study. A personal information form was used to gather the participants' demographical information and the Rational Experiential Inventory (REI) was used to determine their thinking styles. SPSS was used to analyze the collected data at a five percent ($p<0.05$) level of significance. In conclusion, it was ascertained that there is a significant difference between men and women with regards to the sub-dimension of need for cognition factor regarding thinking styles points of the senior students from different academic departments. Furthermore, it was observed that men have more need for cognition than women.

INTRODUCTION

Aggression is a behavior, which has been in existence since the existence of mankind. Children play games like street battle fights, and other assets of a person suffering his efforts until the war is perhaps one on which the most research has been conducted on human behavior. Today, "aggression" in general, is a very popular topic, whether it is against animate or inanimate beings, physical or emotional as long as it is a behavior that causes harm (Ozdevecioglu 2010; Afyon and Metin 2015).

It is important to understand thinking styles because there is a strong relation between thinking quality and the success of curbing aggression. Understanding thinking styles helps understand how the attitude determines the mode of communication and it also raises awareness on how thinking styles affect cognitive and social relations in colleges (Sternberg 1997; Duru and Yildizlar 2010).

The thinking style of an individual may change, diversify through time or differ developmentally (Sternberg and Zhang 2001).

Sternberg (1997) asserted that there are thirteen styles divided under five categories, namely function, form, level, scope and learning. Thinking styles can be summarized as follows based on the individuals' self-governance.

Address for correspondence:
Atalay Gacar
Firat University,
Faculty of Sports Sciences,
Elazig,Turkey

a) Considering the category of function, the individuals who think autonomously are defined as persons that like to create, formulate, design and implement things in their own way. However, individuals who think based on rules like to execute what they are asked and commanded to do, and follow instructions. On the other hand, the ones who think judgmentally like to evaluate and judge existing structures.
b) When assessed in terms of form, individuals who think with regard to singularism prefer to do what they work at the very time and put all their energy and materials into their work. The ones who think hierarchically prefer to do work instantaneously, determine when to implement each work and which one to give priority to. The ones who think equivalently enjoy executing works instantly. However, they have difficulty in setting priorities. Individuals who are unprincipled tend to take a random approach to incidents and problems. Moreover, they do not like systems and being guided and following any kind of instructions.
c) When examined according to level, it was clearly seen that globalists like to deal with relatively large, abstract and generalized issues. The ones who have a local style value details and prefer to deal with concrete and special issues.
d) Examining the category of scope, it is the internal style category of individuals who like to be self-sufficient, like to work alone,

and prefer to concentrate on themselves. On the other hand, the external style category of individuals prefers to work with other people, concentrate on the external world and collaborate with others.

e) Considering the category of learning, the reformist style category of individuals prefers to carry out things using new methods and challenge traditions. However, traditionalists like to execute things via approved and tested methods and follow traditions (Sternberg 1997; Basol and Türkoglu 2009).

The "Mental Self-government Theory" developed by Sternberg (1988) pointed out the thinking styles of individuals. These thinking styles can be used at home, school, workplaces, and in every aspect of life for various situations. Each individual has her/his own thinking style. Individuals choose how to govern themselves throughout their life. Styles may vary by life requirements and through time. Thinking styles can be formed by the conditions that individuals experience (Sternberg 1988; Cubukcu 2004; Basol and Turkoglu 2009).

Each individual develops certain approaches towards her/his relationship with the world, how they perceive the world, achieve their goals and solve problems according to genetic tendencies and experiences, in particular, their first experiences. Throughout this process, individuals pay attention to different aspects of the truth, gather data, organize this data in different ways, make judgmental deductions out of it, arrive at different conclusions and make decisions in different ways (Parlette and Rae 1993; Bulus 2004; Kizilaslan Tuncer 2013).

Each individual has different thoughts on achieving their goals with unique methods. Based on these considerations, this study examined "The Thinking Styles of the Undergraduates Who Study at Universities That Provide Sports Education". This study will contribute to existing literature and will be of benefit to further studies.

MATERIAL AND METHODS

A total of 330 senior students, 59 students from Akdeniz University, 73 students from Mugla Sitki Kocman University and 125 students from Selcuk University participated in the study.

In this study, a personal information form was used to gather the participants' demographical information on gender, age, academic department and university and the Rational Experiential Inventory (REI) developed by Epstein et al. (1996) was used to determine their thinking styles. The Rational Experiential Inventory consists of 31 items and 2 sub-scales. One of these sub-scales examines rational thinking. It comprises 19 items taken from the Need for Cognition scale created by Cacioppa and Petty (1982), which originally has 45 items. The scale tested the participants' level of involving in or not involving in and also enjoying or not enjoying the cognitive activities. The second scale was a sub-scale of Faith in Intuition and had 12 items. The scale evaluated the participants' level of data processing and trusting or not trusting their senses and first impressions in their daily life (Cacioppa and Petty 1982; Coskuner et al. 2012).

A 5-point Likert scale was used. The scale was set at a graduation level which increased from 1 to 5 and responses were given through levels of "Strongly Disagree" to "Strongly Agree". The 1^{st}, 2^{nd}, 4^{th}, 5^{th}, 6^{th}, 7^{th}, 9^{th}, 10^{th}, 11^{th}, 13^{th}, 15^{th}, 16^{th}, 18^{th} and 19^{th} items of the Need for Cognition sub-scale were measured reversely and the score interval of the scale varied between 19-95. Scoring of the Faith in Intuition sub-scale was not implemented reversely since the items were stated as positive statements and the score interval varied through 12-60 (Coskuner et al. 2012).

In analyzing the acquired data, SPSS was used and the significance level of the statistical data was analyzed at a level of $p<0.05$. By means of SPSS, frequency distribution, arithmetic mean, percentages, t-test, one-way ANOVA and Tukey test were used.

RESULTS

In Table 1, when the analysis results with regards to the points of Rational Experiential Inventory (REI) as to gender variable of the students from different departments are examined, it is stated that there is no significant difference at sub-dimension of faith in intuition factors in terms of gender variable while there is a significant difference between men and women on gender variable at sub-dimension of the need for cognition factor ($p>0.05$).

In Table 2 when the analysis results with regards to the points of Rational Experiential Inventory (REI) as to age variable of the students

Table 1: t-test distribution function values of Rational Experiential Inventory (REI) in regard to gender variable

REI	*Gender*	*N*	*Mean*	*SD*	*t*	*p*
Need for Cognition	Male	201	40.87	7.75	1.95	0.05*
	Female	129	39.10	8.32		
Faith in Intuition	Male	201	52.63	10.00	1.25	0.21
	Female	129	51.17	10.97		

Table 2: N, Ss and analysis of variance distribution function values of Rational Experiential Inventory (REI) as to age variable

RREI	*Age*	*N*	*Mean*	*SD*	*F*	*p*
	21-22 years	75	40.72	8.21	0.23	0.79
Need for Cognition	23-24 years	152	39.95	7.90		
	25 years and over	103	40.12	8.08		
	Total	330	40.18	8.01		
	21-22 years	75	53.76	10.29	1.55	0.21
Faith in Intuition	23-24 years	152	51.17	10.58		
	25 years and over	103	52.13	10.15		
	Total	330	52.06	10.40		

from different departments are examined, it is ascertained that there is no significant difference between sub-dimensions of need for cognition and faith in intuition factors ($p>0.05$).

In Table 3 when the analysis results with regards to the points of Rational-Experiential Thinking Styles as to department variable that the students study are examined, it is observed that there is a significant difference between the ones in the Department of Physical Education and Sports and the ones in the Department of Recreation at sub-dimension of need for cognition factor also, there is a significant difference between the Department of Physical Education and Sports and the Department of Coaching Education at sub-dimension of faith in intuition factor ($p<0.05$).

In Table 4 when the analysis results with reference to the points of Rational Experiential Inventory as to variable of university that they attend are examined, it is stated that there is a significant difference between Akdeniz University and Firat University and also between Muðla Sitki Koçman University and Selçuk University at sub-dimensions of need for cognition and faith in intuition factors ($p<0.05$).

DISCUSSION

In the study, the point average and standard deviation values of thinking styles were examined according to gender, age, and department in which they studied and the university that

Table 3: N, Ss and analysis of variance distribution function values of Rational Experiential Inventory (REI) as to department variables

REI	*Academic department*	*N*	*Mean*	*SD*	*F*	*p*
	Physical Education and Sports Teaching	84	37.32	7.61	7.41	.00*
Need for Cognition	Sports Management	71	39.14	7.35		
	Coaching	110	41.70	7.96		
	Recreation	65	42.43	8.16		
	Total	330	40.18	8.01		
	Physical Education and Sports Teaching	84	49.27	9.67	3.69	.01*
Faith in Intuition	Sports Management	71	51.57	10.67		
	Coaching	110	54.14*	10.68		
	Recreation	65	52.67	9.88		
	Total	330	52.06	10.40		

Table 4: N, Ss and analysis of variance distribution function values of Rational Experiential Inventory (REI) as to variables of the university that the students Attend

RREI	*University*	*N*	*Mean*	*SD*	*F*	*p*
Need for Cognition	Firat	73	41.98	7.39		
	SitkiKocman	73	40.69	9.11		
	Selcuk	125	40.93	8.23		
	Total	330	40.18	8.01		
	Akdeniz	59	43.72	6.20	20.63	0.00*
Faith in Intuition	Firat	73	52.52	10.67		
	Sitki Kocman	73	56.47	9.55		
	Selcuk	125	53.15	10.21		
	Total	330	52.06	10.40		

they attend. A total of 330 senior students from Akdeniz University, Firat University, Mugla Sitki Kocman University and Selcuk University participated in the study.

Thinking styles are approaches that people tend to use against the problems, situations, events and variables that they encounter. Thinking styles are closely associated with how the individual extracts the information and analyzes it. Individuals have a profile that shows an alteration on the amount of each style but they are not subject to just one profile. Thinking styles can differ when adjusting to different tasks and circumstances (Sunbul 2004; Basol and Turkoglu 2009; Afyon and Metin 2015; Alp et al. 2014).

The differences on thinking style preferences affect both one-to-one and group interactions at all social environments significantly (Bulus 2000). Thinking styles become organized in different ways through combining an individual's activities and processes with their personal qualities and what is shown to the outer world as thinking styles (Palut 2003). This study tried to determine whether there is a difference between gender and thinking styles of that of men and women or not. According to gathered data, a significant difference was observed in the gender variable at sub-dimension of need for cognition for men and women and men have more need for cognition than women. When supporting and similar studies to this study are examined, it was seen that there is a significant relationship between the gender of teacher candidates and their attitude toward First Reading Writing Education (KizilaslanTuncer 2013). It is stated that there is not a significant differentiation in terms of gender variable at sub-dimension of faith in intuitive factors. In the studies conducted by Duru (2002) and Coskuner et al. (2012), no statistical difference between gender and thinking styles are found. These results supported this study (Kizilaslan Tuncer 2013; Duru 2002; Coskuner et al. 2012). When the analysis results as to age variable were examined, it was observed that there is a significant difference between training directors' thinking styles and their age in a study (2010) this finding corroborates a study that was conducted by Balgalmis and Baloglu (2010) while it was observed there is no significant difference at sub-dimensions of need for cognition and faith in intuition factors.

When the analysis of the results as to the department variable were examined, it was ascertained that there is a significant difference between the students in the Department of Physical Education and Sports and the students in the Department of Recreation at sub-dimension of need for cognition factor also, there is a significant difference between the Department of Physical Education and Sports and the Department of Coaching Education at sub-dimension of faith in intuition factor. However, no significant difference was found in terms of either rational or intuitive in a study conducted by Coskuner et al. (2012) when the researchers looked at the distribution of physical education teacher candidates with relation to the grade variable (Coskuner et al. 2012).

CONCLUSION

In conclusion, it was observed that there is a significant difference in rational and intuitional thinking styles of the students in terms of their academic departments and universities. Experiential opportunities should be created throughout the educational years of the undergraduates by means of environmental factors in order to enhance their thinking styles. Furthermore, studies on the qualifications of a student should be

conducted. This study is believed to contribute to literature for further studies on thinking styles.

RECOMMENDATIONS

Studies should be carried out according to different workgroups. Such categories as qualifications of physical education and sports students should be considered. Not only the academic success of students, but also the psychological level should be considered. This study contributes to the literature on thinking styles and will be useful for future studies.

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