

A RESEARCH ON CURIOSITY LEVELS OF PHYSICAL EDUCATION AND SPORTS TEACHERS (Kayseri Province Sample)³

ABSTRACT

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The purpose of research is to determine the curiosity level of physical education and sports teachers. Research was conducted with physical education and sports teachers (N=230) working in Kayseri during the 2011-2012 academic year. "The Curiosity Index (CI-3)" which was developed by Ainley (1987) and adapted into Turkish by Demirel and Co kun (2009) was used for data collection tools. In data analysis descriptive statistics, frequency (n), percentage (%), mean (\bar{X}) and standard deviation (Sd) were utilized. In order to explore the differences, non-parametrical tests Mann-Whitney U and Kruskal Wallis tests were used and SPSS 18.0 statistics package program was used to determine if there was a relationship among the data. According to the findings, women had higher curiosity level than men, singles had higher curiosity than married people and age group 30 years had higher curiosity than age group 31 years. The curiosity increased with the decrease in working years.

Key Words: Curiosity, Physical Education and Sports Teacher.

BEDEN E T M Ö RETMENLER N N MERAKLILIK DÜZEYLER ÜZER NE B R ARA TIRMA (Kayseri li Örne i)³

ÖZET

Ara tırma, 2011–2012 e itim-ö retim yılında Kayseri’de resmi ortaö retim kurumlarında görev yapan 230 beden e itimi ö retmeni üzerinde gerçekleştirilmiştir. Veri toplama aracı olarak, Ainley (1987) tarafından geliştirilen (Akt. Fulcher, 2004) ve türkçeye uyarlama çalışmaları Demirel ve Co kun (2009) tarafından yapılan "Meraklılık Ölçe i (CI-3)" kullanılmıştır. Verilerin analizinde ki sel bilgiler için betimsel istatistik yöntemleri frekans (n), yüzde (%), aritmetik ortalama (\bar{X}) ve standart sapma (Ss) kullanılmıştır. Farklı ı tespit etmek amacıyla; cinsiyet, ya , mesleki kıdem ve medeni durum de i kenlerinde normal dağılım ve homojenlik ko ulları yerine gelmedi i için Non-Parametrik testlerden Mann-Whitney U testi ve Kruskal Wallis testi uygulanmıştır. Sonuçlar 0,05 anlamlılık düzeyinde de erlendirilmiştir. Elde edilen bulgulara göre; kadınların meraklılık puanı erkeklere göre daha yüksek, bekârların meraklılık puanı evlilere göre daha yüksek, 30 ya ve altı olanların meraklılık puanı 31 ya ve üstü olanlara göre daha yüksek ve kıdem azaldıkça meraklılık puanı daha yüksek bulunmu tur.

Anahtar kelimeler: Meraklılık, Beden E itimi Ö retmeni.

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INTRODUCTION

Today, education has been shaped in a way not to be limited for a certain period of time of life of people and even the most developed countries have been in quest of continuously improving their educational systems and raising the quality of education and as a result of it, lifelong learning concept has emerged. Lifelong learning skills include one's basic competences in mental, sensorial and kinetic fields. According to Knapper and Cropley (2000); an individual who learns lifelong is the one who plans and measures self-learning, is active in learning, can integrate information from different disciplines when needed and can implement different learning strategies in different situations.

Akkoyunlu (2008) presents the characteristics of a lifelong learning individual as follows: curiosity, interest in new developments and subjects, information literacy, organizational abilities and learning abilities. Natural curiosity of human beings rapidly led to scientific discoveries and a big effect upon advancement of the civilization (Berlyne, 1978; Loewy, 1998). Human beings who understood the mechanism of the universe and natural laws thanks to the sense of curiosity developed tools and devices in order to meet their needs more easily and thus have created a life style which has today been called modern.

Pioneering studies made during the 1960s focused on three points. Firstly, theoretical frame and the underlying reasons were attempted to be explored. Secondly, why different and interesting things arouse people's curiosity was investigated. Finally, limited experimental studies were conducted in order to uncover what the situational determiners of curiosity were (Loewenstein, 1994). Also, it was observed in the studies which investigated curiosity, academic success and learning performances that a correlation between academic success of the students and their curiosity levels existed among the students (Loewenstein, 1994; Reio, 1997).

Various definitions were made by the theorists about the motives of curiosity. Piaget (1952) defines curiosity as a requisite for knowledge increase, Bruner (1966) as an essentiality for the survival of not only humans but also other species, Freud (1915) as a thirst for information, Hebb (1955) as a natural inclination of the organism towards cognitive processes, Maslow (1970) as a crucial element in psychological development of the individual (Cited by Reio, 1997). Turkish Language Association defines curiosity which is the driving force for lifelong learning as an urge to understand and to learn, as a desire to acquire and to do, as a keenness and eagerness to be occupied with something. According to Maw and Maw (1968), curious individuals react against the new, different, mysterious and opposite situations around positively and feel the necessity to learn about environment and themselves more, attempt new experiments and analyze the environment better and are insistent during investigations (Cited by Köymen, 2002).

Facione and Sanchez (1995) emphasized that individuals with critical thinking demonstrated seven different tendencies while making decisions and that one of these tendencies was curiosity. Berlyne (1960, 1962) explains the theory of curiosity with two types of curiosity: perceptual curiosity and epistemic curiosity. Perceptual curiosity leads to an increase in impulsive perceptions. In other words, organism organizes itself in order to get information. As for epistemic curiosity, it is a motivational situation that occurs after the relief caused by the search and achievement of information (Noone, 1994; Fulcher, 2004). Berlyne (1960, 1962) suggests that perceptual curiosity is a common trait among both animals and humans but epistemic curiosity exists among humans more thanks to their abilities of learning and memory (Fulcher, 2004). Also; Berlyne (1960, 1962) classifies curiosity as specific curiosity -being willing to search for a part of information- and diversive curiosity -being willing to search for a more general stimulus-.

As for Keller (1983), the following comments are made about curiosity:

1. Stimulation of perceptual curiosity is easier than epistemic curiosity.
2. Sensitiveness and reactivity against an unexpected stimulus is important in life.
3. A continual curiosity is needed for a meaningful learning.
4. To maintain and to improve curiosity is a situation in which teacher tests his own strength; for which the teacher should have epistemic curiosity (cited by Köymen, 2002).

Curiosity is a concept that affects human behaviors in all phases of our lives both positively and negatively. Curiosity is a driving force that affects the development of the children (Stern, 1973 and Wohlwill, 1987) and is identified as one of the important motivational tools (Day, 1982). According to what Köymen (2002) cited (Deci and Ryan, 1985; Kohn, 1991; Lepper and Greene, 1975; Raffini, 1993); motivational problems not seen in the preschool children emerge from the third class of primary school and Köymen claims that most of these students recognize the school subjects as silly, routinized, boring and irrelevant to the daily life according to the findings of these researches made under different conditions and with different measures. In the traditional or teacher-centered teaching method; external inspection is used, which prevents development of internal inspection. Motivational learning approach discovers internal motivation instead of external inspection which makes the students dependent on external factors and alienates them to learning. Free searching, testing one's own strength, attaining outcomes/results and problem solving are basics of internal motivation. According to this approach, individual gets a more meaningful learning not when others want him to learn or when it is necessary but when he wants to learn upon his request (<http://cepkpss.blogcu.com/guduleyici-ogrenme/6644041>).

Aim of the Study

It is known that learning occurs automatically in any learning and teaching process when curiosity motive is activated because curiosity is –in a sense- accepted as igniter of learning process and teachers are recommended to use such phases of teaching as drawing attention and arousing attention more carefully (Demirel and Co kun, 2009); which is true for physical education and sports, too. Physical education program at schools are designed with knowledge that includes basic, specialized and sport-specific movement-abilities and physical activities that the students can use in life so that they can acquire emotional and social characteristics and can participate in health promoting and health preventing activities for life long (Temel and Av ar 2008). To attain these goals is only possible with active participation of students, opportunities of learning by experience and active learning methods. In this regard, physical education teachers should improve themselves in order to implement different and modern course practices. Therefore, we are of the opinion that only those teachers who possess curiosity motive can start and improve their own learning process, provide internal motivation by triggering sense of curiosity among the students and thus can prepare a meaningful learning setting. So, the purpose of research is to determine the curiosity level of physical education and sports teachers and the sub-question of the study were as follows:

1. What is the level of curiosity of physical education teachers?
2. Does the level of curiosity of physical education teachers vary in terms of gender, age, professional length of service and marital status?

METHOD

Screening model was used in this study in order to determine the curiosity level of physical education and sports teachers.

Study Group: The population of the research was composed of 300 physical education teachers working at the state high schools in Kayseri during the 2011-2012 academic year.

Sample was made up by a total of 230 physical education teachers [170 male teachers and 60 female teachers; ($\bar{x}_{age} =$

34.63 ± 18.47 ; ($\bar{x}_{length\ of\ service} = 8.83 \pm 5.74$)]. Table 1 included the data about physical education teachers.

Table 1. The data about physical education teachers

Variables		n	%
Gender	women	60	26.1
	men	170	73.9
Age	23-30 years	82	35.7
	31 and above	148	64.3
Length of service	5 years and below	79	34.3
	6-10 years	68	29.6
	11 and above	83	36.1
Marital status	Married	177	77.0
	Single	53	23.0

Data Collection Tool:

The data collection tool was consisted of two parts: the first part included "Personal Information Form" and the second part included "The Curiosity Index (CI-3)" which was developed by Ainley (1987) (Cited by Fulcher, 2004) and adapted into Turkish by Demirel and Co kun (2009). The index has two subscales: breadth (27 items) and depth (20 items). Breadth is one's searching for information of comprehensive content and diversity. An individual with breadth subscale of the Curiosity Index intends to have encouraging experiences. Depth is one's curiosity for a specific subject, idea or person and his attempts to learn about them in a continuous way. An individual with depth subscale of the Curiosity Index intends to search about his personal field of interest or topic in detail as far as possible (Fulcher, 2004; cited by Demirel and Co kun, 2009). Curiosity index is composed of a total of 47 items. It is 6-point Likert type index. The minimum score to be obtained from the index is (47x1) 47 while the highest score is (47x6) 282. Cronbach alpha coefficient in the study was .87 (27 items) for breadth subscale, .87 (20 items) depth subscale and .93 (47 items) for the index.

Data Collection: Curiosity Index was administered to the physical education teachers who worked in Kayseri during 2011-2012 academic year. Prior to this study, the teachers were informed of the purpose of the research and the importance to answer frankly was explained. It took nearly 10 minutes to fill in the index.

Data Analysis: In data analysis descriptive statistics, frequency (n), percentage (%), mean (\bar{x}) and standard deviation (Sd) were utilized. In order to explore the differences, non-parametrical tests Mann-Whitney U and Kruskal Wallis tests were used because variables of gender, age, marital status and length of service did not follow a normal distribution and did not meet homogenic conditions. For all analyses, statistical significance was defined by a probability level of $P < 0.05$.

FINDINGS

Findings about the first sub-question:

The first sub-question of the study was "What is the level of curiosity of physical education teachers?" Descriptive statistical results about the curiosity levels of the teachers were presented in Table 2.

Table 2. Descriptive statistical results about the curiosity levels of the teachers.

Subscales	n	min	max	\bar{x}	sd
Depth	230	48	118	93.05	12.53
Breadth	230	68	155	120.04	16.24
Curiosity Index Total	230	110	268	213.09	27.10

The mean depth subscale score of the Physical Education Teachers was $\bar{x}=93.05\pm 12.53$, mean breadth subscale score was $\bar{x}=120\pm 16.24$ and mean total index score was $\bar{x}=213.09\pm 27.10$. When it was considered that the highest score of the

scale was 282; it may be suggested that the teachers obtained scores above the average. The statements that yielded the highest scores that teachers obtained from the depth and breadth subscales were taken and presented in Table 3.

Table 3. The statements that yielded the highest scores that teachers obtained from the depth and breadth subscales

DEPTH ITEMS	\bar{x}	sd
1. In order to know a subject in depth , I like learning everything possible about it.	5.20	.96
5. I continue to do an activity until I finish it.	5.11	1.05
32. I would like to learn as much as possible about a subject I am interested in.	5.03	1.05
BREADTH ITEMS		
11. I like different things in my life.	5.01	1.01
46. I like refreshing my day with different activities.	4.97	1.11
10. I find what draws my attention easily because I like many things.	4.92	1.06

The 1st statement $\bar{x}=5.20\pm .96$, the 5th statement $\bar{x}=5.11\pm 1.05$ and the 32nd statement $\bar{x}=5.03\pm 1.05$ that reflected the depth subscale of the index yielded the highest mean scores while in breadth subscale, the 11th statement $\bar{x}=5.01\pm 1.01$, the 46th statement $\bar{x}=4.97\pm 1.11$ and the 10th statement $\bar{x}=4.92\pm 1.06$ gave the highest mean scores. Mean score of the statements of the depth subscale was found to be (93.05/20) 4.65; mean score of the statements of the breadth subscale was found to be (120.04/27) 4.45 and mean

curiosity index score was (213.09/47) 4.53. It may be said that teachers' mean scores of depth statements were higher than their mean scores of breadth statements.

Findings about the second sub-question:

The second sub-question of the study was "Does the level of curiosity of physical education teachers vary in terms of gender, age, professional length of service and marital status?" Results about the curiosity index scores of the physical education teachers in terms of gender were presented in Table 4.

Table 4. U-test results of curiosity scores in terms of gender

Subscales	GENDER	n	Median	Z	P
Depth	Women	60	142.29	-3.629	.000*
	Men	170	106.04		
Breadth	Women	60	137.78	-3.017	.003*
	Men	170	107.64		
Curiosity Index Total	Women	60	141.05	-3.460	.001*
	Men	170	106.48		

*p<0.05

As the result of the Mann Whitney-U test which was performed to determine whether or not teachers' mean scores of depth and breadth subscales and mean total score of Curiosity Index showed a significant difference in terms of "gender" variable; the difference between the mean scores of the groups was found to be statistically

significant (p<0.05). Female physical education teachers' mean scores of depth and breadth subscales and mean total score of Curiosity Index were higher than male physical education teachers. Results about the curiosity index scores of the physical education teachers in terms of age were presented in Table 5.

Table 5. U-test results of curiosity scores in terms of age

Subscales	AGE	n	MEDIAN	Z	P
Depth	23-30 years	82	139.09	-4.004	.000*
	31 years and over	148	102.43		
Breadth	23-30 years	82	135.35	-3.371	.001*
	31 years and over	148	104.49		
Curiosity Index Total	23-30 years	82	137.83	-3.789	.001*
	31 years and over	148	103.13		

*p<0.05

As the result of the Mann Whitney-U test which was performed to determine whether or not teachers' mean scores of depth and breadth subscales and mean total score of Curiosity Index showed a significant difference in terms of "age" variable; the difference between the mean scores of the groups was found to be statistically

significant (p<0.05). Mean scores of depth and breadth subscales and mean total score of Curiosity Index of physical education teachers aged 30 years were higher than physical education teachers aged 31 years.

Results about the curiosity index scores of the physical education teachers in terms of length of service were presented in Table 6.

Table 6. Kruskal Wallis test results of curiosity scores in terms of length of service.

Subscales	Length of service	n	Median	X ²	P
Depth	1-5 years	79	136.72	12.857	.002*
	6-10 years	68	109.58		
	11 years and over	83	100.58		
Breadth	1-5 years	79	133.77	9.566	.008*
	6-10 years	68	110.11		
	11 years and over	83	102.52		
Curiosity Index Total	1-5 years	79	136.24	12.104	.002*
	6-10 years	68	108.48		
	11 years and over	83	101.51		

*p<0.05

As the result of the Kruskal Wallis test which was performed to determine whether or not teachers' mean scores of depth and breadth subscales and mean total score of Curiosity Index showed a significant difference in terms of "length of service" variable; the difference between the mean scores of the groups was found to be statistically significant ($p < 0.05$). Mean scores

of depth and breadth subscales and mean total score of Curiosity Index of physical education teachers whose length of service was between 1 and 5 years were higher than physical education teachers whose length of service was 6 years. Results about the curiosity index scores of the physical education teachers in terms of marital status were presented in Table 7.

Table 7. U test results of curiosity scores in terms of marital status.

Subscales	marital status	n	Median	Z	P
Depth	Married	177	107.61	-3.288	.001*
	Single	53	141.85		
Breadth	Married	177	106.17	-3.888	.000*
	Single	53	146.66		
Curiosity Index Total	Married	177	106.23	-3.850	.000*
	Single	53	146.44		

* $p < 0.05$

As the result of the Mann Whitney-U test which was performed to determine whether or not teachers' mean scores of depth and breadth subscales and mean total score of Curiosity Index showed a significant difference in terms of "marital status (being married or being single)" variable; the difference between the mean scores of the groups was found to be statistically significant ($p < 0.05$). Mean scores of depth and breadth subscales and mean total score of Curiosity Index of single physical education teachers were higher than married physical education teachers.

DISCUSSION AND CONCLUSION

The aim of the study was to determine the curiosity level of physical education and sports teachers and to discover whether or not the curiosity level changed in terms of the variables "gender, age, marital status and length of service". In the literature screening, it was noted that there were studies on curiosity motive of the university students (Demirel and Co kun, 2009; Deringöl et al., 2010; Gülten et al., 2010).

Mean curiosity index score of the teachers was 213.09 In light of this finding; it

may be argued that the teachers' curiosity levels were above the average. The study of Demirel and Co kun (2009) on the university students who studied at different faculties reported a higher mean curiosity index score (234.66) and the study of Deringöl et al. (2010) on the candidate teachers revealed a result (212.86) similar to ours. Besides, mean scores of depth items were higher than mean scores of breadth items; which then made us conclude that teachers wanted to examine a special theme or area in which they were extremely interested and therefore, they were eager to show an interest for any subject or topic they liked instead of focusing on one subject or topic alone.

When mean curiosity index scores of the physical education teachers were analyzed in terms of "gender" variable, it was seen that the difference was higher on behalf of female physical education teachers; which indicated the fact that curiosity characteristics of the female physical education teachers were more dominant as compared with male physical education teachers. The study of Demirel and Co kun (2009) on university students explored that the curiosity level of the male university students was higher. Yet, many other studies on university students found out that gender did

not have an effect upon the curiosity level (Kürüm, 2002; Tokyürek, 2001; Çekiç, 2007; Özdemir, 2005; Saçlı 2008; Saçlı and Demirhan 2008, Certel et al. 2011). On the other hand, Deringöl et al. (2010) drew attention to the result that candidate female teachers obtained higher scores of depth and breadth subscales and higher total score of Curiosity Index than candidate male teachers; which was in agreement with our study. In this sense; it may be concluded that female physical education teachers were more eager in terms of searching a topic in detail, participating in different activities and refreshing their lives than male physical education teachers.

When mean curiosity index scores of the physical education teachers were analyzed in terms of "age" variable, it was seen that the depth and breadth scores of those aged 30 were higher than those aged 30. It may be said that teachers who are younger want to have various experiences encouraging and are keener to learn about the topics they are interested in more. When mean curiosity index scores of the physical education teachers were analyzed in terms of "length of service and marital status" variables; we concluded that those teachers whose length of service was shorter and who were single were more ambitious in terms of spending more time on a topic they are interested in, trying new things, participating in different activities and focusing on a specific topic for a longer time compared to those whose length of service was longer and who were married.

As a conclusion, it was found out that scores of depth and breadth subscales and total score of Curiosity Index of those physical education teachers who were female, younger, single and whose length of service was shorter were higher. It is of high importance that teachers should acquire curiosity-motive which is a characteristic of lifelong learning individuals and is defined as one of the most significant motivators in education (Day, 1982; Akkoyunlu, 2008). In this sense; teachers should be provided with various activities that increase their curiosity levels both during their education and on-job trainings, their abilities of research, inquisition and etc. should be improved and eventually their abilities to access and to produce information should be enriched. It is thought that studies to explore different factors of curiosity and to compare curiosity levels of teachers from different branches will make significant contributions to the literature.

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