



<http://doi.org/10.22282/ojrs.2020.65>

EXAMINATION OF QUESTIONING SKILLS OF STUDENTS IN PHYSICAL EDUCATION AND SPORTS SCHOOLS IN TERMS OF SOME VARIABLES

¹Hayrettin GÜMÜŞDAĞ, ²Mehmet AYDOĞAN

¹Yozgat Bozok University, School of Physical Education and Sports, Yozgat, TURKEY

²Ankara University, Institute of Health Sciences, Ankara, TURKEY

ABSTRACT

The aim of this study is to examine the questioning skills of students studying in physical education and sports schools in different universities according to some variables. A total of 419 students from Karabük University, Kırıkkale University and Hittite University participated in the study as volunteers. As a result of the analyses, it was determined that there was a significant difference between the gender variable and the questioning skills of the students participating in the study and that the questioning skills scores of the female students were higher. There was a significant difference between the type of branch and the interrogation skills of the students who participated in the study. In the lower dimension of controlling knowledge, students who play team sports, and in the lower dimension of self-confidence, students who play individual sports have higher interrogation skills. Knowledge acquisition between students with the college they attended inquiry skills sub-dimensions in the Hittite University, and between Cornell University and Yale University, Kırıkkale University, and Yale University between $p < 0.05$

there was a statistically significant difference at an alpha level of belonging to the university that looking at the scores, the information of the size of the sub to the highest questioning skills were students of the University of Hittite, then Karabuk University of, the lowest interrogation skills were found to belong to Kırıkkale University students. It was observed that there was a statistically significant difference between the Department of Physical Education and sports teaching and the Department of coaching and Sports Management in the lower dimension of self-confidence and the Department of Physical Education and sports teaching and the Department of coaching and Sports Management in the lower dimension of self-confidence, the Department of questioning skills in the lower dimension of. As a result, the study revealed that gender, university education, branch type and Department variables had an effect on questioning skills..

Key Words: Questioning, Skill, Age, Gender, Self-Confidence

INTRODUCTION

TSIS, “according to the job question”, “asking questions and by giving answers on a subject research” is defined as (www.tdk.gov.tr). Questioning, exploring, show interest, be motivated, problem finding, hypothesis building, problem solving, thinking, build relationships, and the means of creating meaning (Delcourt and McKinnon, 2011).

Questioning is a form of thinking. The ability to question is a human skill that enables the individual to live more in harmony with the environment and nature he is involved in, and to use the opportunities that nature has given him to meet his needs. Individuals have undergone an active and challenging process of inquiry in order to determine the goals of their lives, to make predictions before encountering a problem, to provide solutions to the problems encountered, to uncover new things and to use the products obtained (Kazancı, 1989; akt. Aldan Karademir, 2013).

It is accepted that Socrates first used the concept of questioning. Socrates initiated a disciplined inquiry process by exploring basic facts about the inner workings of the natural world and questions about the concept of ethics, starting with the idea that “all he knows knows nothing” (Friesen and Scott, 2013). According to Socrates, thinking takes place through questions. Socrates described his method as “a method based on revealing the truths that are hidden in the mind of the person by carefully arranged questions in advance, thus making him find the truth.” With this, “he applied geometry theory to a slave from teaching,” Menon dialogue” method by going from easy to difficult, from general to private and from events to conclusion has made the slave find the truth” (Aydin, 2001).

According to John Dewey, information comes into being when a deep inquiry is made, rather than when it is started to be considered. Then it develops with its application and comparison to the individual's life. John Dewey's understanding of education is based on a student-centered understanding. Students need to learn by living by doing rather than filling their brain with a pile of memorised information. (Yeşiltaş and Kaymakçı, 2009). Hence the skill of questioning John Dewey; he has defined it as asking questions and searching for answers, revealing new information while collecting information, reflecting on what he has found and newly revealed information (Tashkoyan, 2008).

When the field type was examined, it was observed that there were 3 types of questioning. These:

1. Structured questioning: this type of questioning is important for students to adapt to interrogation skills and practices of this kind, to learn and comprehend the process and steps of questioning. The subject is passed on by the teacher. It gives students questions to investigate. Study

details and to-do work are given to students in advance. Because everything is given by the teacher, the students are not prompted to think, they are closed-ended (Kaplan Parsa, 2016; Tashkoyan, 2008; Karapınar, 2016).

2.Open-ended inquiry: students take responsibility for the issues they wish to investigate. They decide what path they need to follow. In this type of questioning, the teacher is not completely passive. There is student-teacher cooperation. Students are allowed to think more because they have created and resolved their questions themselves. Thus students gain senior thinking skills (Kaplan Parsa, 2016; Kaya and Yılmaz, 2016; Karapınar, 2016).

3.Inquiry in education: inquiry in education relies on children taking an active role in changing their understanding, following questions, or addressing issues that attract their attention (Harlen, 2014). Inquiry helps students actively research, analyze, communicate, and reflect information (Beshears, 2012). The goal in this inquiry-based education is to motivate students, improve their language, mental and social skills, increase their level of thinking, understanding and learning, and facilitate education, learning and evaluation processes (Ontario, 2011; akt. Sun, 2016).

In line with this information obtained from the field paper, it was aimed to examine the questioning skills of the students of Physical Education and Sports High School in different universities according to some variables and the answers to the following sub-problems were sought.

- Is there a significant difference between students ' questioning skills and gender?
- Is there a significant difference between the student's questioning skills and the University variable?
- Is there a significant difference between the students ' questioning skills and the Department variable they read?
- Is there a significant difference between the students ' questioning skills and the type of branch?

MATERYAL AND METOT

Model of Research

In this study, the screening model was used to examine the interrogation skills of Physical Education and Sports High School students studying at different universities according to some variables. This model is a scan of the entire universe or sample taken from it in order to reach a general judgment about the universe in a universe of many elements (Karasar, 2014).

Model of Research

The study group consists of 419 students from Karabük University, Kırıkkale University and Hittite University who study at the Higher School of Physical Education and Sports.

Data Collection Tools

The validity and reliability study of the inquiry skills scale was conducted by Karademir and Saracaloğlu in 2013. The scale is a likert-type scale. In the stable structure formed as a result of explanatory factor analysis, fourteen items on the scale were collected under three factors. Of the remaining 14 items on the scale, 6 are included in "acquiring knowledge", 5 in "controlling knowledge", and 3 in "self-confidence" factor. At the end of factor analysis, the factors of the scale were determined and the factors were named according to the theoretical basis. The cronbach-alpha value for each factor in the scale and the entire scale was calculated. Cronbach-alpha reliability coefficients for "knowledge acquisition".76; for "controlling knowledge".66 and for "self-confidence".78 is for the sum of the scale .It is 82.

The socio-demographic data form was created by examining the field and selecting the appropriate questions for the purpose of the study. This form consists of questions that indicate the age, gender, University, Department and nationality status of the Working Group.

Analysis of the Data

Within the framework of the aim of the research, the data collected for the sub-problems for which answers are sought were first processed into the data coding form. All 419 data were included in the study. Statistical analyses were then applied on the data transferred to the SPSS 24.0 package program.

In statistical representations of the data, frequencies, minimum and maximum values are presented. Skewness and kurtosis values with the test which is showing normal distribution of data was tested for normal distribution parametric tests were applied is shown. The T test and one way ANOVA test were used for the University and department where he studied.

In Table 1, the points were found to be in the range ± 2 . Cooper-Cutting describes skewness and flatness values in the range of ± 2 as an appropriate case for normality, while Büyüköztürk interprets these values in the range of ± 1 as not deviating from normality.

Table 1. Normality distributions of data

	N	Skewness	Kurtosis
İnformation	419	,476	,473
Bilgiyi Kontrol Etme	419	285	-,147
Controlling Information	419	1,233	1,433

FINDINGS

Table 2. Demographics of the Working Group

		f	%
Cinsiyet	Erkek	229	54,7
	Kız	190	45,3
	Toplam	419	100
Yaş	18-20 Yaş	112	26,7
	21-23 Yaş	200	47,7
	24-26 Yaş	98	23,4
	27 ve üzeri Yaş	9	2,1
Üniversite	Hitit Üniversitesi	100	23,9
	Kırıkkale Üniversitesi	150	35,8
	Karabük Üniversitesi	169	40,3
Bölüm	Beden Eğitimi ve Spor Öğretmenliği	185	44,2
	Antrenörlük Eğitimi	112	26,7
	Spor Yöneticiliği	122	29,1
Millilik	Milli Sporcu	92	22
Durumu	Milli Sporcu Değil	327	78

45.3% of the students who participated in the study were female students and 54.7% were male students. 26.7% of pupils were aged 18-20, 47.7% were aged 21-23, 23.4% were aged 24-26, and 9% were aged 27 years or over. 23.9% of the students study at Hittite University, 35.8% at Kırıkkale

University and 40.3% at Karabük University. 44.2% of the students are teaching physical education and Sports, 26.7% are teaching coaching and 29.1% are studying in the Department of Sports Management. 32.7% of students play individual sports, while 67.3% play team sports. Again, 22% of students are national athletes, while 78% are not national athletes.

Is there a significant difference between students ' questioning skills and gender?

Table 3. Results of the analysis between the questioning skills and gender of the students involved in the study

	Gender	n	X± Ss	t	p
Information	Female	190	2,10±,0,28	3,495	0,001*
	Male	229	2,01±0,23		
Controlling Information	Female	190	1,96±0,34	-0,563	0,574
	Male	229	1,98±0,28		
Self-confidence	Female	190	2,29±0,51	0,497	0,619
	Male	229	2,26±0,56		

When looking at Table 3 with inquiry skills of the students that participated in the research gender variable sub-dimensions of analysis results between the sub and the size information of $P < 0.05$ statistically significant difference at the alpha level when an information-control and self-confidence sub-dimensions, and a significant difference was not found between the variables of gender ($p < 0.05$). It was observed that the significant difference in the lower dimension of information acquisition was due to the scores of female students.

Is there a significant difference between the students ' questioning skills and the type of branch?

Table 4. Results of the analysis between the questioning skills of the students and the branch type variable

	Branch Type	n	X± Ss	t	p
Information	Individual Sports	137	2,04±,0,28	-0,665	0,506
	Team Sports	282	2,05±0,25		
Controlling	Individual Sports	137	1,92±0,30	-2,204	0,028*

Information	Team Sports	282	2,00±0,31		
Self-confidence	Individual Sports	137	2,37±0,60	2,385	0,018*
	Team Sports	282	2,23±0,50		

According to Table 4, statistical analysis of the students' questioning skills and branch types showed that there was a statistically significant difference between the knowledge Control and self-confidence sub dimensions and the branch type at the level of $P < 0.05$ Alpha, and there was no significant difference in the knowledge acquisition sub dimension. When the scores were examined, it was found that the students who played team sports in the lower dimension of controlling knowledge and the students who played individual sports in the lower dimension of self-confidence had higher interrogation skills.

Is there a significant difference between the student's questioning skills and the University variable?

Table 5. Results of the analysis between the questioning skills of the students involved in the study and the University variable they studied

	University	n	X± Ss	F	P	Tukey HSD
Information	Hitit University	100	2,13±0,31			1-2*
	Kırıkkale University	150	1,99±0,24	9,044	0,000*	1-3*
	Karabük University	169	2,05±0,23			1-3*
Controlling Information	Hitit University	100	1,95±0,32			
	Kırıkkale University	150	1,96±0,28	1,116	0,328	
	Karabük University	169	2,00±0,32			
Self-confidence	Hitit University	100	2,30±0,59			
	Kırıkkale University	150	2,32±0,54	1,410	0,245	
	Karabük University	169	2,22±0,50			

When looking at Table 5 knowledge acquisition between students with the college they attended inquiry skills sub-dimensions in the Hittite University, and between Cornell University and Yale University, Kırıkkale University, and Yale University between $p < 0.05$ there is a statistically significant difference at the alpha level that is, information control, and self-confidence was not a significant difference between universities found in lower dimensions. When we look at the scores of universities,

it is seen that the students of Hittite University have the highest interrogation skills in the lower dimension of information acquisition, followed by Karabük University, and the lowest interrogation skills belong to the students of Kırıkkale University.

Is there a significant difference between the student's questioning skills and the Department variable they are studying?

Table 6. Results of the analysis between the questioning skills of the students and the Department variable they studied

	University	n	X± Ss	F	P	Tukey HSD
Information	Physical Education and Sport Teaching¹	185	1,92±,0,21	50,649	0,002*	1-2*
	Coaching Education²	112	2,18±0,27			1-3*
	Sports Management³	122	2,12±0,23			
Controlling Information	Physical Education and Sport Teaching¹	185	1,99±0,30	0,554	0,328	
	Coaching Education²	112	1,95±0,33			
	Sports Management³	122	1,98±0,30			
Self-confidence	Physical Education and Sport Teaching¹	185	2,44±0,69	16,150	0,001*	1-2*
	Coaching Education²	112	2,12±0,33			1-3*
	Sports Management³	122	2,17±0,33			

Table 6 knowledge acquisition between students with inquiry skills of their department when looking at the sub-Department of physical education and sports coaching education and sport management departments among dimension, self-confidence sub-dimension of physical education and sports coaching education and Sport Management in the department between various departments $p < 0.05$ a statistically significant difference at an alpha level is that there is a significant difference between the bottom of the sections when it comes to obtaining information was not found. When the scores of the departments were examined, it was found that the highest level of questioning skills was the Coaching Education Department (2,18±0,27) in the lower dimension of acquiring knowledge, and the lower level of self-confidence was Physical Education and sports teaching (2,44±0,69).

DISCUSSION AND CONCLUSION

45.3% of the students who participated in the study were female students and 54.7% were male students. 26.7% of pupils were aged 18-20, 47.7% were aged 21-23, 23.4% were aged 24-26, and 9% were aged 27 years or over. 23.9% of the students study at Hittite University, 35.8% at Kırıkkale University and 40.3% at Karabük University. 44.2% of the students are teaching physical education and Sports, 26.7% are teaching coaching and 29.1% are studying in the Department of Sports Management. 32.7% of students play individual sports, while 67.3% play team sports. Again, 22% of students are national athletes, while 78% are not national athletes.

Is there a significant difference between students ' questioning skills and gender?

It was determined that while there was a significant difference between the gender variable and the lower dimensions of questioning skills, there was no significant difference between the lower dimensions of knowledge acquisition and the lower dimensions of knowledge Control and self-confidence and the gender variables. In the lower dimension of information acquisition, female students had higher interrogation skills scores.

In the master's thesis by Işık (2011), the questioning skills of Primary School students were examined and it was determined that there was a significant difference between the questioning skills of students by gender in favor of female students. It supports the findings of the research at hand with the research findings of the light (2011).

In addition, some studies comparing different characteristics of students such as their skills, perceptions, attitudes and motivations according to their gender have similar results (Khamis, Dukmak and Elhoweris, 2008; Sezen and Paliç, 2011; Yildirim, Hacıhasanoğlu, Karakurt and Türklen, 2011). Martin (2003) also noted in his study that female students value school more than male students, are better focused on learning, are more successful and patient in planning, implementing and managing work. These studies support the findings from the research.

Some studies have shown that the interrogation skills scores of male students are higher than those of female students (Aldan Karademir and Saracaloğlu, 2017; Badr and Duman, 2017; Elmalı and Yıldız, 2017; Şahin et al., 2017; Yılmaz and Karamustafaoğlu, 2015; Aldan Karademir, 2013). These studies contrast with the results from the research.

According to this, it is thought that female students' ability to work in harmony with each other and communicate well with their teachers as a result of their more active participation in the learning process leads to higher personal perceptions of questioning skills than male students.

Is there a significant difference between the students' questioning skills and the type of branch?

Students' questioning skills with statistical analysis is performed of whether a statistically significant difference between the types branch checking the information and self-confidence with dimensions lower branch exists where a statistically significant difference between the type of information was not a significant difference in the size of the sub found. When the scores were examined, it was found that the students who played team sports in the lower dimension of controlling knowledge and the students who played individual sports in the lower dimension of self-confidence had higher interrogation skills.

According to this, it can be said that the reason why the athletes playing team sports have a high level of questioning ability is because they play with a lot of players and they need to question the information they receive from their teammates when necessary. It can be said that the high scores of the students who perform individual sports in the lower level of self-confidence are due to the need to take responsibility for participating in the competitions as a single and have confidence in themselves.

When the field was examined in the summer, it was found that there was no study examining the questioning skills of athletes engaged in individual and team sports. The results obtained from this research are expected to contribute to the field Summer.

Is there a significant difference between the student's questioning skills and the University variable?

Knowledge acquisition between students with the college they attended inquiry skills sub-dimensions in the Hittite University, and between Cornell University and Yale University, Kırıkkale University, and Yale University between $p < 0.05$ there is a statistically significant difference at the alpha level that is, information control, and self-confidence was not a significant difference between universities found in lower dimensions. When we look at the scores of universities, it is seen that the students of Hittite University have the highest interrogation skills in the lower dimension of information acquisition, followed by Karabük University, and the lowest interrogation skills belong to the students of Kırıkkale University. The difference in interrogation skills between universities is thought to be due to different variables such as the environment experienced and the region where the school is located.

When the field was examined, there was no study comparing the interrogation skills of universities. It is thought that this result from the research may have contributed to the field writing.

Is there a significant difference between the student's questioning skills and the Department variable they are studying?

It was determined that there was a significant difference between the Department of Physical Education and sports teaching and the Department of coaching education and Sports Management in the lower dimension of self-confidence and the Department of Physical Education and sports teaching and the Departments of coaching education and Sports Management in the lower dimension of knowledge acquisition.

When we look at the scores of the departments, it is seen that the Department with the highest level of questioning skills in the lower dimension of acquiring knowledge is the Department of coaching education, and in the lower dimension of self-confidence is Physical Education and sports teaching. In addition, questioning skills can vary positively or negatively depending on the student's immediate environment and the education given at the school. Accordingly, students are more inclined to get the information for their professional work coaching education physical education teacher education students from the teacher which was one of the necessary features of self-reliance carry the concept due to the confidence sub-dimension can be said to have obtained a high score in.

Aldan Karademir et al., (2019) concluded that there was significant difference between the interrogation skills of students studying in different undergraduate programs. This study supports the findings.

REFERENCES

- Aldan Karademir Ç., Saracaloğlu A.S. (2013). Sorulama Becerileri Ölçeği' nin Geliştirilmesi: Geçerlik ve Güvenirlik Çalışması. *Asya Öğretim Dergisi*. 2013,1(2). 56-65
- Aldan Karademir Ç., Çaylı B., Deveci Ö. (2019). Öğretmen Adaylarının Sorulama Becerileri ile Meraklılık Düzeylerinin İncelenmesi. *İlköğretim Online*, 2019; 18 (3): s.1157-1171.
- Aldan Karademir, Ç. ve Saracaloğlu, A. S. (2017). Öğretmen adaylarının sorulama ve eleştirel düşünme becerilerinin öğretmen öz yeterlik düzeyine etkisi. *Electronic Turkish Studies*, 12(33), 261-290.
- Aydın, M. Z. (2001) “Aktif Öğretim Yöntemlerinden Buldurma (Sokrates) Yöntemi”, *Cumhuriyet Üniversitesi İlahiyat Fakültesi Dergisi*, 5(1), 55-80.
- Beshears, C. M. (2012) “Inquiry-Based Instruction in the Social Studies: Successes and Challenges, Theses and Dissertations”, *Yüksek Lisans Tezi*, Arkansas Üniversitesi, Amerika Birleşik Devletleri.

- Bedir, T. ve Duman, B. (2017). Öğretmen adaylarının sorgulama becerilerinin incelenmesi. *Electronic Turkish Studies*, 12(18), 105-120.
- Delcourt, M.A.B. ve Mckinnon, J. (2011) “Tools for Inquiry: Improving Questioning in the Classroom”, *Learning Landscapes*, 4(2), 145-159.
- Doğanay, A. ve Ünal, F. (2006) Eleştirel Düşünmenin Öğretimi. (Edt: A. Şimşek): İçerik Türlerine Dayalı Öğretim, Ankara: Nobel Yayıncılık, (209- 264).
- Elmalı, A. G. Ş. ve Yıldız, A. G. E. (2017). Fen bilgisi öğretmen adaylarının sorgulama becerileri, epistemolojik inançları ve öğrenme stilleri. *Adnan Menderes Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 8(2), 92-108.
- Friesen, S. ve Scott, D. (2013). Inquiry-Based Learning: A Review of the Research Literature, Paper Prepared for the Alberta Ministry of Education (<https://galileo.org/focus-on-inquiry-lit-review.pdf>).
- Güneş, F. (2016) “Eğitimde Sorgulamanın Gücü”, *Bartın Üniversitesi Eğitim Fakültesi Dergisi*, 5(2), 188-204.
- Harlen, W. (2014) “Helping children’s development of inquiry skills”, *Educational Consultant, Scotland*, 1(1), 5-19.
- Işık, G. (2011). İlköğretim 6., 7. ve 8. Sınıf Öğrencilerinin Öğrenme Stilleri İle Sorgulayıcı Öğrenme Becerileri Arasındaki İlişkinin Belirlenmesi, Yayınlanmamış Yüksek Lisans Tezi, Adnan Menderes Üniversitesi, Fen Bilimleri Enstitüsü: Aydın.
- Karapınar, A. (2016) “Sorgulamaya Dayalı Öğrenme Ortamının Öğretmen Adaylarının Bilimsel Süreç Becerileri, Sorgulama Becerileri ve Bilimsel Düşünme Yetenekleri Üzerindeki Etkisi”, Yüksek Lisans Tezi, Celal Bayar Üniversitesi Fen Bilimleri Enstitüsü, Manisa.
- Kaplan Parsa, M. (2016) “İşbirlikli Sorgulamaya Dayalı Öğrenme Ortamının Yaratıcı Düşünmeye, Sorgulayıcı Öğrenme Becerilerine, Fen ve Teknoloji Dersine Yönelik Tutuma Etkisi”, Doktora Tezi, Marmara Üniversitesi Eğitim Bilimleri Enstitüsü, İstanbul.
- Kaya, G. ve Yılmaz, S. (2016) “Açık Sorgulamaya Dayalı Öğrenmenin Öğrencilerin Başarısına ve Bilimsel Süreç Becerilerinin Gelişimine Etkisi”, *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 31(2), 300-318.
- Khamis, V., Dukmak, S. ve Elhoweris, H. (2008). Factors affecting the motivation to learn among United Arab Emirates middle and high school students. *Educational Studies*, 34(3), 191-200.
- Martin, A. J. (2003). The Student Motivation Scale: Further testing of an instrument that measures school students’ motivation. *Australian journal of Education*, 47(I), 2003,88-106.
- Sezen, G. ve Paliç, G. (2011). Lise öğrencilerin problem çözme becerisi algılarının belirlenmesi. Antalya: 2nd International Conference on New Trends in Education and Their Implications (27-29 April).
- Şahin, Ç., Arcagök, S., Çetin, Ş., Mertol, H. ve Boran, G. Sınıf öğretmeni adaylarının sorgulama becerilerinin incelenmesi. *Gazi Eğitim Bilimleri Dergisi*, 3(3), 17-28
- Taşkoyan, S. N. (2008) “Fen ve Teknoloji Öğretiminde Sorgulayıcı Öğrenme Stratejilerinin Öğrencilerin Sorgulayıcı Öğrenme Becerileri, Akademik Başarıları ve Tutumları Üzerindeki Etkisi”, Yüksek Lisans Tezi, Dokuz Eylül Üniversitesi Eğitim Bilimleri Enstitüsü, İzmir
- Yeşiltaş, N.K. ve Kaymakçı, S. (2009) “John Dewey’in Eğitim Anlayışı ve Sosyal Bilgiler Eğitimine Yönelik Bazı Örnek Uygulamaları”, *Sosyal Bilimler Enstitüsü Dergisi*, (4),

- Yıldırım, A., Hacıhasanoğlu, R., Karakurt, P. ve Türkleş, S. (2011). Lise öğrencilerinin problem çözme becerileri ve etkileyen faktörler. *Uluslararası İnsan Bilimleri Dergisi*, 8(1), 905-921
- Yılmaz, Z. ve Karamustafaoğlu, S. (2015). Öğretmen adaylarının sorgulama becerilerinin farklı değişkenler açısından incelenmesi. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 25, 347-363.