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Investigation of the effect of human values on the physics achievements of high school students

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Abstract
The values define the things that a person considers important. Values, which are directly related to feelings, opinions and behavior levels of individuals, are very important for their personal improvement. This research was done to investigate the human values (responsibility, friendship, peaceful, respect, honesty and tolerance) and its relationship between the physics achievements of high-school students. The research was carried out with 303 students from three public high schools in the center of Konya in 2017-2018 academic year. The 46.2% (f=140) of the participants were male students, while 53.8% (f=163) of participants were female. The data of this research were obtained by the "Human Values Scale (HVS)" developed by Dilmaç (2007). The obtained data were analyzed by frequency, percentage, correlation and independent samples-t test in SPSS 20 program. The findings have figured out that there isn't a significant difference between male and female students' mean scores of responsibility, friendship, peace, respect, honesty and tolerance subscales scores. Also, a positive correlation between the achievement of physics course and responsibility sub-dimension of human values scale, while there was not found any significant relationship between the achievement of physics with friendship, peace, respect, honesty and tolerance sub-dimensions, respectively.

Keywords: Human values; gender; physics achievement, high school.

INTRODUCTION

Advanced technology depends on the progress in physics science in modern world. The level of power of the leading countries is proportional with their technological improvements. The people well-trained in physics are capable of understanding different technological improvements and can use the physics principals for getting over the problems in their daily life.

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It means that physics facilitates our lives. However, many researches showed that achievement in physics science decreases day by day (Council, 2001; Gok & Silay, 2008; Kaya, 2011; MacLeod, 2013; Mattern, 2002). The researches made during last decades have showed that physics attracts fewer students compared to other sciences such as chemistry, biology and mathematic. Therefore, enrollment to the department of physics in undergraduate education decreases as well (Brickhouse, 2001; MacLeod, 2013; Zohar, 2005). Physics is generally considered as one of the most problematic field of science. Most of the students define physics as a very difficult subject. In contrast the technological improvements in educational tools used in the schools, the physics achievements of the students and attitude towards physics have been decreased day by day. This problem has been realized by the physicists and science educators and it has been investigated in many studies (Gok & Silay, 2008; Hart, 2001; Kaya, 2011; Mattern, 2002; Mbajiorgu, 2006; Zohar, 2005).

As it was stated before, the century of knowledge becomes ever more dependent on technology related with the improvements in physics. Therefore the reasons that reducing the physics interest and success should be figured out as soon as possible. There are many reasons for the declining enrolment and achievement in physics. It can be stated that physics teachers' problems, lack of mathematic, attitude towards physics, students' problems, teaching methods, lack of teaching tools, lack of teaching environments and economic problems are the main reasons for the declining enrolment and achievement in physics. The enough preparation in physics at the high school level is required for high level physics education. We think that the students' problems are one of the main reasons of the decrease in physics success. Therefore, in this research we try to investigate the human values and the relationship between human values and physics achievements of the physics students at high-school.

The concept of value has been defined by different researchers in various definitions (Clouston, 2018; Güngör, 1998; Hansson, Carey, & Kjartansson, 2010; Johansson, 2017; Murray, 2018; Ulusoy & Dilmaç, 2012). For instance, Güngör (1998) defines value as "belief about whether something is desirable or not possible. According to Halstead and Taylor (1996), values are the standards which decide the correctness or incorrectness of our behaviors, opinions, and principles. Ulusoy and Dilmaç (2012) define value as the whole of beliefs that shape human behavior. In conclusions, it can be stated that the values are the basic principles which manage our lives.

The values have been categorized in different ways. For example, they have been categorized in three categories (Winter, Newton, & Kirkpatrick, 1998), in five different categories (Cohen, 1985), in two main categories (Rokeach, 1973), in ten categories (Schwartz, 1992) and in six categories (Dilmaç, 2007). A number of factors (believes, social norms, religion rules, cultures etc.) affect the formation and improvement of values. Therefore, values differ from one country to other one. On the other hand, these values which are shaped by the different cultural rules and norms have an important effect on the progress of educational systems. In this concept, values have both positive and negative effects on teaching and learning processes in different parts of the world. There are many researches related with investigation of values (Demir, 2016; Johansson, 2017; Karababa, Oral, & Dilmaç, 2018; Murray, 2018; Saini, 2016; Sanderse, 2016). As it can be seen from related literature, there are not any research which have conducted to research the values of physics students and its effect on their physics achievements. Therefore, in this research we try to determine the values of high school students and the relationship between their values and their physics achievements.

Purpose of the research

This research aimed to investigate the human values of high school students according to some variables (gender and physics achievement). Therefore, this research carried out to figure out human values of high school students and to learn if the human values of physics students

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differ in terms of gender. On the other hand, it was aimed to figure out the relationship between human values sub-dimensions and physics achievements of high school students too.

METHOD

Research Design

The general scanning model was used among the scanning models in this research. Scanning models are the research approaches that aim to describe a situation which happened in the past or still exist with its all contents (Karasar, 2009). The human values of high school students were compared in terms of gender variable. It is investigated that whether there is a significant difference between the views of students in terms of gender variable or not. This research is also a relational survey model by having this gender aspect (Erkuş, 2005). Relational survey is a research model that is conducted in order to define the relationship between two or more variables, and to obtain clues related to cause and effect relationships (Çepni, 2010; Karasar, 2009).

Participants

The research was conducted with 303 students from three public high schools in the center of Konya in 2017-2018 academic year. When the demographic features of the participants were examined, it was seen that 46.2% (f = 140) of them are male students while 53.8% (f = 163) are female students. The detailed data related with the sample of the research is given in Table 1.

Table1. The data related with participants according to different variables

Variables		Frequency	Percentage (%)
Gender	Male	140	46,2
	Female	163	53,8
	Total	303	100
Grade	9^{th} Grade	110	36,3
	10^{th} Grade	193	63,7
	Total	303	100

As it can be seen from Table 1, the sample of the research consists of 110 (36.3%) 9^{th} and 193(53.8%) 10^{th} grade students.

Data Collection Tools

Human Values Scale (HVS)

In order to specify students' human values, "Human Values Scale (HVS)" developed by Dilmaç (2007) for high school students were administered. The scale consists of 42 items in six subscales which are Responsibility, Friendship, Peaceful, Respect, Tolerance and Honesty. It is a five-point Likert scale (A: Never, B: Rarely, C: Sometimes, D: Frequently, E: Always) and could be administered individually or in groups. The items were scored as A: 1- B: 2- C: 3- D: 4- E: 5. Higher/lower scores indicated that individuals had higher/lower human values.

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Data Analysis

Frequency, mean, independent samples t-test and Pearson correlation analysis were used in order to analysis of data in research. Research data obtained in the research was analyzed with SPSS 20 program.

FINDINGS

In this section of the research the findings obtained are given in Tables 2-6. The physics achievement mean results of the participants are given in Table2.

Table2. The physics achievements mean of the participants

Gender	Frequency	Physics Achievement Mean
Male	140	70,4
Female	163	74,8
Total	303	72,6

As it is seen in Table 2, the mean value of physics success for male students is determined as 70.4 point, while it is found 74.8 point for female students. The mean of physics success result for whole students is found as 72.6 points. The data obtained from the "Human Values Scale (HVS)" is given below in Table3.

Table3. The data obtained from the "Human Values Scale (HVS)" for high school students.

Items	Never - f (%)	Rarely - f (%)	Sometimes - f (%)	Frequently - f (%)	Always - f (%)
1. I take responsibility for what I do.	17(5,6)	3(1,0)	20(6,6)	**138(45,5)**	**125(41,3)**
2. I have strong ties with my friends.	25(8,3)	5(1,7)	32(10,6)	**90(29,7)**	**151(49,8)**
3. I prefer to live in peace with all the people on earth.	**36(11,9)**	**39(12,9)**	73(24,1)	66(21,8)	89(29,4)
4. I respect my relationships with people.	5(1,7)	7(2,3)	27(8,9)	**143(47,2)**	**121(39,9)**
5. I do not refrain from telling the truths, no matter what the results.	15(5,0)	23(7,6)	94(31,0)	**89(29,4)**	**82(27,1)**
6. I ignore the "small mistakes" of people around me.	27(8,9)	26(8,6)	89(29,4)	**92(30,4)**	**69(22,8)**
7. I do not take the tasks given in the school unless they are compulsory.	38(12,5)	67(22,1)	54(17,8)	**72(23,8)**	**72(23,8)**
8. I attach great importance to friendship.	11(3,6)	2(0,7)	21(6,9)	**100(33,0)**	**169(55,8)**
9. I solve my problems in good ways not violently.	16(5,3)	22(7,3)	85(28,1)	**113(37,3)**	**67(22,1)**
10. I believe that all people in the world are equal.	**54(17,8)**	**37(12,2)**	39(12,9)	41(13,5)	132(43,6)
11. I meet with my friends when I need their help.	**164(54,1)**	**66(21,8)**	33(10,9)	16(5,3)	23(7,6)
12. I do not hesitate to listen to my friends' troubles.	13(4,3)	5(1,7)	33(10,9)	**84(27,7)**	**168(55,4)**
13. I do not avoid the responsibilities that I	10(3,3)	2(0,7)	40(13,2)	**78(25,7)**	**173(57,1)**

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believe I will overcome.					
14. I want my friends to be with me in bad times.	21(6,9)	15(5,0)	33(10,9)	**77(25,4)**	**157(51,8)**
15. I do not consider the people in the community when I fulfill my wishes.	**72(23,8)**	**85(28,1)**	67(22,1)	47(15,5)	32(10,6)
16. I try to be a model in terms of respect for others around me.	8(2,6)	16(5,3)	69(22,8)	**116(38,3)**	**94(31,0)**
17. I don't expect a response while helping people.	10(3,3)	10(3,3)	42(13,9)	**126(41,6)**	**115(38,0)**
18. I don't treat my friend who is wrong.	66(21,8)	87(28,7)	80(26,4)	**40(13,2)**	**30(9,9)**
19. I try to fulfill the tasks that I believe on time.	11(3,6)	8(2,6)	59(19,5)	**102(33,7)**	**123(40,6)**
20. I always want to see my friends with me.	17(5,6)	10(3,3)	38(12,5)	**95(31,4)**	**143(47,2)**
21. I do not watch programs include violance.	**80(26,4)**	**68(22,4)**	82(27,1)	36(11,9)	37(12,2)
22. I can accept everyone's opinion.	**47(15,5)**	**44(14,5)**	110(36,3)	45(14,9)	57(18,8)
23. The money I earn by merit makes me happy.	10(3,3)	4(1,3)	12(4,0)	**45(14,9)**	**232(76,6)**
24. I believe in the necessity to stay away from people.	32(10,6)	71(23,4)	94(31,0)	**45(14,9)**	**61(20,1)**
25. I voluntarily take the duties assigned in the school.	**64(21,1)**	**58(19,1)**	91(30,0)	57(18,8)	33(10,9)
26. I overcome the difficulties I face, thanks to my friends.	47(15,5)	46(15,2)	76(25,1)	**101(33,3)**	**33(10,9)**
27. I try to solve the discussions by talking.	**21(6,9)**	**52(17,2)**	103(34,0)	78(25,7)	49(16,2)
28. I constantly warn my friends not to lie.	44(14,5)	58(19,1)	86(28,4)	**59(19,5)**	**56(18,5)**
29. I will not say the truth if I know that the outcome will be bad.	69(22,8)	52(17,2)	72(23,8)	**44(14,5)**	**66(21,8)**
30. I don't value people's outward appearance.	**25(8,3)**	**22(7,3)**	**87(28,7)**	98(32,3)	71(23,4)
31. I constantly warn my friends about fulfilling their responsibilities	24(7,9)	34(11,2)	95(31,4)	**75(24,8)**	**75(24,8)**
32. There is nothing I cannot do for my friends.	23(7,6)	22(7,3)	50(16,5)	**91(30,0)**	**117(38,6)**
33. The wars in the world make me unhappy.	**17(5,6)**	**16(5,3)**	68(22,4)	99(32,7)	103(34,0)
34. I tell people around me that it is important to respect others.	19(6,3)	26(8,6)	86(28,4)	**115(38,0)**	**57(18,8)**
35. I try to be honest, even at the expense of disrupt relationship with my friends.	42(13,9)	59(19,5)	73(24,1)	**62(20,5)**	**67(22,1)**
36. I forgive every mistake against me.	**63(20,8)**	**39(12,9)**	90(29,7)	53(17,5)	58(19,1)
37. I do not run out of the jobs, which belongs to my responsibilities in and out of school.	28(9,2)	19(6,3)	61(20,1)	**97(32,0)**	**98(32,3)**
38. I do everything I can for my friends.	22(7,3)	24(7,9)	72(23,8)	**100(33,0)**	**85(28,1)**
39. I believe that I can handle my problems with people by talking.	14(4,6)	15(5,0)	84(27,7)	**111(36,6)**	**79(26,1)**
40. I always respect others in my life.	13(4,3)	16(5,3)	29(9,6)	**91(30,0)**	**154(50,8)**
41. Everything is not right to say at everywhere.	22(7,3)	26(8,6)	99(32,7)	**61(20,1)**	**95(31,4)**
42. I don't welcome my friends' mistakes.	9(3,0)	21(6,9)	145(47,9)	**103(34,0)**	**25(8,3)**

When the items of each sub-dimensions are checked carefully, each sub-dimensions' items have lowest and highest frequencies are found as; Item25 have lowest and item1 have highest for responsibility sub-dimension. Item26 have lowest and item8 have highest for friendship sub-

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dimension. Item21 have lowest and item33 have highest for peaceful sub-dimension. Item22 have lowest and item4 have highest for respect sub-dimension. Item11 have lowest and item23 have highest for honesty sub-dimension. Item18 have lowest and item12 have highest for tolerance sub-dimension (Table3).

Table4. The items forming sub-dimensions of "Human Values Scale" and participants' sub-dimension values

Sub-dimensions	Items	Total Point	Mean Value
Responsibility	1,7,13,19,25,31,37	25,76	3,68
Friendship	2,8,14,20,26,32,38	27,03	3,90
Peaceful	3,9,15,21,27,33,39	23,16	3,31
Respect	4,10,16,22,28,34,40	25,51	3,64
Honesty	5,11,17,23,29,35,41	23,97	3,42
Tolerance	6,12,18,24,30,36,42	23,44	3,34

It was stated before each of the sub-dimensions of the "Human Values Scale" is formed from seven items given in Table3. These items forming six sub-dimensions and participants' total and mean point values are given in Table4.

When we analyzed the data of Table4, it is seen that the participants' highest sub-dimension value was found for Friendship by total point of 27.03 and mean value of 3.90, while the lowest one was found for Peaceful by total point of 23,16 and mean value of 3.31.

The comparison results of human values sub-dimensions with gender variable are given in Table5.

Table5. The comparison results of "Human Values Scale" sub-dimensions with gender variable

Sub-dimensions	Gender	N	$\bar{x}$	S	t	df	p
Responsibility	Male	140	25.59	4.05	-1.68	301	.09
	Female	163	25.93	3.79			
Friendship	Male	140	26.79	5.21	-.81	301	.41
	Female	163	27.15	5.04			
Peaceful	Male	140	21.62	3.98	-1.81	301	.07
	Female	163	24.70	3.48			
Respect	Male	140	25.15	4.71	-.61	301	.54
	Female	163	25.87	4.35			
Honesty	Male	140	23.26	3.30	.27	301	.78
	Female	163	24.68	3.04			
Tolerance	Male	140	22.90	3.59	-.33	301	.74
	Female	163	23.98	3.31			

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According to the findings obtained from the comparison of sub-dimensions with gender variable, there isn't a significant difference between male and female students' mean scores of responsibility, friendship, peace, respect, honesty and tolerance subscales scores (Table5).

The comparison results of sub-dimensions with physics achievement of high school students are given in Table6.

Table6. The comparison results of sub-dimensions with physics achievement of high school students.

Sub-dimensions	Physics Achievement
Responsibility	.147**
Friendship	.022
Peaceful	.016
Respect	.027
Honesty	.084
Tolerance	.031

** *p*<.01

When the Table6 is examined, it is seen that there is a positive correlation between the achievement of the physics lesson and the responsibility sub-dimension ($r = .147$, $p < .01$). But there was not found any significant relationship between the achievement of physics and friendship, peace, respect, honesty and tolerance sub-dimensions, respectively.

RESULTS AND DISCUSSIONS

This research is aimed to investigate the human values of high school students according to some variables (gender and physics achievement). In the related literature, there are many researches, which have investigated the human values in term of different variables (Hansson et al., 2010; Johansson, 2017; Karababa et al., 2018; Keng, Jung, Jiuan, & Wirtz, 2000; Murray, 2018; Saini, 2016; Sanderse, 2016; Stankevičienė, Kraujalienė, & Vaiciukevičiūtė, 2017; Winter et al., 1998; Yiğit & Dilmaç, 2011). However, there is not any one that investigated the effect of human values on the success of the students. This means that this research is the first that investigate the relationship between human values and success of the high school students. This situation figures out the importance of this research. In this part of the research, the findings obtained for high school students' physics success and their human values are discussed below.

From the findings of Table 2, the mean value of physics achievement for all participants is 72.6 points. It can be stated that the participants' physics achievement is about average level and the male students' physics achievement (70.4) and female students' achievement (74.8) is close to each other.

When the findings obtained from "Human Scale Values" are analyzed (Table3). It was found out that there are very low items such as item25 "I voluntarily take the duties assigned in the school". The 29.7% of all participants answered this item as frequently or always. This result shows that the most of the participants take the duties assigned in the school without voluntarily. Item26 "I overcome the difficulties I face, thanks to my friends". The 44.2% of all participants answered this item as frequently or always. This is a good result. Because this figured out that about the half of the sample help each other. Item21 "I do not watch programs include violence". The 24.1% of all participants answered this item as frequently or always. This result indicates that 75% of the sample watches the programs which include different kind of violence. This is not a good indication for the high-school students because that this kind of programs may cause some problems at school. Item22 "I can accept everyone's opinion". The 33.7% of all

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participants answered this item as frequently or always. According to this result, the most of the participants don't have enough tolerance. This proves the results of watching violence programs. Item11 "I meet with my friends when I need their help". The 12.9% of all participants answered this item as frequently or always". This result figures out that friendship is important for most of the participants. Item18 "I don't treat my friend who is wrong". The 23.1% of all participants answered this item as frequently or always". This shows that the participants of this study have enough tolerance to each other contrary to watching the programs have violence on television.

It can be stated that the strongest sub-dimension of human values for the participants of this study is friendship, while the weakest one was found as peaceful (Table4). This is not an expected result, because that friendship and peaceful sub-dimensions should be close to each other. However, the difference between the mean values of sub-dimensions is not a big difference.

The comparison of sub-dimensions with gender variable has showed that there was not a significant difference between them. This result indicates that sub-dimensions of the male and female students are close to each other (Table5). As it can be seen from the Table5, the biggest difference between male and female students is seen for peaceful sub-dimension. The male students' peaceful sub-dimension's mean value is found as 21.62, while is found as 24.70 for female students. This can be related with the nature of the females. Female persons are generally more polite then the males and because of this reason their peaceful sub-dimension of human value may have stronger then male's. This result of research is in good agreement with the results of the research was carried out by Sarıçam (2014). They have found out that female adolescences have significantly higher score than male adolescence in human values.

The comparison results of sub-dimensions with physics achievement given in Table6 have showed that that there is only a significant relationship between the participants' responsibility sub-dimension and their physics achievements. This means that the higher responsibility obtain the higher success in physics. This is a very important result, which shows the importance of the responsibility in our daily life at everywhere. The responsibility sub-dimension of human values, is defined as a priority (Yiğit & Dilmaç, 2011). Therefore, the students who have enough responsibility to their family, their courses, their friends and their teachers, work their lessons very carefully on time, obey the rule of the school, obey the promises they gave etc. Therefore, the school managements should help the students to learn their responsibilities. The teachers, parents and program makers should also do something to improve the students' responsibilities. From the results of Table 6, we can say that if we can teach the responsibilities and the importance of the responsibilities to our students, we can increase the success of them not only in physics lessons but also in other lessons too.

In conclusions, in order to make physics science and courses more interesting, physics educators should persuade students that physics is a part of their lives. Thus, physics educators should spend more time to find examples of physics applications in daily life and they have to show how to associate physical concepts with their daily life. On the other hand, physics teachers should also try to improve the human values of their students to increase their achievements of physics and to increase their attitudes towards physics.

Conclusions and suggestions

Based on the findings obtained the results of the study can be given as below;

1- There is not any significant difference between sub-dimensions and gender of participants.
2- There is only a significant relationship between responsibility sub-dimension and physics achievements of participants.
3- The participants have stronger responsibility are more successful in physics courses.

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From the results of this study, it can be stated that the similar studies which investigate the human values effect on the success of the students for different lessons can be repeated in different countries have different cultures. Also, it should be research whether values of teachers' and values of students' families factors on effect students' physics achievement.

References

Brickhouse, N. W. (2001). Embodying science: A feminist perspective on learning *Journal of Research in Science Teaching, 38*(8), 282-295.

Clouston, T. J. (2018). Transforming learning: teaching compassion and caring values in higher education. *Journal of Further and Higher Education, 42*(7), 1015-1024. doi:10.1080/0309877X.2017.1332359

Cohen, E. D. (1985). *Making value judgment: Principals of sound reasoning.* Malabar, Florida: Krieger Publishing.

Council, N. R. (2001). Physics in a New Era: An Overview. Retrieved from https://www.nap.edu/catalog/10118/physics-in-a-new-era-an-overview

Çepni, S. (2010). *Araştırma ve proje çalışmalarına giriş.* Trabzon: Üç Yol Kültür Merkezi.

Demir, K. (2016). The values individuals from various education level believe in. *Turkish Online Journal of Educational Technology, 2016*(DecemberSpecialIssue), 1175-1184.

Dilmaç, B. (2007). *Fen lisesi öğrencilerine insani değerler eğitiminin verilmesi ve insani değerler ölçeği ile sınanması [The assessment of the teaching of humane values which are imposed a group of science high school students by humane values scale].* (Ph.D.), Selçuk University, Konya., Konya.

Erkuş, A. (2005). *Bilimsel araştırma sarmalı.* Ankara: Seçkin Yayıncılık.

Gok, T., & Silay, I. (2008). The effects of problem-solving strategies on students' achievement, on the cooperative learning groups in physics teaching. *Hacettepe Universitesi Egitim Fakultesi Dergisi-Hacettepe University Journal of Education*(34), 116-126.

Güngör, E. (1998). *Değerler psikolojisi üzerinde araştırmalar [Researches on the psychology of values].* İstanbul: Ötüken.

Halstead, J., & Taylor, M. E. (1996). *Values in education and education in values.* London: Falmer Press, Harper and Row.

Hansson, T., Carey, G., & Kjartansson, R. (2010). A multiple software approach to understanding values. *Journal of Beliefs and Values, 31*(3), 283-298. doi:10.1080/13617672.2010.521005

Hart, C. (2001). Examining relations of power in a process of curriculum change: The case of VCE physics. . *Research in Science Education, 31*, 525-551.

Johansson, E. (2017). Values education in preschool *Values in Early Childhood Education: Citizenship for Tomorrow* (pp. 1-16).

Karababa, A., Oral, T., & Dilmaç, B. (2018). The role of perceived social support and value in prediction of school attachment among secondary school students. *Hacettepe Egitim Dergisi, 33*(2), 269-279. doi:10.16986/HUJE.2017028440

Karasar, N. (2009). *Bilimsel Araştırma Yöntemi.* Ankara: Nobel Yayıncılık.

Kaya, H., Boyuk, U. . (2011). Attitude Towards Physics Lessons and Physical Experiments of the High School Students. *European Journal of Physics Education, 2*(1), 23-31.

Keng, K. A., Jung, K., Jiuan, T. S., & Wirtz, J. (2000). The influence of materialistic inclination on values, life satisfaction and aspirations: An empirical analysis. *Social Indicators Research, 49*(3), 317-333. doi:10.1023/A:1006956602509

MacLeod, K. (2013). Physics Education and STSE: Perspectives From the Literature. *European J of Physics Education, 4*(4), 1-12.

Mattern, N., Schau, C. . (2002). Gender difference in attitude-achievement relationships over time among white middle-school students. *Journal of Research in Science Teaching, 39*(4), 324-340.

Mbajiorgu, N., Reid, N. (2006). Factors influencing curriculum development in higher education physics: A Physical sciences practice guide. Retrieved from https://www.heacademy.ac.uk/system/files/ps0075_factors_influencing_curriculum_development_in_physics_Nov_2006_0.pdf

Murray, J. (2018). Value/s in early childhood education. *International Journal of Early Years Education*, *26*(3), 215-219. doi:10.1080/09669760.2018.1490849

Rokeach, M. (1973). *The Nature of Human Values*. New York: The Free Press.

Saini, D. (2016). Relevance of teaching values and ethics in management education *Management Education for Global Leadership* (pp. 90-111).

Sanderse, W. (2016). Aristotelian action research: its value for studying character education in schools. *Educational Action Research*, *24*(4), 446-459. doi:10.1080/09650792.2015.1067161

Sarıçam, H. (2014). Ergenlerde insani değerler ve ahlaki olgunluk arasındaki ilişkinin incelenmesi. *International Journal of Human Sciences./ Uluslararası İnsan Bilimleri Dergisi*, *11*(1), 1325-1342. doi:10.14687/ijhs.v11i1.2888

Schwartz, S. H. (1992). *Universals in the content and structure of values; theoretical advances and empirical tests in 20 countries* (Vol. 25). California: Academic Press.

Stankevičienė, J., Kraujalienė, L., & Vaiciukevičiūtė, A. (2017). Assessment of technology transfer office performance for value creation in higher education institutions. *Journal of Business Economics and Management*, *18*(6), 1063-1081. doi:10.3846/16111699.2017.1405841

Ulusoy, K., & Dilmaç, B. (2012). *Değerler eğitimi [Values education]*. Ankara: Pegem Akademi.

Winter, P. A., Newton, R. M., & Kirkpatrick, R. L. (1998). The influence of work values on teacher selection decisions: The effects of principal values, teacher values, and principal-teacher value interactions. *Teaching & Teacher Education*, *14*, 385-400.

Yiğit, R., & Dilmaç, B. (2011). Ortaöğretim öğrencilerinin sahip oldukları insani değerler ile akademik erteleme davranışlarının bazı değişkenler açısından incelenmesi. *Dumlupınar Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *31*, 159-178.

Zohar, A. (2005). Physics teachers' knowledge and beliefs regarding girls' low participation rates in advanced physics classes. *International Journal of Science Education*, *27*(1), 61-77.

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