

Turkish Online Journal of Educational Technology

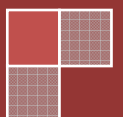
*Special Issue for INTE 2017
November 2017*

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**THE
TURKISH ONLINE
JOURNAL
OF
EDUCATIONAL
TECHNOLOGY**

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ISSN: 2146 - 7242

Indexed by

Education Resources Information Center – **ERIC**
SCOPUS - ELSEVIER

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Published in TURKEY

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Message from the Editor-in-Chief

Dear Colleagues,

We are very pleased to publish Special Issue for INTE-2017, ITICAM 2017 & IDEC 2017 conferences. This issue covers the papers presented at International Conference on New Horizons in Education, International Trends and Issues in Communication & Media Conference and International Distance Education Conference which were held in Freie Universität Berlin, Germany. These papers are about different research scopes and approaches of new developments and innovation in education, communication, media and technology.

Call for Papers

TOJET invites you article contributions. Submitted articles should be about all aspects of educational technology. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJET. Manuscripts must be submitted in English. TOJET is guided by its editors, guest editors and advisory boards. If you are interested in contributing to TOJET as an author, guest editor or reviewer, please send your CV to tojet.editor@gmail.com.

November, 2017

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Investigation of Preservice Elementary Teachers' Opinions on Science Fiction Films

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ABSTRACT

In this research, opinions of preservice elementary teachers on science fiction films are investigated in terms of gender, academic success and department. The survey research method was used in this study. In this descriptive study, a relational screening model was used from survey method to determine the current situation. The relational screening model is a type of research model that aims to determine whether there is a relationship between two or more variables and to determine the degree of the relationship. Likert type attitude scale developed by Çemrek et al (2005) was used for gathering data in this research. The data were gathered from 142 students at the department of elementary science teacher and classroom teacher education at Hacettepe University during the 2014-2015 academic year. The collected data has been analyzed and interpreted with the help of SPSS statistical programme and recommendations were given in the light of results gathered at the end of this analysis.

Key Words: Science fiction film, preservice teacher, elementary education.

INTRODUCTION

Individuals have been thinking about how humanity can create a future in a long period of time, as well as how their personal future will be, what kind of life will be encountered or what kind of life can be created (Ekem, 1990). As a result of rapid advances in science and technology, the thoughts of mankind about future are shaped. In the formation of these thoughts, the contribution of science-fiction cannot be ignored sometimes at the point of providing a basis for the next thought and sometimes applying it. The famous science-fiction writer Arthur C. Clarke asserts that "The spread of science-fiction is useful for the future of mankind" (cited: Ekem, 1992).

Orhan Duru, who created the science-fiction concept in Turkish Literature, emphasizes that science-fiction is "a phenomenon of our time" as well as not only the extraordinary scientific and technical developments in the emergence of science-fiction, but also the fact that people are devoted to the dream, extraordinary and extrinsic events as well (Reyhanoğulları, 2012). Zılhoğlu (1986) also describes science-fiction as the symbolic communication of what might be happened, occurred, lived in the open or implicit future.

By looking at the definitions of science-fiction, we can see that science-fiction can be in the service of mankind and potentially used for educational purpose. First of all, science-fiction starts and maintains its subjects in a scientific way. Science-fiction films also convey these scientific events in an audiovisual appeal (Ekem, 1992).

When we examine the historical development of science-fiction films, we can see that they are shaped according to the characteristics of the period. For example, until the 19th century, science-fiction films have dealt with current events in ways that might be possible in the future. In the following years, science-fiction films have shown that science can be used not only for the benefit of people, but also for warlike purposes. Several science-fiction films were made full of artificial people, pessimistic themes and monsters. After 1950s, we see more science-fiction films for military purposes. After the 1960s, as a result of the developments in scientific research and technology science-fiction films have become worthy of the name keeping pace with developments in cinematography (Ekem, 1992).

Ekem (1992) states some of the factors that make science-fiction films attractive are as follows; the existence of science, the existence of unreal science, the process of the future, the idea of technological products in the future, the process of good and bad concepts, appeal to individual's imagination, the effective power of cinema, ambient conditions. It can be said that the content of science-fiction films may be appropriate to the nature of science, especially in terms of the existence of science, the process of the future, and the idea of technological products in

the future. Especially in science and mathematics, imagination can be used effectively in problem solving and in spatial thinking. In this context, it should be considered the fact that science-fiction films can make possible to gain this mentality in science and mathematics (Balbağ, Yenilmez and Turgut, 2012). The functions of science-fiction films in science education and teaching are collected under three titles. These are; the effect on students' attitudes towards science, the effect of improving students' personalities, the ability to give concrete examples to some scientific issues (Ekem, 1991). When the literature is reviewed, Ekem (1990) found that science-fiction films have a positive effect on the attitudes of university students towards science. In the research conducted by Çemrek et al., it is seen that the reflection of science-fiction films on the success of the teacher candidates in the science courses is seen as positive (Çemrek et al. , 2005).

For this purpose, in this research, it was aimed to compare the views of science and classroom teacher candidates towards science fiction films in terms of gender, academic achievement, and department.

Research questions:

1. What are the views of science and classroom teacher candidates on science fiction films?
2. Are the views of science and classroom teacher candidates on science fiction films differentiated by department?
3. Are the views of science and classroom teacher candidates on science fiction films differentiated by gender?
4. Are the views of Science Teachers and Classroom Teachers towards science fiction films differentiated by academic success?

THE STUDY

The research was conducted as a relational screening model study, since it aims to determine the current situation. The screening model aims to describe the current situation as it is. The individual, object or event that subject to the research is tried to be defined without the aim of changing in its own conditions (Karasar, 2004).

The research was conducted with (133) science teacher candidates and (100) classroom teacher candidates who were studying at the undergraduate program of Science and Classroom Teaching at a state university in Ankara in the 2014-2015 academic year. The information for the study group is presented in Table 1.

In the research, personal information form and a questionnaire for science-fiction films were used. Information about gender and academic averages of the teacher candidates were obtained with the personal information form. The questionnaire for science-fiction films is a 5-point likert type measurement tool developed by Çemrek et al. (2005). In the research, the reliability (Cronbach Alpha) coefficient of the opinion questionnaire for science-fiction films was 0.95.

Table 1. Demographic Information of the participants

variables		n	%
department	Science teacher	133	57,1
	Classroom teacher	100	42,9
gender	Female	182	78,1
	Male	51	21,9
gpa (grade point average)	0-1,99	9	3,9
	2-2,49	30	12,9
	2,5-2,99	105	45,1
	3-3,49	77	33,0
	3,5-3,99	12	5,2
grade	1 st grade	52	22,3
	2 nd grade	91	39,1
	3 rd grade	53	22,7
	4 th grade	37	15,9

When Table 1 was examined, 57.1% of the participants in the survey were "Science Teacher Education" and

42.9% of them were "Primary Teacher Education" students. 78.1% of the participants were female and 21.9% were male. Looking at the academic average, it is seen that the majority of the teacher candidates have an academic average of 2.5-2.99% with 45.1%. In terms of their grade the distribution is as follows; first grade is 22,3%, second grade is 39,1%, third grade is 22,7% and fourth grade is 15,9%.

FINDINGS

Shapiro Wilk test was used for the normal distribution fitness of continuous variables to determine the opinions of science teachers and classroom teacher candidates about science-fiction films. The t-test used for comparison of two groups with normal distribution and One-way ANOVA and LSD multiple comparison tests used for comparison in more than two groups. Cronbach Alpha coefficients were calculated for reliability of the scale. SPSS for Windows version 24.0 package program was used for statistical analysis and $P < 0.05$ was accepted as statistically significant. The below mentioned tables include information about findings.

Table 2. Science and Classroom Teacher candidates' opinions on Science-Fiction films score t-Test results by department

Department	N	sd	t	P	
Science teaching	133	98,9474	31,01522	-1,381	0,169
Classroom teaching	100	104,1300	24,34128		
Total	233	101,1717	28,40343		

There was no significant difference in science and classroom teacher candidates' opinions on science fiction films when compared to the scale total scores in terms of department ($P = 0,169$). In this context, it can be said that science and classroom teacher candidates have similar views on science fiction films.

Table 3. Science and Classroom Teacher candidates' opinions on Science-Fiction films score t-Test results by gender

Gender	N	sd	t	P	
Female	182	100,9560	28,77726	-0,218	0,827
Male	51	101,9412	27,28986		
Total	233	101,1717	28,40343		

There was no significant difference in science and classroom teacher candidates' opinions on science fiction films when compared to the scale total scores in terms of gender ($P = 0,827$). In this context, it can be said that female and male teacher candidates have similar views on science fiction films.

Table 4. One-Way analysis of variance (ANOVA) results of Science and Classroom Teacher candidates' opinions on Science-Fiction films score by grade level

Grades	N	sd	F	P	
1 st grade	52	90,55	28,63	3,435	0,018
2 nd grade	91	105,81	24,11		
3 rd grade	53	101,96	33,20		
4 th grade	37	103,54	27,69		
Total	233	101,17	28,40		

According to the one-way analysis of variance (ANOVA) results of Science and Classroom Teacher candidates' opinions on Science-Fiction films score by grade level, there was a significant difference in the total scores between the grades ($P=0,018$). Subgroup differences were tested by the LSD test and are given in Table 5. The scores of the students in the first grade were statistically significantly lower than the other grades. No, significant differences were observed between the other classes.

Table 5. LSD test results

(I) grade	(J) grade	mean difference (I-J)	P
1	2	-15,25*	0,002
	3	-11,40*	0,038
	4	-12,98*	0,032
2	1	15,25*	0,002
	3	3,85	0,426
	4	2,27	0,677
3	1	11,40*	0,038
	2	-3,85	0,426
	4	-1,57	0,792

Table 6. One-Way analysis of variance (ANOVA) results of Science and Classroom Teacher candidates' opinions on Science-Fiction films score by grade point average

Average groups	N	sd	F	P
0-1,99	9	90,56	24,75	0,594
2-2,49	30	105,47	31,97	
2,5-2,99	105	101,23	28,46	
3-3,49	77	101,51	28,42	
3,5-3,99	12	95,75	21,41	
Total	233	101,17	28,40	

With the reason of the lack of frequency in the groups, 0-1,99 and 2-2,5 groups were combined and 3,5,3,99 and 3-3,49 groups were combined and the analyzes were repeated.

Table 7. One-Way analysis of variance (ANOVA) results of Science and Classroom Teacher candidates' opinions on Science-Fiction films score by grade point average (repeated)

Average groups	N	sd	F	P
0-2,49	39	102,03	30,81	0,028
2,5-2,99	105	101,23	28,46	0,972
3-3,99	89	100,73	27,55	
Total	233	101,17	28,40	

Analysis of science and classroom teacher candidates' opinions on science-fiction films by grade point averages did not show any significant difference in mean scores between the groups in terms of scale scores ($P = 0.972$).

CONCLUSIONS

In this study of Science and Classroom Teacher candidates' opinions on science-fiction films, the following results were obtained: Science and Classroom Teacher candidates' opinions on science-fiction films seem to be similar and positive. Balbağ, Yenilmez and Turgut (2012) have found that the views of science and elementary mathematics teacher candidates' opinions on science-fiction films are generally positive. Science and Classroom Teacher candidates' opinions on science-fiction films differ in terms of their grade levels. The scores of the students in the first grade were statistically significantly lower than the other grades. No significant differences were observed between the other classes. Science and Classroom Teacher candidates' opinions on science-fiction films do not change acin terms of grade point average. Studies can also be conducted with different teacher candidates for science fiction films.

When examined in the literature; It is noteworthy that science-fiction films can influence students' understanding of science and their ideas. Barnett, Wagner, Gatling, Anderson, Houle, and Kafka (2006) argue that science fiction films can have a major impact on student ideas and the conceptual understanding of scientific concepts, have a significant impact on students' scientific ideas and so they emphasized teachers and science educators should be aware of the ideas presented in science-fiction films may also be an important source of some misconception for the students. In the future studies, the effects of science fiction films on primary school students' learning the concept of science and the effects of overcoming the problem of misconceptions about science may be examined.

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