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Attitudes of prospective Turkish language teachers towards instructional technologies and material development course

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Abstract

The aim of this study is to analyze the attitudes of prospective Turkish language teachers towards the Course on Instructional Technologies and Material Development and find out whether these attitudes differ on the basis of changes in certain criteria. The sample consisted a total of 161 prospective teachers who took the Course on Instructional Technologies and Material Development offered at the Faculty of Education of a public university in Turkey in the academic year of 2018-2019. In this study, in which the descriptive survey model was used, the data were collected through the "Instructional Technologies and Material Development Course Scale" developed by Çetin *et al.* (2013). In data analysis, descriptive statistics, independent-samples t-test and one-way analysis of variance (ANOVA) were utilized. At the end of the data analysis, it was discerned that, in the attitudes of the prospective Turkish language teachers towards the Course on Instructional Technologies and Material Development, there was a moderate significant difference in terms of the 'enjoyment' and 'denial' sub-scales, whereas there was a strong significant difference in terms of the 'usefulness' sub-scale and the overall scale. In the attitudes of the prospective Turkish language teachers towards the Course on Instructional Technologies and Material Development, there was no significant difference on the basis of the class-year variable, whereas there was a statistically significant difference on the basis of the gender variable in favor of the female participants.

Keywords: Turkish language education; prospective Turkish language teachers; instructional technologies and material development; attitude.

1. Introduction

1.1. Literature review

Enabling acquired knowledge to be more useful and embedded, promoting development and distribution of information, improving students' skills such as questioning, problem-solving and reasoning, allowing the teacher to have access to primary resources and be more productive and permitting education to be independent of time and space, instructional technologies are positively

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influenced by the dizzying developments in the field of information and communication technologies to a considerable extent. Therefore, today, when the impact of technology on instructional systems is more observed and felt with each passing day, it is essential for teachers to have a certain level of technological knowledge, skills and competency (Özen, 2013). In recent years, the supportive attitude of the Tertiary Education Council of Turkey, Ministry of National Education of Turkey, and public and private institutions and agencies towards instructional technologies, their use in learning and teaching processes and development of materials gave rise to serious developments in this field. The place and importance of tools, equipment and materials, which support multiple learning environments and vocabulary improvement facilitate understanding and make learning embedded by simplifying the content, offer the opportunity to make sound observations and save time, capture attention and make remembering easier, cannot be denied in teaching (Yalın, 2003). Moreover, they serve various functions such as acting as communication, learning and teaching tools and materials, transferring information, allowing presentation of the reality and serving as objectified instructional systems and symbolization instruments (Kaya, 2006).

Instructional materials, which are all sorts of equipment and resources, either electronic or simple, used in formal and non-formal educational institutions, classrooms or laboratories and almost in every setting where learning and teaching processes are at play (Saban, 2016), may also be defined as tools offered by instructors to students in different settings during the learning process. These tools may be, on the one hand, written and visual materials, photographs and simplistic objects like models, and on the other hand, in several forms such as audio and video cassettes, CDs and web pages which require more advanced technologies to have access to their contents (Kaya, 2006).

In the design of an effective, successful and embedded education and teaching process, the use of audiovisual materials is an integral part of the teaching process (Koşar & Çiğdem, 2003). In this respect, the use of materials in the instruction process will stir the receptors of students, allow theoretical and abstract topics to be understood more easily and make the learning of such topics embedded, as well as enabling the learning process to be more entertaining (Çoban & İleri, 2013). Preparation of these materials by teachers themselves on the basis of the topic, objective and targeted accomplishments of the course or the use of already available materials by teachers intensifies the attention paid by students to the course in the learning and teaching process, raises the level of academic achievements and enhances the permanency of learning (Uzunöz, Aktepe & Gündüz, 2017). As well as making the learning process more entertaining, this course is one of the crucial courses for developing occupational knowledge inasmuch as it helps, through practice and experience, the teaching of concepts which are difficult to understand due to being abstract, makes difficult concepts more understandable through materials and indicates that learning efforts addressed to all senses of students have more permanent and motivating effects on learning and teaching processes.

The use of information technologies in tertiary education has a significant effect on education and instruction in terms of format and content. An analogous situation also applies to Turkey, and the widespread use of information technologies on individual and institutional levels makes it inevitable for several changes to occur in the field of education and instruction (Odabaş, 2004). Developments and efforts such as utilization of several technological devices and applications like computers, smart boards, web-based educational programs (FATİH etc.) and the use of internet connections at public and private educational institutions of Turkey, participation of teachers in pre-service and in-service training so as to ensure that teachers benefit from these developments and integration of information technologies into the educational system are some of the changes needed to be made in this direction (Çağıltay *et al.*, 2001). In order to put this change into practice and ensure that this change will be successful, the key role is to be played by teachers and academicians. In this respect, exploration of the decisions, experiences, approaches and attitudes of teachers, prospective teachers and academicians is important

to all researchers, planners and practitioners in this field, as it will directly affect the use of information technologies in the instruction process (Turan & Çolakoğlu, 2008).

Targeting to equip prospective teachers with cognitive, sensory and physical attitudes and behaviors necessary for their professional life, the Instructional Technologies and Material Development course is a course introduced by the Tertiary Education Council of Turkey into the Undergraduate Program for the Education of Teachers and offered by faculties of education and pedagogical formation programs as a common compulsory course.

The objective of this course may be described as ensuring that prospective teachers comprehend developments in the field of instruction technologies, the relationship between instruction technologies and communication process, the link between instruction technologies and the teaching program and the place of tools and materials in the education process. Besides, other objectives of the course may be listed as knowing the design, the designed element and the relationship of both, achievement in preparing materials to be utilized frequently in courses, getting familiarized with computer-supported instruction settings and their characteristic features (Güneş & İskender Aydoğdu, 2014). As the Instructional Technologies and Material Development course plays a critical role in empowering prospective teachers to play an effective role in the learning and teaching process and enhancing the permanency of acquired knowledge and skills, it progressively occupies a more crucial place in teacher education programs (Yazar, 2015).

Offered for a total of four hours per week as two-hour theoretical studies and two-hour practical applications and providing five ECTS credits and three course credits, the Instructional Technologies and Material Development course is a course enabling the use of today's information and communication technologies at schools and so significantly facilitating acquisition of general and specific field competencies that teachers must have. In terms of integration of technology, it is essential for prospective teachers to integrate technological knowledge, field knowledge and pedagogical knowledge within the framework of the Instructional Technologies and Material Development course. However, to what extent prospective teachers have the competencies that they should have in the framework of the course is also a matter of curiosity (Çubukçu *et al.*, 2017), and the required competencies of prospective teachers have not yet reached the anticipated level. As a matter of fact, it is asserted that one of the major reasons for the failure of technological integration to attain the desired level is about the lack of good quality courses necessary for technologically-supported education and graduation of prospective teachers with limited knowledge in this field (Gündüz & Odabaşı, 2004).

Inasmuch as the Instructional Technologies and Material Development course develops students' skills for using instructional tools, it endows students with the ability to look at matters from different perspectives and facilitates and accelerates the design of effective materials by them on topics relevant to their fields, as well as having positive implications on promotion of their creative skills (Kolburan Geçer, 2010; Saka & Saka, 2005). The necessity and functionality of the Instructional Technologies and Material Development course will be further felt assuming that the teacher has the cognitive, sensory and physical competency to prepare useful materials despite the case in which instructional tools and materials planned to be used in a course do not exist at the school, and they are unable to be provided on account of financial issues (Halis, 2001).

It is acknowledged that instructional materials which occupy a crucial place in acceleration of education quantitatively and qualitatively have several important aspects such as facilitating the motivation of students, allowing students to study more efficiently by extending the opportunity to have access to information and evaluate better, providing students with the chance to study freely and have unambiguous and investigative settings and enabling students to explore complicated ideas which the teacher fails to discern (Akkoyunlu, 2002). Kürüm Yapıcıoğlu (2016), by arguing that materials used in

the learning and teaching process have crucial functions such as facilitating learning, making learning more effective and enabling transformation of lessons learned into concrete knowledge, underlined that instructional materials are not supposed to be considered just as decoration materials embellishing teaching settings, and in this direction, these materials must be aligned with the purpose and well-designed by paying attention to the attributes of students and the topic to be taught. Instructional technology refers to a systematic approach which includes phases of designing learning and teaching processes, implementing, evaluating and developing these designs in order to reach certain special goals by employing human power and other resources together, whereas instructional materials may be described as course presentation contents created in general with the help of several tools in order to reach a specific goal (Yanpar Yelken, 2011).

Instructional materials should help enhance processes such as comparison, observation, categorization, imagination, hypothesizing, criticizing and evaluation, interpretation, decision-making, summarizing, problem-solving and designing of projects and studies. Instructional materials cannot be considered separately from other elements making up the learning-teaching process (Vatansever Bayraktar & İşleyen, 2018). Making significant contributions to the learning and teaching process, instructional materials facilitate learning by appealing to certain sensory organs of students and enable students to make sense of lessons learned (Saban, 2016). In this process, any element facilitating exchange of information between the resource and receiver may be considered as an instructional material (Çelik, 2012). It is known that instructional technology and material development are closely related concepts. In order to design accurate, current and effective materials, instructional technologies are applied (Kaya, 2006).

According to Yanpar (2009), there exist various factors affecting selection of instructional materials such as teaching goals, teaching methods, student characteristics, teaching settings, activities, attributes of the tool, design characteristics of materials, teacher attitudes, teacher skills, cost, time and accessibility, and these factors are elements of the teaching and learning system and in interaction with each other.

What matters is to further develop outputs which will be produced along with creative integration of these elements for the purpose of acquiring learning achievements by applying principles for material preparation and design (Yanpar Yelken, 2011).

Aiming to develop teaching materials (leaflets, transparent papers, slides, videos and computer-based course materials, etc.) through instructional technologies and analyze materials with different characteristics (www.atauni.edu.tr), the Instructional Technologies and Material Development course aspires to attain the following learning outcomes as skills:

- To explain the conceptual and theoretical basis of instructional technologies and material development,
- To explain concepts related to instructional technologies and material development,
- To analyze the historical development of instructional technologies,
- To explain the relationship between instructional technology and communication,
- To explain the process of instructional material preparation,
- To list the criteria for selecting and developing instructional materials,
- To explain the principles of instructional material design,
- To describe the attributes of different instructional materials,
- To explain the design process of different instructional materials,

- To explain tools and materials used in instructional settings on the basis of their characteristic features,
- To categorize tools and materials on the basis of their characteristic features,
- To explain the advantages and limitations of tools and materials,
- To compare tools and materials on the basis of purposes of their usages,
- To design an instructional material,
- To select an objective / achievement from the teaching program of the subject field,
- To prepare a course plan suitable to the selected objective/achievement,
- To develop an instructional material aligned with the design criteria,
- To evaluate different instructional materials,
- To explain the evaluation criteria of different instructional materials,
- To prepare an evaluation form in line with the evaluation criteria,
- To make a critique of an instructional material on the basis of evaluation criteria (www.anadolu.edu.tr).

When judged from these perspectives, studies which are addressed to students, prospective teachers, teachers already in service, school principals and academicians in the context of the Instructional Technologies and Material Development course offered by faculties of education as a common compulsory course which aim to analyze their views, attitudes, perceptions, competencies, etc. in relation to the course have significance.

1.2. Research questions

The objective of this study is to identify the attitudes of prospective Turkish language teachers towards the Course on Instructional Technologies and Material Development. In conjunction with the research objective, answers were sought for the questions below:

1- What is the general attitude of prospective Turkish language teachers towards the Course on Instructional Technologies and Material Development like?

2- In terms of the enjoyment, denial and usefulness sub-scales, what is the attitude of prospective Turkish language teachers towards the Course on Instructional Technologies and Material Development like?

3- On the basis of the gender variable, is there a statistically significant difference in the attitudes of prospective Turkish language teachers towards the Course on Instructional Technologies and Material Development generally in terms of the scale and specifically in terms of sub-scales?

4- On the basis of the class-year variable, is there a statistically significant difference in the attitudes of prospective Turkish language teachers towards the Course on Instructional Technologies and Material Development generally in terms of the scale and specifically in terms of sub-scales?

2. Method

This study is a survey-type study performed to analyze the attitudes of prospective Turkish language teachers towards the undergraduate course on teaching technologies. Surveying is a method of research

that aims to describe a previous or current situation as it is actually supposed to be (Karasar, 2012, p. 79).

2.1. Sample

The population of the study consisted of prospective Turkish language teachers studying in the Spring semester of the academic year of 2018-2019 at a public university located in the Eastern Anatolia Region in Turkey. The sample included a total of 161 students studying in the second, third and fourth years of the Turkish language teaching department and selected through the criterion sampling method. The selection criterion was designated as the completion of the Course on Instructional Technologies and Material Development.

Table 1 includes information on the demographic characteristics of the sample.

Table 1. Demographic Characteristics of the Sample

Variable	Characteristics	f	%
Gender	Female	125	77.6
	Male	36	22.4
Total		161	100.0
Class-Year	2nd Year	65	40.4
	3rd Year	50	31.1
	4th Year	46	28.6
Total		161	100.0

2.2. Instrument

In the study, the "Instructional Technologies and Material Development Course Scale" developed by Çetin *et al.* (2013) was utilized as the data collection tool. The scale contains three sub-scales and a total of 33 items. The 'enjoyment' sub-scale includes 9 items, the 'denial' sub-scale includes 6 items, and the 'usefulness' sub-scale includes 18 items. The Cronbach's Alpha coefficients as the measure of internal consistency were found to be 0.94 for the entire scale, 0.95 for the usefulness sub-scale, 0.87 for the enjoyment sub-scale and 0.78 for the denial sub-scale. The Cronbach's Alpha coefficients calculated for this study were 0.952 for the entire scale, 0.876 for the enjoyment sub-scale, 0.810 for the denial sub-scale and 0.957 for the usefulness sub-scale. These results attest to the reliability of the data obtained from the scale.

2.3. Data collection procedures

In the data collection process, prospective Turkish language teachers were informed about the purpose of the research. Guarantee was given that the data will not be shared with third parties. The data collection process took about 15 minutes.

2.4. Data analysis

In data analysis, firstly, the arithmetic means and standard deviations were calculated on the basis of the views of the prospective Turkish language teachers on items of the Instructional Technologies and Material Development Course Scale. Then, independent samples t-test was applied in order to test whether there was a statistically significant relationship between the gender variable and the mean attitude scores, and one-way analysis of variance was employed in order to test whether there was a statistically significant relationship between the class-year variable and mean attitude scores.

3. Results

Table 2 includes the descriptive statistics demonstrating the mean scores of attitudes of the prospective Turkish language teachers towards the instructional technologies and material development course.

Table 2. Views of Prospective Turkish Language Teachers on Attitude Items about the Instructional Technologies and Material Development Course.

Sub-scale	Item	$\overline{X}$	sd
Enjoyment	**I am interested in the Course on Instructional Technologies and Materials Development.**	**3.81**	**1.13**
	I like the ITMD course.	3.78	1.10
	I like talking about the ITMD course.	3.58	1.14
	I would like to take the ITMD course once again.	**2.64**	**1.32**
	The ITMD course is more entertaining than other courses.	3.49	1.18
	Topics covered by the ITMD course are entertaining.	3.69	1.12
	I enjoy doing assignments of the ITMD course.	3.41	1.11
	Activities performed under the ITMD course are exciting.	3.66	1.15
	More hours should be devoted to the ITMD course.	2.88	1.24
Denial	Topics covered by the ITMD course make me nervous.	2.73	1.23
	The ITMD course is just a waste of time for me.	**2.18**	**1.18**
	Studying for the ITMD course makes me nervous.	2.40	1.21
	I would not take the ITMD course if it were not a compulsory course.	2.84	1.32
	Activities performed in the context of the ITMD course are tiring.	**3.15**	**1.16**
	Doing practical exercises in the ITMD course makes me nervous.	2.76	1.30
Usefulness	The ITMD course is necessary for me to solidify learned topics related to my field.	3.82	1.10
	The ITMD course is essential to my success in using instructional methods and techniques effectively.	3.92	1.03
	The ITMD course is essential to my success in following technological developments.	**3.78**	**1.09**
	The ITMD course is important to enhancement of effectiveness of instruction.	3.96	1.02
	The ITMD course has a major contribution to teaching professional life.	3.98	1.01
	Hours devoted to practical applications under the ITMD course enhance my motivation.	3.79	1.09
	The ITMD course enables the effective use of instructional tools & materials.	3.95	1.01
	The ITMD course allows development of materials which are suitable to targets.	3.98	.89
	The ITMD course enables selection of materials which are suitable to targets.	4.07	.94
	The ITMD course enables the accurate use of instructional materials.	4.06	.95
	The ITMD course enables me to design materials relevant to my own field.	4.05	1.05
	The ITMD course empowers me to develop materials relevant to my own field.	4.03	.97
	The ITMD course helps explain basic concepts relevant to instructional materials.	3.96	.99
	The ITMD course allows development of alternative instructional materials.	4.03	.97
	Practical exercises in the ITMD course enable enhancement of my psychomotor skills.	4.08	.91
	The ITMD course enables me to use already existing technologies effectively in the teaching process.	4.08	.87
	The ITMD course develops my creativity.	4.15	.88
	The ITMD course makes me comprehend the importance of using materials in educational setting.	**4.16**	**.86**

As seen in Table 2, in terms of the enjoyment sub-scale, the item which was the most strongly agreed with by the prospective Turkish language teachers was the one stating that "I am interested in the Course on Instructional Technologies and Materials Development ($\overline{X}$ =3.81)," whereas the item which was the least strongly agreed with was the one asserting that "I would like to take the Course on Instructional Technologies and Materials Development once again ($\overline{X}$ = 2.64)." In terms of the denial sub-scale, the item which was the most strongly agreed with by the prospective Turkish language teachers was the one alleging that "Activities performed in the context of the Course on Instructional Technologies and Materials Development are tiring ($\overline{X}$ =3.15)," whereas the item which was the least strongly agreed with was the one suggesting that "The Course on Instructional Technologies and Materials Development is just a waste of time for me ($\overline{X}$ = 2.18)." In terms of the usefulness sub-scale, the item which was the most strongly agreed with by the prospective Turkish language teachers was the one declaring that "The Course on Instructional Technologies and Materials Development makes me comprehend the importance of using materials in educational settings ($\overline{X}$ =4.16)," whereas the item which was the least strongly agreed with was the one stipulating that "The Course on Instructional Technologies and Materials Development is essential to my success in following technological developments ($\overline{X}$ = 3.78)." It is discerned that, in general, the prospective Turkish language teachers expressed positive views on items of the Course on Instructional Technologies and Materials Development Scale. The low mean scores in terms of the denial sub-scale arose from the fact that the dimension contained inversely stated items.

Table 3 exhibits the descriptive statistics for the mean scores of the overall scale and its sub-scales on the basis of the attitudes of the prospective Turkish language teachers towards the Instructional Technologies and Material Development course.

Table 3. Descriptive Statistics for the Overall Scale and Its Sub-scales on the Basis of Attitudes of Prospective Turkish Language Teachers towards Instructional Technologies and Material Development Course

Sub-scales	$\overline{X}$	sd
Enjoyment	3.44	.85
Denial	2.68	.88
Usefulness	3.92	.68
Overall Total	3.66	.61

Upon the examination of the mean scores obtained by the prospective Turkish language teachers from the overall Instructional Technologies and Materials Development Course Scale and its sub-scales, it is ascertained that the general view expressed in the enjoyment and usefulness sub-scales and the entire scale was "I agree," and the general view stated in the denial sub-scale was "I cannot decide.".

Table 4 displays the results of the independent-samples t-test performed to find out whether there was a statistically significant difference in the mean scores obtained by the prospective Turkish language teachers from the overall scale and its sub-scales in terms of their attitudes towards the Instructional Technologies and Material Development course on the basis of the gender variable.

Table 4. Results of Independent-Samples t-Test Showing the Level of Differentiation in Mean Scores Obtained by Prospective Turkish Language Teachers from the Overall Scale and Its Sub-Scales in Terms of Their Attitudes towards the Instructional Technologies and Material Development Course on the Basis of the Gender Variable

Variable	Group	N	$\overline{X}$	sd	df	*t*	p
Enjoyment	Male	36	27.97	8.87	159	-2.707	**.008**
	Female	125	31.79	7.01			
Denial	Male	36	16.16	5.50	159	.135	.893
	Female	125	16.03	5.27			
Usefulness	Male	36	66.72	12.39	159	-2.097	**.038**
	Female	125	71.55	12.12			
Total	Male	36	114.35	21.65	159	-2.237	**.027**
	Female	125	122.74	19.29			

As demonstrated in Table 4, according to the results of the independent-samples t-test, there was a statistically significant difference in the mean scores obtained by the female prospective Turkish language teachers ($\overline{X}_{Enjoyment}$= 31.79; $\overline{X}_{Usefulness}$= 71.55; $\overline{X}_{Total}$= 122.74) and the male prospective Turkish language teachers ($\overline{X}_{Enjoyment}$= 27.97; $\overline{X}_{Usefulness}$= 66.72; $\overline{X}_{Total}$= 114.35) from the overall Instructional Technologies and Material Development Course Scale and its 'enjoyment' and 'usefulness' sub-scales in favor of the female prospective teachers ($t_{Enjoyment\ (159)}$= -2.707, p<.05; $t_{Usefulness(159)}$= -2.097, p<.05; $t_{Total\ (159)}$= -2.237, p<.05).

Table 5 displays the results of the One-Way Analysis of Variance performed to find out whether there was a statistically significant difference in the mean scores obtained by the prospective Turkish language teachers from the overall scale and its sub-scales in terms of their attitudes towards the Instructional Technologies and Material Development course on the basis of the class-year variable.

Table 5. Results of One-Way Analysis of Variance Indicating the Level of Differentiation in Mean Scores Obtained by Prospective Turkish Language Teachers from the Overall Scale and Its Sub-Scales in Terms of Their Attitudes towards the Instructional Technologies and Material Development Course on the Basis of the Class-Year Variable

Sub-Scale		Sum of Squares	df	Mean of Squares	F	p
Enjoyment	Between groups	156.145	2	78.072	1.356	.261
	Within group	9095.053	158	57.564		
	Total	9251.198	160			
Denial	Between groups	9.599	2	4.799	.169	.845
	Within group	4488.547	158	28.409		
	Total	4498.146	160			
Usefulness	Between groups	477.434	2	238.717	1.588	.208
	Within group	23758.169	158	150.368		
	Total	24235.603	160			
Total	Between groups	1065.198	2	532.599	1.326	.268
	Within group	63444.985	158	401.551		
	Total	64510.184	160			

A one-way analysis of variance was implemented in order to test whether there was a statistically significant difference between the mean scores of the attitudes of the prospective Turkish language teachers towards the Instructional Technologies and Material Development Course, and it was observed that there was no statistically significant difference in the mean attitude scores of the groups ($F_{Enjoyment}$

$_{(2,158)}$ = 1.356, p> 0.05; F $_{\text{Denial }(2,158)}$ = .169, p> 0.05; F $_{\text{Usefulness }(2,158)}$ = 1.588, p> 0.05; F $_{\text{Total }(2,158)}$ = 1.326, p> 0.05).

4. Discussion

In this study, in which the attitudes of prospective Turkish language teachers towards the Instructional Technologies and Materials Development course were analyzed, it was perceived that the prospective teachers expressed positive views on the items of the Attitude Scale designed for the undergraduate course. The prospective Turkish language teachers expressed their attitudes by stating that "I agree" in terms of the enjoyment and usefulness sub-scales, whereas they submitted views below the overall mean by remarking that "I cannot decide" in terms of the denial sub-scale. The existence of inversely stated items under the denial sub-scale may be specified as the basis of scores below the overall mean. Upon the review of the literature on the topic, it is discerned that the results were also positive in various studies both on prospective teachers and teachers already in service, and in this respect, they coincided with the results of this study (Bozpolat & Arslan, 2018; Çevik Kılıç, 2016; Kolburan Geçer, 2010; Özer & Tunca, 2014; Saka & Saka, 2005; Uzunöz *et al.*, 2017). Besides, in the research performed by Ürün Karahan (2016) to measure the attitudes of students of an undergraduate program of Turkish language teaching, a survey was applied both before the start of the course at the beginning of the semester and after the end of the course at the end of the semester, and attitude levels were compared. Along with findings of the research, it was ascertained that the attitudes of prospective teachers towards the instructional technologies and material development course did not differ significantly, and their mean scores got slightly higher after the course. However, in the study performed by Vatansever Bayraktar and İşleyen (2018) with the participation of prospective teachers who took the instructional technologies and material development course and were enrolled in the faculty of education or a pedagogical formation program at certain universities in Istanbul, it was found that there was a moderate significant difference in the mean scores of the attitudes of the prospective teachers towards the instructional technologies and material development course in terms of the enjoyment and denial sub-scales, and there was a strong significant difference in the mean scores of the attitudes of the prospective teachers towards the instructional technologies and material development course in terms of the usefulness sub-scale and the overall scale.

In light of the findings of this study conducted with the participation of a total of 161 prospective teachers, 125 of whom were females, and 36 of whom were males, it is discerned that there was a statistically significant difference in the mean scores obtained by the female prospective Turkish language teachers and the male prospective Turkish language teachers from the overall Instructional Technologies and Material Development Course Scale and its 'enjoyment' and 'usefulness' sub-scales in favor of the female prospective teachers. This result supports the findings of studies by Dargut and Çelik (2014), Kinay *et al.* (2015) and Ürün Karahan (2016), whereas it contradicts the findings of the study by Vatansever Bayraktar and İşleyen (2018). Nevertheless, in studies by Bektaş, Nalçacı and Ercoşkun (2009) and Alım (2013), it was reported that there was no statistically significant difference in the views of prospective teachers on achievements attained through the Instructional Technologies and Material Development course on the basis of the gender variable. In the studies by Yenilmez and Uygan (2009) and Altınok (2012) on prospective teachers, it was found that female prospective teachers had a more positive attitude than males towards application of technologies to the education process.

In this study performed with the participation of prospective teachers, 65 of whom were second-year students, 50 of whom were third-year students, and 46 of whom were fourth-year students, it was found that there was no statistically significant difference in the attitudes of the prospective teachers towards

the Instructional Technologies and Material Development course on the basis of the class-year variable. This result coincides with findings of studies performed by Yaman (2007) and Kinay *et al*. (2015) on prospective teachers studying at different years of class. As a matter of fact, also in the study conducted by Vatansever Bayraktar and İşleyen (2018) with the participation of 183 prospective teachers who were enrolled at faculties of education and 237 prospective teachers who were enrolled at a pedagogical formation program, it was determined that there was no statistically significant difference in the attitudes of the prospective teachers towards the Instructional Technologies and Material Development course on the basis of the gender, class-year and marital status variables. Judging from this point of departure, it may be deduced that the class-year variable does not have a significant effect on scores of the attitudes of prospective teachers towards the Instructional Technologies and Material Development course. The increase in the number of studies to be performed to analyze the effect of the class-year variable on attitudes towards the Instructional Technologies and Material Development course will offer the possibility to carry out a more general evaluation on the topic. Studies to be conducted with different populations and samples and designed to analyze the effect of the class-year variable on scores of attitudes towards the Instructional Technologies and Material Development course will extend the opportunity to make a more general and large-scale evaluation.

5. Conclusions

Instructional technologies play a key role in development of scientific research and academic thinking capabilities, as well as researching, questioning, problem-solving, inference-making, reasoning, decision-making and evaluation skills. Development of materials and their use in lessons have positive impacts on promotion of the motivation and preparedness of students. Starting from the definition and historical background of the field, the instructional technologies and material development course allows prospective teachers to be aware of technological developments in education and includes instructions as to how to integrate technological developments to lessons besides enabling selection, design and evaluation of materials by prospective teachers. In this respect, it is believed that studies conducted to analyze prospective teachers' views, attitudes, perceptions, competency levels, etc. in relation to the instructional technologies and material development course are important.

In conclusion, the fact that the prospective teachers have moderately and highly positive attitudes towards the Instructional Technologies and Material Development course is encouraging inasmuch as proving that they are capable of integrating teaching technologies into the instruction of subject area courses, professional knowledge courses and general culture courses and competent enough to design integrated materials. It is essential to devise various studies that will encourage designing of materials by prospective teachers themselves and ensure development of more positive attitudes by them, and on the other hand, these studies will be beneficial only if academic staff pays attention to them.

This study had certain limitations. This study was limited to prospective teachers enrolled at the Undergraduate Program of the Turkish Language Teaching Department of the Faculty of Education and to certain variables. With the inclusion of other university programs and different variables, it may also be possible to reflect the practical aspects of study results in the field by conducting large-scale and differently designed studies which will apply comparative, qualitative and quantitative research methods. Moreover, shortcomings in terms of tools and equipment in courses and schools related to teaching technologies should be overcome, and proper laboratory facilities should be provided so that prospective teachers could design and produce their own materials. Finally, more time should also be reserved for practical studies.

6. Ethics Committee Approval

The author confirms that ethics committee approval was obtained from Atatürk University Social and Human Sciences Ethical Committee (Approval Date and Number: 16/03/2020, 06).

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Türkçe öğretmeni adaylarının öğretim teknolojileri ve materyal tasarımı dersine yönelik tutumları

Öz

Bu araştırmanın amacı, Türkçe öğretmeni adaylarının Öğretim Teknolojileri ve Materyal Tasarımı dersine ilişkin tutumlarının ne düzeyde olduğunu ve çeşitli değişkenlere göre farklılaşıp farklılaşmadığını incelemektir. Araştırmanın evreni, 2018-2019 eğitim yılında bir devlet üniversitesinin Eğitim Fakültesinde öğrenim gören Öğretim Teknolojisi ve Materyal Tasarımı dersini almış 161 öğretmen adayından oluşmaktadır. Betimsel tarama modelinin kullanıldığı bu araştırmada veriler, Çetin, Bağçeci, Kinay ve Şimşek (2013) tarafından geliştirilen "Öğretim Teknolojileri ve Materyal Tasarımı Dersine Yönelik Tutum Ölçeği" kullanılarak toplanmıştır. Verilerin analizinde betimsel istatistiklerden, bağımsız örneklemler için t-testi ve tek yönlü varyans analizinden (ANOVA) faydalanılmıştır. Veri analizi sonucunda, öğretmen adaylarının öğretim teknolojileri ve materyal tasarımı dersine

yönelik tutumlarının "hoşlanma ve yadsıma" alt boyutlarında orta düzeyde, "yararlılık" alt boyutunda ve toplam ortalamalara göre yüksek düzeyde olduğu görülmüştür. Öğretmen adaylarının öğretim teknolojileri ve materyal tasarımı dersine yönelik tutumları, öğrenim gördüğü sınıf değişkenine göre anlamlı bir farklılık göstermezken; cinsiyet değişkenine göre kız adaylar lehine istatistiksel açıdan anlamlı bir farklılık göstermektedir.

Anahtar sözcükler: Türkçe eğitimi; Türkçe öğretmeni adayları; öğretim teknolojileri ve materyal tasarımı; tutum.

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