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Group psychological and pedagogical technologies for developing the narrative ability in future specialists

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Abstract

The purpose of this research is to get the opinions of future experts and primary schoolteacher candidates on the use of group psychological and pedagogical technologies for the development of narrative skills. This research was created by using the qualitative research method. The participant group of the research consisted of 80 teacher candidates studying at the primary school teaching department in various universities in Kazakhstan in the 2021–2022 academic year. Research data were collected with a semi-structured interview form developed by the researchers. As a result of the research, majority of the primary schoolteacher candidates participating in the research stated that their narrative skills are at a medium level and their technological pedagogical content knowledge is partially sufficient. In addition, the majority of primary schoolteacher candidates participating in the research; stated that they support the use of group psychological and pedagogical technologies for the development of narrative skills. It has become necessary to create an effective training programme for primary schoolteacher candidates by using group psychological and pedagogical technologies in order to develop narrative skills in future experts.

Keywords: Future experts, primary schoolteacher candidates, narrative ability, technological pedagogical knowledge;

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1. Introduction

Technology, which changes life rapidly in the 21st century, has revealed new applications in the educational environment as well as in other fields (Abbitt, 2011). This situation has made it necessary for educators to follow technological developments closely and plan learning activities enriched with technological materials suitable for changing conditions. In the information age, where education and technology affect each other, an education without technology will cause failure (Erdemir, Bakırcı, & Eyduran, 2009).

1.1. Theoretical and conceptual framework

Due to the rapid developments in the world of technology and the fact that students adapt to these developments very quickly and students spend most of their time with technology in their daily lives, the effective use of technology in the education–teaching process has been a goal to be achieved for educators (Hew & Brush, 2007; Hicks, 2006; Uzunboylu & Ozdamli, 2011). Technological pedagogical content knowledge is a new field formed by the combination of technology, pedagogy and content knowledge. Considering that information is constantly changing and new information is coming out compared to the previous year, teachers need to be flexible in giving information because it is easier to reach new information by using technology than before. Until the concept of technological pedagogical content knowledge emerged, it was determined that there were some deficiencies in the preparation of pre-schoolteachers and other field teachers for education and self-development (Liang, Chai, Koh, Yang, & Tsai, 2013).

For an efficient education, teachers should have sufficient technological knowledge and the ability to transfer this knowledge to the education environment (Drent & Meelissen, 2008). Because it is thought that the teacher with high technological knowledge can use this knowledge better in other fields. In addition, it is seen that teachers' technological knowledge is beneficial in education, as the use of multiple technologies in the classroom allows students to interact with stimuli (Vannatta & Nancy, 2004). When prospective teachers' views on technology use and technology are examined, the reasons for not using technology in their teaching include their prejudices about how to teach a subject with the help of technology, the complexity of teaching students to use technology and their lack of knowledge about how technology will affect student learning (Niess, 2005).

Speaking, which is one of the telling skills, is the language skill acquired after the listening skill, which is used by human beings to communicate and applied the most (Aydın & Kaya, 2021). The realisation of verbal expression self-efficacy at the desired level of the teachers, who have an important effect on both the education of the student and being a model for the student, is of great importance in terms of efficient speaking education and verbal expression of the teacher candidates because every individual desires to express himself effectively and accurately throughout his life. Individuals with high self-confidence who can express themselves correctly and can influence the other person with their expressive skills can be successful in both their social and professional lives because one of the prerequisites for success is that individuals have verbal communication skills (Tunagür, Kardas, & Kardas, 2021). It is very important to determine the self-efficacy perceptions of the teachers, who play an important role in the acquisition of oral expression skills, while they are teacher candidates

in the undergraduate period because the success of teachers in acquiring language skills in their professional life depends on the quality of the education to be given at the undergraduate level (Wati, Bharati, & Hartono, 2014).

1.2. Related research

Valtonen et al. (2020) conducted a study with the participation of first-year pre-service teachers at a university in Finland in order to determine the areas in which pre-service teachers are confident and find it difficult in technology pedagogical content knowledge. It is thought that the research will provide an important perspective to the development of technology pedagogical content knowledge of pre-service teachers. Jang and Chen (2010) examined the impact of science teaching undergraduate students on a transformative model of integrating technology and peer coaching to enhance their knowledge of technological pedagogical content. As a result of the research carried out with the participation of teacher candidates, it was determined that the model improved the technology pedagogical content knowledge levels of teacher candidates.

In the study of Kafyulilo, Fisser, Pieters, and Voogt (2015), senior science and mathematics undergraduate pre-service teachers participated in microteaching, applied education and collaborative course design programmes in design teams. As a result of the research, it was observed that the pre- and post-evaluation results of pre-service teachers' perceived knowledge and skills about integrating technology into teaching differed. Mouza, Karchmer-Klein, Nandakumar, Ozden, and Hu (2014) describe an integrated pedagogical approach that aims to advance teacher candidates' learning about technology use and to investigate its impact on participants' knowledge (TPACK) and practices. Quantitative data of the study were obtained through the pre- and post-test application of the instructional and technology knowledge questionnaire of pre-service teachers; qualitative data were collected through open-ended questionnaires. The findings showed that the participants achieved significant gains in all TPACK structures, and that the participants applied their knowledge in practice.

In the article written by Maeng, Mulvey, Smetana, and Bell (2013), there are detailed explanations about the technology-assisted inquiry teaching of secondary school science teacher candidates and the technological pedagogical content knowledge they have developed. How pre-service science teachers use educational technologies and how they develop their technological pedagogical content knowledge through technology-supported research education are also determined.

In the literature, there are studies examining the oral expression levels and speaking skills of pre-service teachers (Yelok & Sallabas, 2009). In addition, it is seen that studies emphasise the necessity of improving the speaking skills of teachers and teacher candidates (Swearingen, 2019; Vostal, Mrachko, Vostal, & McCoy, 2021). Akkaya (2012) examined the speech problems experienced by pre-service teachers and stated that among these problems, under the title of psychological problems, students have speaking problems in public. Er and Demir (2013) enabled Turkish language teaching fourth-year students to observe the speaking skills of Turkish teachers in practice schools. As a result of their observations, pre-service teachers reported negative aspects of Turkish teachers such as limited vocabulary, use of local language, unnecessary word repetition and ineffective expression.

1.3. Purpose of the research

The purpose of this research is to get the opinions of future experts and primary schoolteacher candidates on the use of group psychological and pedagogical technologies for the development of narrative skills. In line with the purpose of the research, the following sub-objectives were determined.

1. What are the primary schoolteacher candidates' views on the level of their narrative abilities?
2. What are the primary schoolteacher candidates' competencies regarding technological pedagogical content knowledge?
3. What are the views of primary schoolteacher candidates on using group psychological and pedagogical technologies to improve their narrative skills?

2. Methods and materials

2.1. Research method

This research was created by using the qualitative research method. Qualitative research is considered a form of knowledge production developed by people to understand their own potential, reveal their secrets and explore the depths of social structures and systems that they have built with their own efforts. There is an effort to reach a deep perception about the event or phenomenon examined in researches created with qualitative method. Qualitative data collection techniques, such as observation, interview, document and speech analysis, are generally used in qualitative research. In addition, qualitative research, in which perceptions and events related to human beings are examined in depth in social reality and natural environment, presents a holistic perspective that combines different disciplines (Malterud, 2001). In this direction, the opinions of primary schoolteacher candidates on the use of group psychological and pedagogical technologies for the development of narrative skills of future experts are discussed in accordance with the qualitative research method.

2.2. Participants

The participant group of the research consisted of 80 teacher candidates studying at the primary school teaching department in various universities in Kazakhstan in the 2021–2022 academic year. Demographic information of primary schoolteacher candidates participating in the research is given in Table 1. The participant group of the research consists of volunteer primary schoolteacher candidates.

Table 1. Demographic characteristics of primary schoolteacher candidates

Experience	Gender		Sum
	Female	Male	
First year	10	19	29
Second year	7	4	11
Third year	9	13	22
Fourth year	7	11	18
Total	33	47	80

In Table 1, the gender and class distribution of primary schoolteacher candidates participating in the research are given. 29 primary schoolteacher candidates study in the first year, 11 in the second year, 22 in the third year and 18 in the fourth year. 33 primary schoolteacher candidates participating in the research are female and 27 are male. A total of 80 primary schoolteacher candidates participated in the research.

2.3. Data collection tools

Research data were collected with a semi-structured interview form developed by the researchers. Before the semi-structured interview form was developed, a literature review was carried out in accordance with the research purpose. After the literature review, there are three open-ended questions in the semi-structured interview form developed to get the opinions of primary schoolteacher candidates on the use of group psychological and pedagogical technologies for the development of narrative skills of primary schoolteacher candidates. In addition, there are two questions in which the demographic characteristics of primary schoolteacher candidates regarding the gender and the class they are studying are determined. The open-ended questions in the semi-structured interview form used in the research are given below.

1. What are your views on the level of your narrative ability? Evaluate yourself in one of the categories ‘very high’, ‘high’, ‘medium’, ‘low’ or ‘very low’ and give a reason.

2. What are your views on your technological pedagogical knowledge? Evaluate yourself in one of the following categories: ‘very sufficient’, ‘adequate’, ‘partially sufficient’, ‘insufficient’ or ‘very insufficient’ and give a reason.

3. What are your views on using group psychological and pedagogical technologies to improve your narrative ability? Give your opinion by evaluating yourself in one of the following categories: ‘I support’, ‘I am undecided’ or ‘I do not support’.

2.4. Data collection process

In the process of collecting the research data, primary schoolteacher candidates were reached via email in order to provide preliminary information. Primary schoolteacher candidates participating in the research were informed about the content of the research. The researchers were asked to answer the questions in the semi-structured interview form in the email and send them to the researchers. It took approximately 3 weeks for the primary schoolteacher candidates, who constituted the study group of the research, to fill in the semi-structured interview forms and deliver them to the researchers.

2.5. Data collection analysis

Research data were analysed by content analysis method. Content analysis requires a more detailed examination of the collected data by reaching the concepts, categories and themes that explain the data. Content analysis focuses on collected data; codes are extracted from the events and

facts that are frequently repeated in the data set or that the participant emphasises heavily on, i.e., from the codes to the categories and from the categories to the themes. In short, data (codes) that are found to be similar and related to each other are interpreted by bringing them together within the framework of certain concepts (categories) and themes. In content analysis, the content of participants' views is systematically separated (Bengtsson, 2016). With the content analysis method, the opinions of primary schoolteacher candidates were transformed into findings. The opinions of primary schoolteacher candidates were divided into categories and themes and frequency and percentage tables were created and are presented in the results section.

3. Results

In Table 2, the opinions of the primary schoolteacher candidates participating in the research on the level of their narrative abilities are evaluated.

Table 2. Opinions of primary schoolteacher candidates on the level of narrative skills

Category	Theme	*F*	%
Very high	Have a very high level of fluency Ability to choose the right words	5	6.25
High	Ability to make effective transitions between sentences Avoiding unnecessary repetitions that will disrupt the flow of the subject Support with appropriate examples	9	11.25
Middle	Intermediate fluency in speaking Moderate tone adjustment Ability to set medium speech rate Have moderate motivation	46	57.5
Low	having speech anxiety Having trouble using language that everyone understands Inability to simplify the subject that needs to be explained	18	22.5
Very low	Avoid public speaking Having impromptu speaking anxiety	2	2.5
Total		80	100

In Table 2, the views of the primary schoolteacher candidates participating in the research on the level of their narrative abilities are categorised. The very high level category was divided into following themes: having a very high level of fluency and being able to choose the right words. The high level category was divided into the following themes: making effective transitions between sentences, avoiding unnecessary repetitions that would disrupt the flow of the subject and supporting with appropriate examples. The middle level category was divided into the following themes: having moderate fluency, adjusting moderate tone, moderate speaking speed and moderate motivation. The low level category was divided into the following themes: having speech anxiety, having trouble using a language that everyone can understand and not being able to simplify the subject that needs to be told. The very low level category was divided into the following themes: avoiding public speaking and having impromptu speaking anxiety. 6.25% of the primary schoolteacher candidates participating in

the research had a very high level of narrative skills, 11.25% had a high level, 57.5% had a medium level, 22.5% had a low level and 2.5% had a very high level.

In Table 3, the competencies of the primary schoolteacher candidates participating in the research regarding technological pedagogical content knowledge are evaluated.

Table 3. Primary schoolteacher candidates' competences on technological pedagogical content knowledge

Category	**Theme**	***F***	**%**
Very enough	Very adequate in terms of ability to use technology Very sufficient in terms of enriching the course through technology	6	7.5
Sufficient	Sufficient in terms of giving the achievements related to the field to the students Adequate in terms of use of technological tools Adequate in terms of course content knowledge	8	10
Partially sufficient	Partially sufficient in terms of solving technological problems Partially sufficient in terms of using effective teaching approaches Partially sufficient in terms of having field knowledge Partially adequate in terms of blending new technologies with pedagogical knowledge	51	63.75
Insufficient	Inadequate in terms of using special software related to the field Inadequate in choosing the technology that will enrich the course content Inadequate in terms of evaluating the student by using technology	12	15
Very insufficient	Very inadequate in terms of developing teaching approaches Very inadequate in terms of using technology in teaching	3	3.75
Total		80	100

In Table 3, the competencies of the primary schoolteacher candidates participating in the research regarding technological pedagogical content knowledge are evaluated in five categories. Very adequate category was divided into very sufficient in terms of the ability to use technology and very sufficient in terms of enriching the course through technology. Sufficient category was divided into the following themes: sufficient in terms of giving students the acquisitions related to the field, sufficient in terms of using technological tools and sufficient in terms of course content knowledge. Partially adequate category was divided into the following themes: partially sufficient in terms of solving technological problems, partially sufficient in terms of using effective teaching approaches, partially sufficient in terms of having content knowledge and partially sufficient in terms of blending new technologies with pedagogical knowledge. Insufficient category was divided into the following themes: inadequate in terms of using special software related to the field, insufficient in choosing the technology that will enrich the course content and insufficient in terms of evaluating the student by using technology. Finally, the very inadequate category was divided into the following themes: very insufficient in terms of developing teaching approaches and very insufficient in terms of using technology in teaching. 7.5% of the primary schoolteacher candidates stated that they found their technological pedagogical content knowledge very sufficient, 10% stated sufficient, 63.75% stated partially sufficient, 15% stated insufficient and 3.75% stated very insufficient.

In Table 4, the views of primary schoolteacher candidates participating in the research on using group psychological and pedagogical technologies to improve their narrative skills are evaluated.

Table 4. Opinions of primary schoolteacher candidates on using group psychological and pedagogical technologies for the development of narrative skills

Category	Theme	*F*	%
I support	I support the development of narrative ability I support in terms of benefiting from psychological and pedagogical technologies	59	73.75
I'm undecided	I'm undecided if it will improve narrative ability I'm not sure if it's an effective method.	13	16.25
I do not support	I do not support it because I do not think that narrative ability will be gained in a technological environment. I do not support it because I think that more effective methods should be used in gaining narrative ability.	8	10
Total		80	100

In Table 4, the views of primary schoolteacher candidates participating in the research on using group psychological and pedagogical technologies to improve their narrative skills are categorised. The I support category consists of I support in terms of the development of narrative ability and I support in terms of benefiting from psychological and pedagogical technologies. The undecided category consists of I am undecided about whether it will improve the narrative ability and I am undecided about whether it is an effective method. I do not support category consists of I do not support because I do not think that narrative ability will be gained in a technological environment and I do not support because I think that more effective methods should be used to gain narrative ability. 73.75% of the primary schoolteacher candidates answered that they support the use of group psychological and pedagogical technologies for the development of narrative skills, 16.25% are undecided about using it and 10% do not support it.

4. Discussion

The majority of primary schoolteacher candidates participating in the research stated that their narrative skills were at a medium level. Gizir and Koksal (2014), in their study with teachers working in primary schools, concluded that teachers were satisfied in some dimensions of communication satisfaction and remained undecided in some dimensions. In addition, in some of the researches in the field, it is seen that there are studies showing that teachers and teacher candidates can have effective speaking skills if they receive training (Bele, Laukkanen, & Sipilä, 2010; Timmermans, Coveliers, Wuyts, & Van Looy, 2012).

The majority of primary schoolteachers participating in the research stated that their technological pedagogical content knowledge is partially sufficient. In some studies conducted in the field, various obstacles to the development of pre-service teachers' technological pedagogical content knowledge were mentioned, and it was stated that removing these barriers would increase pre-service teachers'

technological pedagogical content knowledge (Agyei & Voogt, 2012; Inan & Lowther, 2010; Mudzimiri, 2012). In some studies conducted in the field, it has been stated that pre-service teachers consider themselves sufficient in the use of technology only in some teaching areas, and that they are not fully competent in the use of technology at every stage of education (Kim & Jang, 2015).

Hare, Howard, and Pope (2002) and Ottenbreit-Leftwich, Glazewski, Newby, and Ertmer (2010) stated that there is a gap between pre-service teachers' theoretical knowledge of technology use and their use of technology in real classroom environments. The majority of teacher candidates participating in the research stated that they support the use of group psychological and pedagogical technologies for the development of narrative skills. It is seen that there are research results indicating that it is possible to develop speaking skills and narrative abilities of teachers and teacher candidates through trainings (Alves, Robazzi, Marziale, Felippe, & Romano, 2009; Chen, Chiang, Chung, Hsiao, & Hsiao 2010; Da Costa, Prada, Roberts, & Cohen, 2012; Van Houtte, Claeys, Wuyts, & Van Lierde, 2011).

5. Conclusion

Technology is very important for societies today and tomorrow. It is seen that the living standards are high in a technologically developed society and these societies have a say in world politics by influencing other societies. For this reason, countries that want to achieve success have to train individuals who value technology, can use it and contribute to its development. Developing the skills of teacher candidates directly affects the quality of the education they will provide in the future. The ability of teachers to speak effectively and to express effectively is related to the effectiveness of the studies in the teacher training process. The efficiency level of this process may have positive or negative reflections on teachers and teacher candidates. Therefore, in this research, the opinions of prospective primary schoolteachers on the use of group psychological and pedagogical technologies for the development of narrative skills of future experts were taken. As a result of the research, majority of primary schoolteacher candidates participating in the research stated that their narrative skills are at a medium level and their technological pedagogical content knowledge is partially sufficient. In addition, the majority of primary schoolteacher candidates participating in the research stated that they support the use of group psychological and pedagogical technologies for the development of narrative skills.

6. Recommendations

Based on the results of the study, the following are recommended:

1. In order to improve the narrative skills of primary schoolteacher candidates, the course content in teacher training programmes should be intensified.
2. In order to increase the technological pedagogical content knowledge of primary schoolteacher candidates, the course content in teacher training programmes should be increased.
3. It is seen that future experts have a positive attitude towards the use of group psychological and pedagogical technologies for the development of narrative skills. In this direction, the necessity of preparing a training programme for primary schoolteacher candidates has arisen.

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