Impact of Technology-Assisted Context-Based Teaching on the Listening Skills of Teacher Candidates

Selma Korkmaz
Near East University. NORTHERN CYPRUS

Ahmet Güneyli
Near East University. NORTHERN CYPRUS

ABSTRACT
Listening is highly critical as it is the first skill that is acquired from birth. However, this skill can be developed if it is acquired through proper methods and approaches. The purpose of this study is to identify whether technology-assisted context-based teaching improves the listening skills of teacher candidates. The research was based on a mixed research approach where quantitative data were obtained through experimental study and qualitative data were obtained through interviews. The study group of the research consisted of 50 teacher candidates in total; - 25 in the experimental group and 25 in the control group - who took the Comprehension Techniques II: Listening Education course in the Turkish Language Teaching department of Near East University in Northern Cyprus during the 2016-2017 academic year. The topics were conveyed to the experimental group using a context-based approach with technology-assisted context-based teaching, meaning the digital stories and drama method. A traditional method and approach was applied to the control group. “Listening Success Tests” and “Student interview forms” developed by the researchers were used for data collection. The obtained quantitative data were analysed using the Mann-Whitney U test, while qualitative data were analysed through content analysis. As a result of the findings obtained in the listening success tests, it was seen that there was a significant difference between the experimental group on which technology-assisted context-based teaching was applied and the control group where traditional teaching was used. Thus, it was proved that this approach applied to the experimental group was highly beneficial for developing the listening skills of the teacher candidates. Additionally, based on the opinions of the teacher candidates, it was revealed that this approach improved the listening skills from several perspectives.

Keywords: technology, context, teacher candidate, success, listening skill

INTRODUCTION
The basic purpose of Turkish language teaching is to develop the receptive and productive skills of students (Güneyli, 2016; Kavcar, Oğuzkan & Hasırcı, 2016). However, considering that individuals cannot acquire productive skills without acquiring receptive skills, it becomes clear that listening and reading, which are elements of receptive skills, are more important. Relatedly, it is an undeniable fact that listening is more important than the other language skills as it is the first acquired skill. For this reason, Akyol (2006) claimed that listening constitutes the foundation of all other language skills.
Some researchers claim that listening is a skill which is acquired from birth and is developed automatically, for which reason it does not require teaching (Yalçın, 2002:123). Some others state that listening is a skill that can be improved if the appropriate methods and techniques are used (Aytan, 2011; Katranci, 2012; Melanlıoğlu, 2011; Tüzel & Keleş, 2013; Yurdakul & Bayat, 2017). In some studies conducted to this point, it has been emphasised that listening education is neglected, teachers do not pay the required attention to listening education, children already know listening before they begin school and listening is the language skill that attracts the least interest and attention. For all these reasons, some make the mistake of thinking that listening skills do not require official teaching (Burley-Allen, 1995; Robertson, 2004; Rost, 2011). However, studies in the literature (Bond, 2012) assert that listening education shows considerable development if modern teaching-learning methods are used and that it is an extremely important skill used in our daily lives. Consequently, context-based teaching was chosen as a modern teaching approach in this study and the impact of context-based listening education was investigated.

Temur (2001:61) defined “listening is the ability of the listener to establish a connection between what is said before and what is said later and their function in communication” and demonstrated the importance of establishing connection (relation), meaning context. According to the Turkish Language Institution (2005:180), context is defined as the pattern or connection between events, situations, relations in a phenomenon. Observed from an educational perspective, context can be defined as the individual relating phenomenon, events, or technology he/she uses in real life with course contents (MEB, 2012).

In this study, listening texts were formed and listening activities were performed based on different locations in Cyprus (such as museums, libraries, dungeons, mosques, castles, monasteries); in other words, context-based listening education was conducted. When context-based studies in the literature are examined (Acar & Yaman, 2011; Peşman & Özdemir, 2012; Waddington, 2005) it is seen that the majority of studies are in the field of natural sciences. However, it is believed that, in experimental terms, this study is one of the first to investigate the impact of context-based teaching in language and is therefore unique. Additionally, it can be said that more in-depth study was conducted purely on the listening skill, which provided more detailed data.

The aim of this research was to support context-based teaching, meaning natural learning and environment media, with technology, meaning virtual learning media. Thus, the listening texts prepared were transformed into digital stories and dramas. In this way, the objective was to realise more permanent learning with context-based teaching. In the literature, research findings can be found which reveal that technology-assisted
listening education positively affected the success and skills of students (Freihat, 2014; Liubiniene, 2009; Sun, Chang & Yang, 2013).

As a result, in this study, the extent to which technology-assisted context-based teaching affected listening skill competence of the teacher candidates was determined. At the same time, the research analysed the teacher opinions on the types of contributions made by technology-assisted context-based teaching.

METHODOLOGY

Research Model

In this study, a combination of both qualitative and quantitative approaches were used, meaning that it was based on a mixed research model. As Johnson, Onwuegbuzie and Turner (2007) defined, in mixed researches, a quantitative dominant mixed method research is employed. This model is defined as an explanatory model by Creswell, Plano and Clark (2007). In this mixed research model, which was planned in two-stages, the purpose is to support, explain or exemplify with data collected using a qualitative method the data obtained with a quantitative method.

In this study, a control group experimental pattern was used and technology-assisted context-based teaching was applied to the experimental group, whereas traditional education continued in the control group. The listening success scores of the experimental and control groups who participated in the research were compared with statistical methods (quantitatively) at the end of the experimental application process. Additionally, in the group where the experimental application process was applied (only in the experimental group) the observations and opinions of the participants in the process were included. Thus, quantitative findings were supported with qualitative findings.

Study Group

The study group consisted of 50 teacher candidates who were enrolled at the Turkish Language Teaching department in Near East University in Northern Cyprus during the 2016-2017 academic year and who took the “Comprehension Techniques II: Listening Education” course. The purposive sampling method was used when choosing teacher candidates and the researchers preferred students who were at the same institution where they were working. Thus, issues such as obtaining necessary permission, accessibility, time management, speed and practicality benefited purposive convenience. In addition, by using scale sampling, only the teacher candidates who took the “Comprehension Techniques II: Listening Education” course in the Turkish Language Teaching programme were included in the research. Finally, random sampling, which is a probability-based sampling method, was used and 25 teacher candidates were assigned to the experimental and control groups each randomly. The experiment group consisted of 14 female and 11 male students, whereas the control group consisted of 13 female and 12 male students. Additionally, the ages of the teacher candidates were between 21 and 24.

Data Collection

In order to collect data, a program that lasted for 3 hours a week for a total of 10 weeks was designed for both experimental and control groups. Within this program, listening texts and activities were prepared on Cyprus in general as well as various important historical sites in Cyprus such as Canbulat Museum, Selimiye Mosque, Sultan II. Mahmut Library, St. Hilarion Castle, Namik Kemal Dungeon and Museum, Kırklar Shrine, Grand Inn, Güzelyurt Museum of Archaeology and Nature, St. Barnabas Monastery, Lala Mustafa Pasha Mosque, Apostolos Andreas Monastery, St. Mamas Church, Mevlevi Lodge, and Kyrenia Castle.

The topics were conveyed to the teacher candidates in the experimental group through technology-assisted context-based teaching. Consequently, digital stories and drama methods and a context-based approach were employed. Thus, they acquired information about the historical sites which were covered by establishing context and they made a connection between their previous and new information and followed a path towards
learning. Topics were conveyed to the teachers in the control group through a traditional method and approach (usually through lecturing and a question-answer technique).

“Listening Success tests” and a “student interview form” were employed in order to collect data. Two field experts (Turkish language teaching) were consulted in the preparation of the listening success test and the selection of questions to be asked in the interview form so that coverage was validated.

Listening success tests: A general success test was applied at the end of the process in order to assess whether the topics conveyed during the application were memorised. This listening success test consisted of short-answer knowledge questions aimed at identifying the level of knowledge, open-ended questions aimed at identifying interpretation and evaluation skills, and matching questions which were aimed at identifying knowledge and evaluation levels. Thus, it was expected that the teacher candidates would give information on each topic through the short-answer knowledge questions and would explain the topics they learned with open-ended questions; furthermore they would show the extent to which pictures were remembered by matching the names of sites with their pictures and they would determine whether the information they had remembered belonged to the correct site by matching the site name with the appropriate information.

Interview form: Student Interview Forms were used in order to reveal the type of contribution that the technology-assisted context-based learning approach made on the success of teacher candidates. Open-ended questions were included in the interview form, which had the characteristics of a semi-structured form, and researchers tried to obtain detailed and in-depth knowledge with additional questions.

Data Analysis

While analysing the research data, success tests were applied to the students with the purpose of collecting quantitative data. The Shapiro-Wilk Test was applied first in order to reveal whether the scores related to the success tests applied on the experimental and control groups were distributed normally. Resultantly, it was observed that the scores belonging to the experimental and control groups did not show normal distribution (p<0.05). Thus, the Mann-Whitney U test was employed in order to identify whether there was a significant difference between the two groups.

Qualitative data obtained using the interview form were analysed through content analysis. In addition, direct citations were made from the opinions of the teacher candidates and the findings were examined by grouping into certain themes.

FINDINGS AND COMMENTS

In the “findings” section, results of the comparisons between the listening success test scores belonging to the experimental and control groups are given. At the same time, in regard to the general evaluation of the technology-assisted context-based learning approach, opinions of the teacher candidates in the experimental group are included.

a) Findings related to the comparison of the listening success test scores of the experimental and control groups

Here, a listening success test was applied to the experimental and control groups at the end of the process with the purpose of measuring the permanence of information conveyed during the 10 weeks. In this listening success test, short-answer knowledge questions, open-ended questions to explain the learned elements, and questions including matching of the taught sites and pictures and the relevant information for every topic. Scores obtained by the teacher candidates from the success tests were classified into separate groups as experimental and control groups and the compared using the Mann Whitney U test.
Based on Table 1, it was found out that there was a significant difference in the scores obtained by the experimental and control groups from the short-answer knowledge questions (U=42, p<0.05). The level of knowledge of the teacher candidates in the experimental group was found to be higher compared to those in the control group.

When Table 2 is examined, it can be seen that there is a significant difference between the scores obtained by teacher candidates in the experimental and control groups from the open-ended interpretation-evaluation questions (U=95, p<0.05). The teacher candidates in the experimental group discussed the topic that was most interesting to them in a detailed manner using its contents, whereas the teacher candidates in the control group had to give more superficial and incomplete information.

In Table 3, a significant difference was found in the scores obtained by teacher candidates in the experimental and control groups from the questions matching the names of sites with their pictures (U=30, p<0.05). It was determined that the teacher candidates in the experimental group were more effective at memorising the visuals compared to the candidates in the control group.

In Table 4, a comparison of the scores obtained by the teacher candidates in the experimental and control groups from questions matching the names of sites and the related information can be found. This table also reveals a significant difference between the two groups (U=69, p<0.05). It can be seen that the teacher candidates in the experimental group showed the highest success in these tests when matching the names of sites and the related information. Again, it was observed that the experimental group was superior compared to the control group.
### Table 5. Opinions of teacher candidates in the experimental group on contributions made by the technology-assisted content-based learning approach in the development of listening skills

<table>
<thead>
<tr>
<th>Theme</th>
<th>Opinions of Teacher Candidates</th>
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<tbody>
<tr>
<td>Improving listening skill</td>
<td>“Covering interesting topics and using technology is very effective in development and improvement of listening skills” (S20)</td>
<td>16</td>
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<td>“This is an approach that students can choose in order to improve their listening skills and become successful.” (S11)</td>
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<td>Increasing class participation</td>
<td>“I witnessed that, through this approach, several students participated in the class willingly” (S6)</td>
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<td></td>
<td>“The most important purpose of each teacher is to turn their students from mere hearers to listeners. This approach can be used to achieve this and help students be active participants in classes.” (S22)</td>
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<tr>
<td>Increasing success</td>
<td>“I believe that technology-assisted context-based learning approach increases success” (S15)</td>
<td>12</td>
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<tr>
<td></td>
<td>“This is an approach which maximizes student achievement” (S24)</td>
<td></td>
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<tr>
<td>Ensuring the permanence of knowledge</td>
<td>“The greatest complaint of all students is about forgetting information rapidly. However, this applied approach makes a contribution to the permanence of information” (S7)</td>
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<td></td>
<td>“Teachers can benefit from this applied approach if they want to ensure the permanence of knowledge they teach” (S18)</td>
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<tr>
<td>Concentrating attention</td>
<td>“We saw that everything we watched on computer and listened to helped us concentrate our attention by establishing context” (S21)</td>
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<td></td>
<td>“Such elements as visuals, tone of voice, background etc. are very attractive. All of these elements that we listed were included in the technology-assisted context-based learning approach. For this reason, students listened to the lecture carefully.” (S10)</td>
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<tr>
<td>Helping to establish contact with previous information</td>
<td>“Through brainstorming, an effort is paid to establish a connection between new and previous knowledge” (S9)</td>
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<td></td>
<td>“By founding a connection between new and previous knowledge, the topic can be comprehended better” (S22)</td>
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<tr>
<td>Increasing motivation</td>
<td>“I am convinced that student motivation can be increased with this and similar approaches” (S13)</td>
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<td></td>
<td>“Topics are interesting and are conveyed in an interesting style, which increases motivation too” (S17)</td>
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<tr>
<td>Ensuring preparation of visual materials</td>
<td>“While our lecturer was giving information, he made use of visual materials and made sure that knowledge was reinforced. Although we can forget knowledge, we do not forget visual materials easily” (S3)</td>
<td>8</td>
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<td></td>
<td>“While topics are discussed in the form of a documentary and slides, several visual materials are included. Therefore it is seen that visuals are still remembered after a certain time” (S9)</td>
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<tr>
<td>Entertaining and amusing</td>
<td>“An approach which students will enjoy while listening” (S10)</td>
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<tr>
<td></td>
<td>“As it is entertaining and amusing, it makes sure that we listen more carefully” (S16)</td>
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<tr>
<td>Facilitating concept-mapping</td>
<td>“As the taught items usually follow a chronological order, concept-mapping is easier” (S18)</td>
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<td>“Certain concepts make sure that the topic is remembered more easily. We can concept-map while using contexts.” (S5)</td>
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<td>Allowing easier access to who, where, when, why etc. questions</td>
<td>“As topics are conveyed with visual materials, the answers to such questions as who, when, why etc. are more easily found.” (S25)</td>
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<td>“Discussing topics in the form of story and drama allows us to find the answers to such questions as who, when, why etc.” (S16)</td>
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<td>Helping to establish causality relations more easily</td>
<td>“The reason why each historical site was built and then what happened to this historical site were conveyed by establishing relations” (S10)</td>
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<tr>
<td></td>
<td>“Such approaches make contribution to students in establishing causality relations more easily.” (S22)</td>
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<tr>
<td>Helping to explore essential information more easily</td>
<td>“Essential information such as the central topic and supporting ideas in any topic can be more easily and rapidly learned” (S5)</td>
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<td></td>
<td>“There are critical points in every topic discussed. These critical points are sometimes hard to identify. With this approach, it becomes easier to explore critical points” (S11)</td>
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<tr>
<td>Improving imagination</td>
<td>“While establishing a relationship between old and new knowledge, imagination improves.” (S2)</td>
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<td></td>
<td>“I think that it is influential in improving the imaginary power of students.” (S14)</td>
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b) Opinions of the experimental group on the contributions made by the technology-assisted content-based learning approach

In the research, the contribution made by this approach applied to the experiment group is explained based on teacher opinions.

In Table 5, the opinions of teacher candidates on the contributions of technology-assisted context-based teaching are listed, starting from the most emphasised. Accordingly, the most emphasised elements are that the application process improves listening skills and increases course participation. Other opinions are also listed in the table.

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

In this research, significant differences were detected between the experimental group and the control group as a result of the findings obtained from all listening success tests. It was determined that all findings were in favour of the teacher candidates in the experimental group and that the technology-assisted context-based learning approach positively affected the success level of the teacher candidates. Based on this point, it was determined that the approach applied to the experimental group made knowledge more permanent. It was witnessed that teacher candidates in the experimental group were most successful in matching questions followed by open-ended and short-answer questions.

Beall, Gill-Rosier, Tate and Matten (2008) stated that in order to acquire success in listening education, the qualification and purposefulness of materials is particularly critical. In this study, it is believed that using technological materials in context-based teaching in particular (digital stories or dramas) was effective in increasing the success of the teacher candidates. Owca, Pawlak and Pronobis (2003) claimed that students who suffer from insufficient listening skills mostly daydream during class, they become distracted, bored of the speaker, and appear to be listening while closing their minds to what they hear. However, an examination of the opinions of the teacher candidates in this study indicated that such problems did not occur during the application process; on the contrary, active participation was ensured, attention-developing activities were included, and entertaining and motivating applications were performed. Therefore, it can be suggested that the above topic (technology-assisted language education) must be considered when aiming to obtain success in listening education.

In the research, when the “student interview forms” were subjected to evaluation, it was revealed that technology-assisted context-based learning ensured permanence of learning, helped to relate with previous learning, helped recall visuals, facilitated concept mapping, and ensured that who, where, when, why etc. questions were reached more easily, helped establish causal relations, helped explore essential information more easily and improved imagination. Findings of previous research support the results of this research mentioned above. For example, in Temur’s study (2010), as was observed in this research, it was seen that questions asked before and after the text had a positive impact on the comprehension skills. In another study (Türkylmaz, 2010), visually supported text was found to be higher compared to all other groups (silent reading, listening, loud reading groups). In this research, students in the experimental group emphasised that they obtained intense information at the end of the application; some themes acquired from the interviews were “ensuring permanence of learning”, “ensuring connecting with previous knowledge”, and “ensuring exploration of essential information”. In fact, in Melanlıoğlu’s study (2011), the results reached at the end of listening activities were similar to the findings of this study and it was displayed that the metacognition skills of students, including analysing and evaluation of knowledge, developed considerably.

As emphasised by Matheson, Moon and Winiecki (2000), listening is a very important language skill which is required for all aspects of education as well as life outside school. For this reason, trying to increase the quality of listening education with a modern teaching approach, as was the case in this study, is extremely essential. Swain, Friese and Harrington (2004) emphasised the activities that teachers have to perform in listening education. In this research, before they begin their careers, teacher candidates had the opportunity to experience listening education
activities; therefore, it is believed that when they begin their future careers, they will see examples in these activities and will easily develop similar ones.

In context-based teaching, it is essential that the content is taught by connecting it with the daily lives of students (Acar & Yaman, 2011; Glynn & Koballa, 2005); in this regard, the only limitation of this study is revealed, as it was expected that teacher candidates who participated in the experimental application would place more emphasis on the acquisition of cultural accumulation and increased cultural sensitiveness. Nonetheless, despite the mentioned limitation, it is undeniable highly important that teacher candidates feel a sense of enjoyment during the experimental process, with increased motivation and developed imagination, which are among the important acquisitions of context-based teaching.

As a result of the revealed findings, it would be beneficial to follow the recommendations listed below:

- The technology-assisted context-based learning approach can be applied not only to listening skills but also to reading, speaking and writing skills.
- This approach can be applied not only to Turkish language classes but also to all other classes.
- All kinds of topics can be presented through this approach in order to attract the attention of candidate teachers or students to the discussed topic.
- The importance and characteristics of this approach can be introduced to teachers through in-service training.
- In order to introduce the works that discuss the history and cultural characteristics of Cyprus, this approach can be applied not only to students but to the public at large.
- It can be ensured that teacher candidates prepare a topic with this approach and develop it themselves.

REFERENCES


