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The impact of multisensory learning model-based tale-telling on listening skills and student opinions about it

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This study aims to reveal the impact of multisensory learning model-based tale-telling on listening skills. The research was carried out under a hybrid research design using both quantitative and qualitative research methods together. The study group of the research consists of 13 fifth-grade students in total who were studying in a public school during the 2020 to 2021 academic year. Students were involved in the research voluntarily and with parental permission. The following data collection tools were used in the research: "Attitude Scale Towards Improving Listening Skills with Tales," which was created by the researcher, tale diaries, and tale self-evaluation forms. Quantitative and qualitative data analysis methods were used to analyze the research data. T-test analysis was applied to the quantitative data after transferring them to the SPSS data analysis program; on the other hand, content analysis was used to analyze the qualitative data. As a result of the research, it was concluded that the multisensory learning method-based tale-telling has a positive impact on the attitudes of the fifth-grade students towards tale listening. In light of the results, it was concluded that parents were satisfied with the activities for multisensory tale-telling, students have understood the plots of the tales correctly, themes were remembered correctly by the students most of the time, and parents have shown a positive attitude towards tale listening.

KEYWORDS

multi-sensory learning, attitude, listening skills, tale, learning model

1. Introduction

Tales help individuals in many aspects such as supporting learning, developing positive attitudes, improving language skills, mental development, creative thinking, personality, aesthetic perception, listening comprehension, and imagination (Çetinkaya and Sönmez, 2019). Tales can help the children not only to improve their language skills but also find a solution to their own problems after thinking through the events in the tale and solutions of the characters in their inner worlds. Their potential contributions towards improving language skills show themselves in improving listening skills. From this perspective, it can be beneficial to include tales in the lessons to improve listening skills since they have educational and instructional characteristics. On the other hand, it is also important to decide which educational method will be used in the process of improving listening skills with tales. In the study, a multisensory learning model was decided on, which is considered to contribute to improving listening skills that are difficult to teach since they are abstract skills. In this sense, the study aims to measure and evaluate the impact of tale-telling on listening skills.

1.1. Tales and education

Tales are often described as a literary genre created by people using their imagination, have a place in the oral culture, and tell extraordinary events that happen to both ordinary people and surreal characters (Çelik, 2009). In another definition by Aytan (2012), tales are also described as surreal stories arising from people's dreams and their collective consciousness, passing onto other generations after being told for centuries, and having extraordinary characters. Thanks to the elements in the tales, it is possible to learn about the people and society of the era and benefit from the lessons and advice in the plot; in addition, the attitudes and behaviors of the characters give people the opportunity to get to know the authors' souls and characters. Characteristics of the tales are as follows (Güneypınar, 2021): they are produced by imagination; they are far from reality; they do not have any concerns about credibility; their characters are normal or extraordinary, some of their characters are animals while some are supernatural such as witches, genies, giants, and fairies; they do not have a concrete place and time; they are told in prose; and they may include some cultural information such as places and beliefs.

The following factors can make tales into an effective educational tool: tales include imagination, various characters, and interesting elements, and they help preschool and primary school students to move from dreams to the real world. Adults add their experiences and problems into the tales (Kuzu, 2021); children, on the other hand, see situations that they could potentially experience in their life earlier through the tales. Since the events and situations in the tales reflect the realities of society, tales have taken on a function of warning future generations and evolved into a critical position to educate society. People imagine themselves in the place of the characters having difficulties in tales and form thoughts about how they would react if they were these characters (Çetinkaya, 2007). They help the children to adopt a positive attitude and behavior towards potential situations that they may encounter later in their lives and decide how to act. They are also a useful tool to strengthen communication between parents and children (Tanrikulu, 2018). They enable individuals to know themselves and life and regulate their behaviors. Thus, they can make inferences about their attitudes, behaviors, and strategies toward potential problems (Yılmaz, 2012). Creative language activities in Turkish lessons aim to help the students to acquire language skills (El, 2012); thus, they can solidify learning. Tales have turned into useful tools utilized in lesson plans. They are created by individuals who have the drive to display a confident personality in a cultural environment (Onarıcıoğlu, 2011). According to Türkben (2018), tales provide such advantages to individuals during the course of education as effective and efficient use of language, improving communicational skills, facilitating decision-making, providing creative and critical thinking abilities, assertiveness, intratextual and intertextual reading, concretizing abstract concepts and phenomena, and sympathy.

Previous studies have shown that tales were often been used in language education for a long time (Arıcı and Bayındır, 2015). The message to be given through tales can be easily conveyed to the student considering their cognitive development level and creating the tale at the level of a child in their specific operational stage. Thanks to tales, it is possible to help students comprehend some difficult concepts (Sağlam, 2001). Therefore, one should not underestimate the importance of tales utilized during language education in the forms of listening, speaking, reading, and writing as a teaching tool. It is

possible to say that tales act like a tool to be utilized by educators. In this respect, it is considered appropriate for the designed learning process to include tales in this study.

1.2. Multisensory learning and education

It helps one to prepare as many students as possible for reading if certain strategies are involved in the educational processes of the students. The recent developments in educational programs and methods show that multisensory learning is one of the most effective methods to achieve success in education (Shams and Seitz, 2008; Balci and Çayır, 2017). Multisensory learning is related to more established methods, especially Gardner's multiple intelligence theory (Yıldırım, 2020). The reason why multisensory learning is amongst the most effective learning strategies is related to the working principle of the brain (Thelen et al., 2012). The human brain has multidimensional characteristics and grows recognizing various stimuli from the environment and reacting to them. It helps to perceive visual, auditory, and tactile functions and interpret them by combining these functions into one point (Baines, 2008; Şahin, 2011). Learning becomes more comprehensive, long-lasting, and meaningful when multiple senses are simultaneously activated for a common learning objective during the learning process. Learning is supported to be more fun, effective, and permanent when various sensory characteristics of the individual are activated. As a characteristic of learning processes, it helps the students to involve their multiple senses in the learning process and the learning environment to be enriched (Huyck and Wright, 2013; Mehrabi et al., 2014). Multisensory learning means that a student simultaneously uses more than one sense when a piece of information is given to him or her (Rau et al., 2020). Therefore, motivation is oriented toward learning objectives and outcomes when the student is involved in the learning process with more than one sense (Magpuri-Lavell et al., 2014). In this respect, it is important to have active multisensory characteristics in learning processes (Blomert and Froyen, 2010).

Educational research on multisensory learning shows that it increases success and retention in education (Birsh, 2011; Nurjanah, 2017). It also gives students numerous opportunities to reach their full learning potentials when multisensory strategies are used (Jurban, 2011). The multisensory learning model increases the active participation of the students in the lesson, raises motivation of the students who are reluctant to partake in the lesson, and enables the students to be involved in the educational process not only mentally but also behaviorally and emotionally (Hazoury et al., 2009). Multisensory learning can be designed in different ways depending on the characteristics of the lesson, topic, and learning environment. Multisensory learning processes have a functional characteristic for students in terms of individual and group activities. It is also necessary to use various materials with rich content in the learning environments. Multisensory learning is a good teaching method not only for children with special education needs but also all students. Learning becomes more accessible to students with learning differences when multisensory learning tools are involved in the learning process (Pagliano, 2012). Therefore, it is clear that multisensory learning is a model that can be used to fulfil the existing objective in the learning process when considering its advantages in the learning process for both teacher and student.

1.3. Literature studies

In the study conducted by [Balci and Çayır \(2017\)](#), the impact of a multisensory learning model on increasing phonological awareness of fourth-grade students was examined and it was revealed that there was a significant increase in reading and writing skills of the students. In the research conducted by [Lian et al. \(2017\)](#) examining the impact of multisensory learning on academic writing skills acquisition, it was concluded that there was an increase in the success of the individuals. [Sinclair \(2018\)](#) examined the impact of learning activities with multisensory learning characteristics on creativity and criticism of the individuals and revealed as outcomes of the research that multisensory learning provided such advantages as increasing creativity in teaching processes, facilitating learning processes, and establishing multidimensional evaluation. In addition, it was determined that it heightened the motivation for learning by increasing the students' interest in electronic learning tools. In the research conducted by [Suryaratri et al. \(2019\)](#) on the application of multisensory learning in primary schools, teachers emphasized that it yielded more effective results for the learning process, increased active participation of the students in the learning process, appealed to students with different learning styles, and should be used in all the lessons. In the research conducted to examine the various impacts of multisensory learning, [Rau et al. \(2020\)](#) pointed out that high efficiency was achieved with less effort for both students and teachers since it reduced distraction for the individuals. In the research conducted to examine the impact of multisensory learning characteristics on the learning of individuals, [Bas et al., \(2021\)](#) concluded that students were motivated more, and learning skills remained for a longer time.

It is expected that performing the activity of tale-telling using a multisensory learning model can contribute to the literature. It is thought that this study will be a guide for researchers and educators who wish to benefit from multiple learning and tales in language teaching. In this respect, the purpose of the research was shaped, and this study aims to reveal the impact of tale-telling with a multisensory learning model on tale-listening skills. Under the research objective, answers to the following research questions were sought:

1. Is there any significant difference between pre-test and post-test scores of the students' attitudes towards improving tale listening skills as a result of tale-telling performed with a multisensory learning model?
2. What are the students' opinions depending on their answers to the tale diaries prepared for the tales?
3. What are the students' opinions depending on their answers to the self-evaluation forms prepared for the tales?
4. What are the observer's opinions depending on their answers to the observation evaluation forms prepared for the tales?

2. Method

2.1. Research model

Research was carried out based on a hybrid research methodology. In the study, data were collected using both quantitative and qualitative research methods. The most important contribution of using

qualitative and quantitative methods together is that it gives the opportunity to study and examine the research problem thoroughly ([Fraenkel et al., 2012](#); [Creswell and Plano Clark, 2018](#)). As the quantitative aspect of the research, one group pre-test post-test experimental design was utilized. The quasi-experimental design aims to test the potential impact of certain pre-arranged applications on individuals. Experimental applications are performed to reveal the impact of some independent variables on dependent ones. Comparing the difference between pre-test and post-test scores, one tries to determine the impact of the experimental procedure ([Büyüköztürk et al., 2014](#)). As for the qualitative aspect of the research, the data were collected by interviewing the participants. Following the collection and analysis of the quantitative data, the research was planned on the process of collecting and analyzing the qualitative data.

2.2. Study group

The study group of the research consists of fifth-grade students who were studying in a public school during the 2020 to 2021 academic year. The classroom size selected to perform the research consisted of 22 students in total. Parental consent forms were collected for each student to participate in the study. However, 8 students were excluded from the study group since they have not had parental permission. Therefore, the study was performed with a study group of 14 students. One student has also been excluded from the analysis since they had not participated in the application from the beginning to the end. Eventually, the study was completed with 13 students. Students who participated in the research consisted of 5 (38%) boys and 8 (62%) girls.

2.3. Data collection tools

2.3.1. Attitude scale towards improving tale listening skills

Utilized in this study, the "Attitude Scale Towards Improving Tale Listening Skills" was created by the researcher. Based on the literature, an item pool of 40 questions was prepared and submitted to expert opinions by the researcher. A pilot application was performed for the scale form finalized in accordance with the experts' opinions. Following the pilot application, it was applied to the participants, who are fifth-grade students. Exploratory (EFA) and confirmatory (CFA) factor analyses and reliability analysis were performed for the data obtained from the application. Created scale is a measurement tool in the type of 5-point Likert scale with 5 subdimensions. It consists of 22 items in total. The Cronbach alpha reliability coefficient for the overall scale is 0.87. Five subdimensions of the scale were named as follows: (i) Attitude Towards the Tale, (ii) Comprehension and Analysis, (iii) Association with Life, (iv) Presentation of the Tale, and (v) Active Participation. In addition, each dimension has Cronbach alpha reliability values of 0.86, 0.77, 0.79, 0.80, and 0.87, respectively, ([Gazioglu and Karakuş, 2021](#)).

2.3.2. Tale diaries

There are four fundamental questions in the form created by the researcher and to be asked to the students following the tale-telling activity based on the multisensory learning method.

The tale diaries contain the following questions:

“Q1. Did you have any difficulties while listening to the tale? Why?”

“Q2. Did you enjoy listening to the tale? Why?”

“Q3. What did you think about while listening to the tale?”

“Q4. What did you feel while listening to the tale?”

2.3.2.1. Tale self evaluation form

Self-evaluation forms consist of questions that will help the students to evaluate the extent of their comprehension of the plot in the tales. Questions were prepared for the tales by the researcher, and shared questions for each tale were asked separately. They are as follows:

1. I could identify the theme in the tale.
2. I could identify the main idea in the tale.
3. I could identify the supporting ideas in the tale.
4. I could identify the plot, place, time, characters, creatures, and the elements related to them in the tale.
5. I could identify cause-and-effect relations in the tale.
6. I could identify purpose-and-effect relations in the tale.
7. I could summarize the tale in chronological and logical order.

2.3.3. Observer evaluation forms

Observer evaluation forms for the tale consist of questions that will help to evaluate the extent that the students have comprehended the plot in the tales. They were applied upon later examination of the application records by the experts in the field who have not taken part in the application. There are some pieces of information about the application process and tales on the form, and experts have evaluated the activities depending on certain criteria. Questions were prepared for the tales by the researcher, and shared questions for each tale were asked separately. Questions are related to the following topics: preparation, using previous knowledge, asking questions before listening, making some guesses, keyword activity, identifying the purpose, identifying the method, taking some notes, questions and answers, intonation, sympathy, real-life associations, visualization, summarizing, deduction, cause-and-effect relation, and self-evaluation. Applications in the research were observed, examined, and evaluated by two experts.

2.4. Preparation process for the tales

Then different tales were prepared to apply to the students undergoing this research. Seventeen tales were created by the researcher during the preparation process. The seventeen tales were submitted to the experts along with two evaluation forms, and they were evaluated by the experts. A graded evaluation form was prepared considering the required qualities of listening/watching texts and textuality criteria of tale texts in accordance with fundamental objectives and principles. Tales were graded in 13 items for the first form and 10 items for the second form and evaluated in scores from 1 to 10 by the experts. Expressions in the evaluation form were

prepared considering textuality criteria of the text such as “*title, student level, variety of word classes, narration characteristics, main idea, supporting ideas, integrity, listening taste and habit*.” Evaluation results of the expert opinions on 17 different tales were presented in [Supplementary Table 1](#).

Evaluation results of the experts for 17 different tales were presented in [Supplementary Table 1](#). Scores for the tales range from 262 to 435. As a result of the expert evaluations, it was decided to use the 10 tales with a score higher than 400 in the research. The tales selected to be used in the research were as follows: Altın Araba, Akıllı Evlat, Aç Kurt, Dev Baba, Benli-Bahri, Nine ile Tilki, Nohut Oğlan, Yer Altı Diyarının Kartalı, Geveze Kadın, and Tuz. Out of 10 tales selected to be used in the research, 8 were used during the real application and 2 during the pilot application. Tuz, one of the tales used in the research, was presented in [Appendix 1](#) as an example.

2.5. Application process

A pilot application was performed before the real one. The pilot application process was completed using two tales (Dev Baba, Benli-Bahri) randomly selected from amongst eight tales. It was performed previously to carry out the research well, thus it was aimed to prevent possible negative situations for the storyteller or the students during the application of tale-telling. In this way, prior to the real application, potential problems were prevented and the required precautions were taken.

Following the required permissions for the experimental application, the researcher moved to the applying the process for real. The planned research application was performed online. It was carried out online on the Zoom platform. Applications were carried out between 07:00 PM and 09:00 PM on weekdays and 02:00 PM and 04:00 PM on weekends, each session lasted 2 h, and a total of 8 experimental applications were completed within 24 days, with 3 days intervals.

Previously, it was planned to carry out the research application face-to-face before the Covid-19 pandemic. The classroom environment was to be prepared by the educator based on the appropriate senses for each tale. The multisensory learning environment for each tale was to be designed by the researcher before the tale telling activity. Even though it was planned to be carried out face-to-face, the application was performed in the home environment due to the pandemic. Parents were informed about the qualities to appeal to the five senses determined for the tales prior to each activity of tale telling. Accordingly, they prepared the environment, objects, and voices that will activate one of the five sensory organs of the students. For instance, if possible, parents have brought their children to the forest since one tale takes place in the forest. They were supposed to bring food and beverages such as salt, fish, or milk since they are mentioned in some of the other tales. On the other hand, they were supposed to make their children touch soft fluff or a hard material if there are soft or hard textures in the tale. In addition, sounds in the tales were played on the internet, and thus hearing was also activated. Therefore, tale telling activities were completed as planned along with parental communication, and multisensory environments were created to activate the senses of the children.

2.6. Data analysis

Quantitative and qualitative data analysis methods were used to analyze research data. Answers to the attitude scale towards tale listening were transferred to SPSS 26 statistics program. Pre-test and post-test data were analyzed by paired sample t-test. In addition, descriptive statistics of the attitude scale were calculated. Tale diaries were analyzed by content analysis. Analyses were completed after evaluation forms were analyzed based on their descriptive statistics (percentage and frequency distributions).

3. Findings

Based on prior research in which the impact of multisensory learning model-based tale-telling on tale-listening skills was revealed, findings were presented targeting research questions.

Findings for the results of the t-test analysis applied to compare the pre-test and post-test scores of the attitude scale towards improving tale listening skills were demonstrated in [Supplementary Table 2](#).

In [Supplementary Table 2](#), one can see the comparison between the paired sample t-test and pre-test post-test data of the scores students who have participated in the research have obtained from the attitude scale towards tale listening. As a result of the research, it was determined that there is a significant difference between the total scores and subdimensions of the scale, which are attitude toward the tale, comprehension and analysis, real-life associations, presentation of the tale, and active participation ($p \leq 0.05$). Considering the scores for arithmetic mean related to the significant difference, it was determined that there is a significant difference between pre-test and post-test scores, and it is for post-test scores. [Supplementary Table 3](#) demonstrates the findings for content analysis results of the tale diary for “Aç Kurt,” which is one of the tales told to the students who participated in the study.

In [Supplementary Table 3](#), one can see the diary answers for “Aç Kurt,” which is one of the tales told to the students. It was understood that all the students felt no difficulty while listening to the tale, from the answers given to the first question. They have supported their answers with statements like “I did not, I liked the tale, and I found it very fun and good.” It was determined that all the students have given answers like “I enjoyed it” depending on the answers given to the second question. Students expressed their enjoyment with statements like “It was a good tale, I listened to it with excitement, it has impressed me, I really enjoyed listening to it with my eyes closed.” It was seen that students gave answers like “nothing, I imagined” for the third question. One can see that they have given answers like “I thought that the wolf was looking for food in a place covered in snow, I imaged the hungry wolf, I imagined the tale, people in the tale.” It was determined from the answers the students gave to the fourth question that the following ideas emerged: “hunger, I felt sorry, I did not feel anything, and I felt happy.” Students also stated “I felt very sorry because the wolf starved and died” for the theme of hunger, and “I felt sorry for the wolf, but I was happy because it did not eat the other animals, I felt like the wolf in the tale, I felt sorry because the wolf starved and died” for the theme of I felt sorry. There were no statements for the themes of I felt happy, and I did not feel anything. [Supplementary Table 4](#)

demonstrates the findings for content analysis results of the tale diary for “Akıllı Evlat,” which is one of the tales told to the students who participated in the study.

In [Supplementary Table 4](#), one can see the diary answers to “Akıllı Evlat,” which is one of the tales told to the students. It was determined that all the students gave an answer like “I did not” for the first question. It was understood that the students have used such statements as “it was fun, it was enjoyable, I listened to it very carefully.” One can see that all the students enjoyed this story, from the answers to the second question. In addition, students have used such statements as “our teacher told it very good [*sic*].” It was determined that children said the tale had no theme. One student on the theme of everything, and four students on the theme of people in the tale. Answers given to the fourth question by the students are “excitement, nothing, not every kid is smart.” It was seen that nine students have stated that they felt excited while two students stated that they felt nothing, and two students have expressed an opinion along the lines of not every kid is smart. [Supplementary Table 5](#) demonstrates the findings for content analysis results of the tale diary for “Altın Araba,” which is one of the tales told to the students who have participated in the study.

In [Supplementary Table 5](#), one can see the diary answers to “Altın Araba,” which is one of the tales told to the students. All the students have given an answer like “I did not” for the first question. As for the question of “Why?,” the students used statements like “I did not, it was easy, I listened to it very carefully.” One can see that all the students have answered the second question as yes. As for the question of “Why?,” the students have used the statements like “our teacher told it well, it was enjoyable, it was a very good tale, it was fun.” One can see that the students have answered the third question as “nothing, everything, myself, people in the tale.” It was seen that six students have expressed their opinions on the theme of nothing, one student on the theme of everything, four students on the theme of people in the tale, and two students on the theme of myself. Depending on the answers given to the fourth question by the students, the following themes have emerged “excitement, nothing, golden car.” It was detected that eight students have expressed their opinion on the theme of excitement, three students on the theme of nothing, and two students have stated that they want to have a golden car in the future. [Supplementary Table 6](#) demonstrates the findings for content analysis results of the tale diary for “Geveze Kadın,” which is one of the tales told to the students who have participated in the study.

In [Supplementary Table 6](#), one can see the diary answers to “Geveze Kadın,” which is one of the tales told to the students. All students gave an answer along the lines of “I did not” for the first question. As for the question of “Why?,” one can recognize that they have used such statements as “I did not, it was a beautiful tale, it was easy, I listened to it very carefully.” One can see that all the students have given an answer like yes depending on the answers to the second question. They justified their answers with the statements like “it was enjoyable and fun.” For the third question, they have given answers like “nothing, my friend, people in the tale.” It was seen that seven students have expressed their opinions on the theme of nothing, four students on the theme of my friend, and two students on the theme of the people in the tale. Depending on the answers given to the fourth question by the students, the themes were decided as excitement, happiness, nothing, and teaching a lesson. It was noticed that two

students have expressed their opinions on the theme of excitement, four students for the theme of nothing, four students on the theme of happiness, and three students on the theme of teaching a lesson. [Supplementary Table 7](#) demonstrates the findings for content analysis results of the tale diary for “*Nine ile Tilki*,” which is one of the tales told to the students who have participated in the study.

In [Supplementary Table 7](#), one can see the diary answers to “*Nine ile Tilki*,” which is one of the tales told to the students. It was seen that students have given such answers to the first questions as “I did not, and I did.” One can see that 11 students answered “I did not” while 2 students answered “I did.” It was seen that students have used statements like “I did not, I had fun” for the theme of I did not, and “it was very noisy, the volume was very low” for the theme of I did. One can see that all the students have given an answer like yes depending on the answers to the second question. As for the question of “Why?,” they used statements like “it was fun, our teacher told it well, and it was fluent.” Depending on the answers given to the third question by the students, the themes were decided as “nothing, my cousins, people in the tale.” It was detected that three students have expressed their opinions on the theme of nothing, one student favored the theme of my cousins, and eight students for the theme of people in the tale. Depending on the answers given to the fourth question by the students, the following themes have emerged: “excitement, sadness, difficulties, and fun.” It was detected that three students have expressed their opinions on the theme of excitement, four students on the theme of sadness, one student on the theme of difficulties, and five students on the theme of fun. [Supplementary Table 8](#) demonstrates the findings for content analysis results of the tale diary for “*Nohut Oğlan*,” which is one of the tales applied to the students who have participated in the study.

In [Supplementary Table 8](#), one can see the diary answers to “*Nohut Oğlan*,” which is one of the tales told to the students. It was detected that all the students answered “I did not” for the first question. One can appreciate they used statements like “I’ve listened to the tale before, I enjoyed it, it was easy, it was fun” about this theme. One can see that all the students have answered yes to the second question. They have justified their answers with the following statements: “it was enjoyable, it was very good, it was fun, I was curious about it.” It was seen that they have answered the fourth question as “nothing, babies, people in the tale.” It was seen that six students have expressed their opinions on the theme of nothing, one student on the theme of babies, and six students on the theme of people in the tale. [Supplementary Table 9](#) demonstrates the findings for content analysis results of the tale diary for “*Tuz*,” which is one of the tales told to the students who have participated in the study.

In [Supplementary Table 9](#), one can see the diary answers to “*Tuz*,” which is one of the tales told to the students. All the students answered “I did not” for the first question. As for the question of “Why?,” they have used such statements as “it was quite fluent, I liked the tale, it was fun, it was easy, it was a quite beautiful tale.” One can see that all the students have given an answer like “I enjoyed it” depending on the answers to the second question. As for the question of “Why?,” they used such statements as “it was quite fluent, I liked the tale, it was fun, it was easy, it was a quite beautiful tale, meaningful and good.” One can see that the students have given answers like “nothing, tale of snow white, my friend, saltless food tastes bad, I wondered what task the teacher would give, prejudice people” for the third question.

Depending on the answers, it was concluded that five students stated “nothing” while the other answers were each stated once. From the answers given to the fourth question by the students, it was determined that the following themes emerged: “excitement, sadness, happiness, nothing, salt is bad.” “It made me sad that he wanted his son to be beheaded because his son said that he loved him as little as a salt grain” was stated for the theme of sadness, and “I felt sorry for the wolf, but I was happy because it did not eat the other animals, I felt like the wolf in the tale, I felt sorry because the wolf starved and died” for the theme of I felt sorry. There were no statements for the themes of excitement, happiness, nothing, and salt is something bad. The theme of happiness was stated by five students, the theme of sadness by three students, the theme of nothing by two students, and the other themes by one student for each. [Supplementary Table 10](#) demonstrates the findings for content analysis results of the tale diary for “*Yer Altı Diyarı*,” which is one of the tales told to the students who have participated in the study.

In [Supplementary Table 10](#), one can see the diary answers to “*Yeraltı Diyarının Kartalı*,” which is one of the tales told to the students. All the students answered “I did not have any difficulties” for the first question. In addition, one can see that the students have used such statements as “it was quite easy, I listened to it carefully, it is a quite beautiful tale, it has impressed me.” Depending on the answers to the second question by the students, one can see that all the students have given an answer like “I enjoyed it.” As for the question of “Why?,” students have used such statements as “excitement and adventure, activities were good and tale was fantastic, it was fun, it was good and exciting.” Depending on the answers given to the third question by the students, one can see that the following themes have emerged: “people in the tale, beautiful places, I imagined, humanity, animals, helpfulness.” It was concluded that one student each stated the themes of “beautiful places, humanity, helpfulness,” three students for the theme of “people in the tale,” two students for the theme of “I imagined,” and one student for the theme of “animals.” Depending on the answers given to the last question by the students, it was determined that the following themes have emerged: “sympathy, sadness, happiness.” For the theme of sympathy, they used such statements as “I felt like I was that kid, I felt myself in the tale,” for the theme of happiness, they stated that “I felt something good in me.” [Supplementary Table 11](#) demonstrates the findings of content analysis results for the student self-evaluation forms prepared for the listening activities of the tale applied to the students who have participated in the study.

In [Supplementary Table 11](#), one can see the student answers to student self-evaluation forms for the listening activities of the tale. It was understood that 61% of the students answered yes for “Aç Kurt,” 100% for “Akıllı Evlat,” 84% for “Altın Araba,” 92% for “Geveze Kadın,” 92% for “Nine ile Tilki,” 84% for “Nohut Oğlan,” 84% for “Tuz,” and 92% for “Yer Altı Diyarının Kartalı” to the expression of “1. I could identify the theme in the tale.” It was determined that 61% of the students answered yes for “Aç Kurt,” 76% for “Akıllı Evlat,” 84% for “Altın Araba,” 92% for “Geveze Kadın,” 92% for “Nine ile Tilki,” 92% for “Nohut Oğlan,” 77% for “Tuz,” and 92% for “Yer Altı Diyarının Kartalı” to the expression of “2. I could identify the main idea in the tale.” Even though the rate of identifying the theme of “Aç Kurt” is low, they have not had any difficulties to identify the main idea of the other tales. One

can see that 53% of the students have answered yes for “Aç Kurt,” 53% for “Akıllı Evlat,” 77% for “Altın Araba,” 69% for “Geveze Kadın,” 69% for “Nine ile Tilki,” 92% for “Nohut Oğlan,” 61% for “Tuz,” 92% for “Nohut Oğlan,” and 61% for “Yer Altı Diyarının Kartalı” to the expression of “3. I could identify the supporting ideas in the tale.” And they could identify the supporting ideas in the tale. It was determined that 92% of the students answered yes for “Aç Kurt,” 84% for “Akıllı Evlat,” 84% for “Altın Araba,” 100% for “Geveze Kadın,” 100% for “Nine ile Tilki,” 100% for “Nohut Oğlan,” 92% for “Tuz,” and 100% for “Yer Altı Diyarının Kartalı” to the expression of “4. I could identify the plot, place, time, characters, creatures, and the elements related to them in the tale.” It was detected that 84% of the students have answered yes for “Aç Kurt,” 77% for “Akıllı Evlat,” 77% for “Altın Araba,” 69% for “Geveze Kadın,” 92% for “Nine ile Tilki,” 77% for “Nohut Oğlan,” 69% for “Tuz,” and 84% for “Yer Altı Diyarının Kartalı” to the expression of “5. I could identify cause-and-effect relations in the tale.” and they could identify the cause-and-effect relations in the tale. One can see that 77% of the students have answered yes for “Aç Kurt,” 69% for “Akıllı Evlat,” 77% for “Altın Araba,” 77% for “Geveze Kadın,” 84% for “Nine ile Tilki,” 69% for “Nohut Oğlan,” 54% for “Tuz,” and 69% for “Yer Altı Diyarının Kartalı” to the expression of “6. I could identify purpose-and-effect relations in the tale.” and they could identify purpose-and-effect relations in the tale. One can also see that 46% of the students have answered yes for “Aç Kurt,” 46% for “Akıllı Evlat,” 84% for “Altın Araba,” 84% for “Geveze Kadın,” 84% for “Nine ile Tilki,” 77% for “Nohut Oğlan,” 61% for “Tuz,” and 77% for “Yer Altı Diyarının Kartalı” to the expression of “7. I could summarize the tale in a chronological and logical order.” and they could summarize the tale in a chronological and logical order. [Supplementary Table 12](#) demonstrates the findings of content analysis results for the observer evaluation form prepared for the listening of the tale told to the students who have participated in the study.

In [Supplementary Table 11](#) one can see the observer answers to observer self-evaluation forms for the listening activities of the tale. Depending on the evaluation data on the tale activities by the observers, one can also see that students were often observed in the preparatory stage, and characteristics were highly related to preparing the materials to be used in the while-listening process, visualising the theme of the tale, and identifying the outline of the tale in the pre-tale-telling process. Observers have observed that students have shown high listening skills such as using previous knowledge about the tale, and creating questions in the pre-listening process. In addition, observers have observed that students have guessed the theme of the tale using the keywords for all the tales. It was observed at a high rate that before the tale, students concentrated on the tale thanks to images and concepts, they were informed about why they need to listen to the tale, and evaluations were performed for the genre of the tale. Observers have observed at a high rate that while listening, students have benefited from note-taking techniques, they were careful about questions and answers, intonation, they have sympathized with the people in the tale, they have associated the events and situations with real life, and they have visualized the symbols in the tale. It was observed at a high rate that after tale-telling, students were able to summarize the tale, make deductions about the tale, visualize the tale, comprehend the message in the tale

correctly, understand the arguments in the tale based on cause-and-effect relations, and express themselves easily about the events and situations in the tale. Considering the self-evaluations of the tales by the students and evaluations of the students and activities by the experts together, one can see the similarities between the opinions of both students and experts. Students have stated that they can mostly perform skills such as identifying the theme, main idea, supporting ideas of the tale, building cause-and-effect relations with the situations in the tale, explaining the plot of the tale, and summarizing the tale in a chronological and logical manner. Similarly, experts have also stated that they use listening skills effectively in the pre-, during-, and post-narrative processes in their observations for tale-telling activities.

4. Discussion and conclusion

This research aims to reveal the impact of tale-telling based on multisensory learning methods and listening skills.

It was detected that tale-telling-based practices with a multisensory learning model have a positive impact on improving the listening skills of the students. Comparing the findings in this research and other related studies in the literature, it can be understood that they have yielded similar results. In the research carried out on the impact of Aesop's fables on listening skills by [Yıldız and Savaş \(2019\)](#), 18 fables created a positive impact on the listening and comprehension skills of the students. In the research conducted about the impact of interactive tale-telling technique on the listening skills of middle school fifth-grade students by [Öztürk and Duran \(2018\)](#), students had more fun, interaction level was higher, tale listening skills were affected positively, and these impacts also contributed to other skills. In the research carried out by [Şahin \(2011\)](#) to examine the impact of tales on paediatric development based on teacher opinions, students were affected positively when they were told stories and tales. In the study conducted by [Yılmaz \(2017\)](#) to examine the impacts of tales on language skills for language education at an early age, it was detected that using tales in language education increased the attention of the children, created a positive impact on their languages skills, made tales more entertaining, helped the students love the lessons, and conveyed the intercultural differences more effectively. In another research, it was found that drama-based tale-telling created a significant impact on the development of problem-solving skills of the children ([Erdal, 2020](#)). Considering the literature studies on this context, it is obvious that tale-telling has a positive impact on improving the different skills of children. In addition, it is evident that the current study yields similar results with the literature revealing the positive impact of tale-telling on listening skills and attitude towards it.

On the other hand, it was revealed that the multisensory learning model contributes to improving listening skills and creating a positive attitude toward listening. Similarly, one can see the studies revealing the impact of multisensory learning model-based practices on the students' attitudes and outcomes toward learning. In the research examining the impact of multisensory learning methods on learning for children, it was concluded that students performed more if multisensory learning features were involved in the visual

and auditory learning processes starting from the age of 6 (Broadbent et al., 2018). In another study, it was revealed that they had positive impacts when multisensory learning model-based activities were performed in addition to oral expression skills (Fifer et al., 2013). In the study performed by Sinclair (2018), it was concluded that multisensory learning facilitated learning processes, multidimensional evaluation was made possible, and attitudes toward learning increased. Similarly, in the research carried out by Yıldırım (2020), it was concluded that it improved the students' attitudes towards reading and writing positively, increased their self-efficacy for reading and writing, and made the acquired knowledge more permanent when learning was performed using multiple stimuli. It was revealed that multisensory learning helped the students to integrate their learning qualities with real life when it was used in primary school and emphasized the need to use the multisensory learning model effectively in all the lessons (Suryaratri et al., 2019). In addition, it was concluded that multi-learning motivated the children more, made their learning skills permanent (Bas et al., 2021), and increased success for the individuals (Lian et al., 2017). Pointing out that multisensory foreign language teaching enabled students to use tactile, visual, auditory, olfactory, and gustatory materials, Akpınar and Aydın (2010) stated that thus, more than one sensory mechanism accompanied the language learning process, and it provided a multidimensional learning environment depending on the individual differences of the students. Shams and Seitz (2008) stated the benefits of multisensory learning as follows: organizing the learning environment, improving the mental skills of the students, increasing the motivation and interest towards learning, and making the learning process more effective. In this respect, it was revealed that the results both in the literature and this study support each other. To sum up, its contribution to both multisensory learning environments and the impact of tales on the listening skills of individuals was revealed.

In addition, data were evaluated from the forms for listening activities of the students. Although the rate of identifying the theme in "Aç Kurt" is low, it was concluded that students have not had any difficulties identifying the themes in the other tales. It is possible to say that students have had some difficulties identifying the supporting ideas in Aç Kurt, Akıllı Evlat, and Tuz. One can say that students have not had any difficulties identifying the plot, place, time, characters, creatures, and the elements related to them in the tale. One can also say that they have had some difficulties to identify cause-and-effect relations in Geveze Kadın and Tuz.

It is possible to say that students have had some difficulties to identify purpose-and-effect relations in Akıllı Evlat, Tuz, Nohut Oğlan, and Yer Altı Diyarının Kartalı. It is possible to say that students have had some difficulties identifying the supporting ideas in Aç Kurt, Akıllı Evlat, and Tuz. In addition, observer forms indicate that students have good listening skills since the scores for tale listening are high and the scores for attitude towards it are not low. It is quite an important outcome that research data overlap at this point.

5. Suggestions

Depending on the results of the research, the following suggestions were put forward. During the distance education process, it is

important to restructure education based on a multisensory learning model so that students who are expected to be in front of the screen for a long time will not suffer from sensory deprivation. Especially tales can be included more in Turkish teaching programs as a text type to be used to improve basic language skills. Provided for the teachers as in-service training, Anadolu Masalları Masal Anlatıcılığı Eğitimleri (Anatolian Tales Tale telling Training) can be combined with a multisensory learning method.

Data availability statement

The original contributions presented in the study are included in the article/[Supplementary material](#), further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving humans were reviewed and approved by Yıldız Teknik Üniversitesi. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin. Written informed consent was obtained from the individual(s), and minor(s)' legal guardian/next of kin, for the publication of any potentially identifiable images or data included in this article.

Author contributions

The applications of the study were made by MG. The data of the study were interpreted by NK. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2023.1137042/full#supplementary-material>

References

- Akpınar, B., and Aydın, K. (2010). Çoklu duyuşsal (multisensory) yabancı dil öğretimi. *Tübbav Bilim Dergisi* 2, 99–106.
- Arıcı, A. F., and Bayındır, N. (2015). Masalların öğretim aracı olarak kullanılması üzerine bir araştırma. *Dil ve Edebiyat Eğitimi Dergisi* 15, 106–119.
- Aytan, N. (2012). İlköğretim ikinci kademe ders kitaplarındaki masal ve hikayelerin karakter eğitimi açısından incelenmesi. Unpublished Master's Thesis, On Sekiz Mart University Graduate School of Educational Sciences.
- Baines, L. (2008). *A teachers' guide to multisensory learning*. Association for Supervision and Curriculum Development, USA.
- Balci, E., and Çayır, A. (2017). Disleksi riski taşıyan 4. sınıf öğrencisinin fonolojik farkındalığının artırılmasında çoklu duyuşsal öğrenme'nin etkisi. *Ana Dili Eğitimi Dergisi* 5, 201–216.
- Bas, A., Burns, N., Gulotta, A., Junker, J., Drasler, B., Lehner, R., et al. (2021). Understanding the development, standardization, and validation process of alternative in vitro test methods for regulatory approval from a researcher perspective. *Small* 17:2006027.
- Birsh, J. R. (2011). *Multi sensory teaching of basic language skills*. Brookes Publishing Company, Baltimore, MD 21285.
- Blomert, L., and Froyen, D. (2010). Multi-sensory learning and learning to read. *Int. J. Psychophysiol.* 77, 195–204. doi: 10.1016/j.jpsycho.2010.06.025
- Broadbent, H. J., White, H., Mareschal, D., and Kirkham, N. Z. (2018). Incidental learning in a multisensory environment across childhood. *Dev. Sci.* 21:e12554. doi: 10.1111/desc.12554
- Büyükköztürk, Ş., Kılıç Çakmak, E., Erkan Akgün, Ö., Karadeniz, Ş., and Demirel, F. (2014). *Bilimsel araştırma yöntemleri*. Ankara: Pegem Akademi Yayıncılık.
- Çelik, A. (2009). Masalların eğitim açısından dil ve kültür edimine katkısı üzerine bir araştırma. Unpublished Doctoral Dissertation. Atatürk University Graduate School of Social Sciences.
- Çetinkaya, Z. (2007). Masalların Türkçe öğretimindeki yeri ve önemi. Unpublished doctoral dissertation, Dokuz Eylül university graduate School of Educational Sciences. Ed. Thousand Oaks, CA: Sage. Education (8th Ed.). New York: Mc Graw Hill.
- Çetinkaya, F. Ç., and Sönmez, M. (2019). Masal anlatımının ilkököl 4. sınıf öğrencilerinin konuşma prozodilerine etkisi. *Yaratıcı Drama Dergisi* 14, 297–308.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd) Thousand Oaks, CA: Sage.
- El, M. (2012). Anadili eğitimi-öğretimi sürecinde çocuk yazını ürünlerinden yararlanma ve masal türüne yönelik bazı belirlemeler. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi* 31, 1–12.
- Erdal, Z. (2020). Drama temelli masal anlatıcılığı yöntemi ile verilen problem çözme eğitiminin beş yaş çocuklarının problem çözme becerilerine etkisi. Unpublished Master's Thesis, Selçuk University Graduate School of Social Sciences.
- Fifer, J. M., Barutçu, A., Shivdasani, M. N., and Crewther, S. G. (2013). Verbal and novel multisensory associative learning in adults. *F1000 Faculty Rev.* 2:34. doi: 10.12688/f1000research.2-34.v2
- Fraenkel, Jack R., Wallen, Norman E., Hyun, Ve, and Helen, H. (2012). *How to design and evaluate research in education. (vol. 7)* New York: McGraw-hill, p. 429.
- Gazioğlu, M., and Karakuş, N. (2021). Developing attitude scale towards the effect of listening skills of tales: a validity and reliability study. *Ulakbilge* 9, 493–503. doi: 10.7816/ulakbilge-09-59-01
- Güneypınar, Ş. (2021). İlköğretim üçüncü sınıf öğrencileri ile masal temelli karar verme etkinliklerinin öğrencilerin karar verme becerisi algısı düzeyine etkisinin incelenmesi: Bir eylem araştırması. Unpublished Master's Thesis, Marmara University Graduate School of Educational Sciences.
- Hazoury, K. H., Oweini, A. A., and Bahous, R. (2009). A multisensory approach to teach Arabic decoding to students with dyslexia. *Learn. Disabil. Contemp. J.* 7, 1–20.
- Huyck, J. J., and Wright, B. A. (2013). Learning, worsening, and generalization in response to auditory perceptual training during adolescence. *J. Acoust. Soc. Am.* 134, 1172–1182. doi: 10.1121/1.4812258
- Jurban, S. (2011). Using multi sensory approach for teaching English skills and its effect on students' achievement at Jordanian school. *Eur. Sci. J.* 8, 50–61.
- Kuzu, S. (2021). Çağdaş Masal örneği olarak Cahit Zarfıoğlu'nun anlatıları. Unpublished Master's Thesis, Fatih Sultan Mehmet Vakıf University, Institute of Graduate Studies.
- Lian, A., Bodnarchuk, A., Lian, A., and Napiza, C. (2017). "Academicwriting as aestheticsapplied: creative use of technology to support multisensory learning" in *Challenges in global learning: Dealing with education issues from an international perspective*. eds. A. Lian, P. Kell, P. Black and K. Y. Lie (UK: Cambridge Scholars Publishing), 350–374.
- Magpuri-Lavell, T., Paige, D., Williams, R., Akins, K., and Cameron, M. (2014). The effects of a summer reading program using simultaneous multisensory instruction of language arts on reading proficiency. *Read. Improv.* 51, 361–372.
- Mehrabı, A., ZARBAKHSH, M. R., and Rahmani, M. A. (2014). Effect of multi-sensory teaching method using sina education alinstrument on performance of reading and writing in learning disabled children in Tonekabon City. *Univ. J. Manag. Soc. Sci.* 4, 30–39.
- Nurjanah, E. (2017). Metode multisensori terhadap kemampuan mengenal lambang bilangan 1-10 pada anak autisme. *J. Pendidikan Khusus* 9, 1–10.
- Onarıcıoğlu, A. (2011). Manzum hayvan masallarının anlama ve hatırlama becerilerine etkisi. Yüksek Lisans Tezi. Selçuk Üniversitesi Eğitim Bilimleri Enstitüsü.
- Öztürk, E., and Duran, E. (2018). Etkileşimli masal anlatım tekniğinin ortaokul 5. sınıf öğrencilerinin dinleme becerilerine etkisi. *Avrasya Dil Eğitimi ve Araştırmaları Dergisi* 2, 60–84.
- Pagliano, P. (2012). *The multisensory handbook*. USA: Routledge.
- Rau, P. L. P., Zheng, J., and Wei, Y. (2020). Distractive effect of multimodal information in multisensory learning. *Comput. Educ.* 144:103699:103699. doi: 10.1016/j.compedu.2019.103699
- Sağlam, İ. (2001). Okulöncesi Eğitimde Sözlü Öğretim Etkinlikleri ve Din Eğitimi. *Uludağ Üniversitesi İlahiyat Fakültesi Dergisi* 10, 1–12.
- Şahin, M. (2011). Masalların çocuk gelişimine etkilerinin öğretmen görüşleri açısından incelenmesi. *Milli Folklor* 23, 208–2019.
- Shams, L., and Seitz, A. R. (2008). Benefits of multisensory learning. *Trends Cogn. Sci.* 12, 411–417. doi: 10.1016/j.tics.2008.07.006
- Sinclair, S. (2018). "Creativity, criticality and engaging the senses in higher education: creating online opportunities for multisensory learning and assessment" in *Creativity and critique in online learning* (Cham: Palgrave Macmillan), 103–122. doi: 10.1007/978-3-319-78298-0_6
- Suryaratri, R. D., Prayitno, E. H., and Wuryani, W. (2019). The implementation of multi-sensory learning at elementary schools in Jakarta. *Jurnal Pendidikan Usia Dini* 13, 100–113. doi: 10.21009/10.21009/JPU.131.108
- Tanrıkuş, F. (2018). Özel yetenekli öğrencilerin eğitiminde masaları drama yöntemiyle işlemenin Türkçe dersine etkisi. *Uluslararası Türkçe Edebiyat Kültür Eğitim (TEKE) Dergisi* 7, 2571–2590.
- Thelen, A., Cappe, C., and Murray, M. M. (2012). Electrical neuroimaging of memory discrimination based on single-trial multisensory learning. *NeuroImage* 62, 1478–1488. doi: 10.1016/j.neuroimage.2012.05.027
- Türkben, T. (2018). Ana dili eğitimi ve öğretimi sürecinde masalların çocuk gelişimine katkılarının ilişkin öğretmen görüşlerinin incelenmesi. *Electronic Turkish Stud.* 13, 1821–1841. doi: 10.7827/TurkishStudies.14130
- Yıldırım, G. (2020). Türkçe dersinde çoklu uyarıcılarla gerçekleştirilen kelime öğretimi uygulamalarının etkililiği üzerine bir araştırma. Unpublished Doctoral Dissertation, Dokuz Eylül University Graduate School of Educational Sciences.
- Yıldız, A. B., and Savaş, B. (2019). Ezop masallarının dinleme becerisine etkisi. *Ulusal Eğitim Akademisi Dergisi* 3, 185–208. doi: 10.32960/uead.607309
- Yılmaz, A. (2012). Çocuk eğitiminde masalın yeri (Binbir gece masaları örneği). *Süleyman Demirel Üniversitesi Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi* 2012, 299–306.
- Yılmaz, D. (2017). Erken yaşta yabancı dil eğitiminde masalların dil becerilerine etkileri. Unpublished Master's Thesis, Trakya University Graduate School of Social Sciences.