

Unlocking English Skills Through Bulgarian Folktales: A Study with 7-10 Year Olds

Maria Mladenova

South- West University, Bulgaria

Email: m.kamenichka@swu.bg

Abstract: *This article examines the use of Bulgarian folktales as an innovative method for enhancing English language skills among 4th-grade students. The study compares a folktale-based approach with traditional instruction through a six-month experiment involving two groups of 23 students. Pre- and post-tests measured progress in vocabulary, grammar, listening, and speaking. The experimental group, taught through adapted Bulgarian folktales and interactive activities, outperformed the control group, particularly in vocabulary and listening. Challenges such as complex language and unfamiliar cultural references were addressed through careful story selection and the use of visual and interactive tools. The findings support the effectiveness of folktales in early language learning, highlighting their potential to improve language skills while promoting cultural awareness and creativity. The “Magical Journey” model offers a motivating and flexible framework that can enrich English language instruction in primary education.*

Keywords: Bulgarian folktales, English language teaching, early second language learning, Theoretical model, cultural awareness, language development, interactive activities, storytelling, vocabulary enrichment, comprehension strategies

1. Introduction

Bulgarian folk tales represent a very rich source of cultural, linguistic, and pedagogical relevance that is extremely valuable in the context of teaching English. In this article, besides discussing the theoretical advantages of using folktales in a foreign language classroom, the authors provide empirical evidence from a recent experimental study that shows how folktales can make a huge difference in students' language proficiency.

This experiment, performed on two groups of 4th-grade students, deals with the treatment of the integration of Bulgarian folktales into English language lessons and its enhancements to key language skills: vocabulary, grammar, listening, and speaking. One group received traditional instruction, while the other was taught using the folktale approach, allowing for a comparative analysis of their language development. The study provided compelling evidence that folktales serve as an effective teaching tool, fostering greater engagement and deeper language retention than conventional instructional methods.

Emphasizing the significance of Bulgarian folk tales in enhancing children's language acquisition in English, this article investigates how such narratives facilitate the enrichment of lexicon and grammatical structures. In addition, the experimental results underscore their role in cultivating students' capacity to discern and comprehend cultural nuances, thereby engendering a heightened linguistic acumen and an appreciation of the interconnectedness between language and cultural heritage (Kaneva, P. 2013).

Improving language skills through folktales is an exciting and multifaceted process. Folktales provide authentic language materials and contexts, serving as a window into the cultural richness of a people. They stimulate the imagination, encourage creativity, and support the formation of both linguistic and cultural identity. Through stories, children learn to analyze, interpret, and adapt information—key

components in developing communication skills. Therefore, folktales not only prepare students for effective use of English but also immerse them in a rich and engaging process of discovering the world of language and culture. The findings of the present study provide empirical support for the idea that folktales are a dynamic tool for enhancing language skills and fostering cultural awareness (Petkova, M. 2023).

1.1 Bulgarian Folk Tales as a Resource for Language Learning

Bulgarian folktales offer a substantial source of linguistic material and contextualised content that can be effectively applied in English language learning. They provide a rich palette of vocabulary and grammatical structures, supporting the development of learners' speaking, reading, and writing skills in English. Through the study of Bulgarian folktales, learners are given opportunities to acquire new words, phrases, and grammatical constructions in meaningful, natural contexts framed within the English language (Bubalova-Petrova et al., 2016). This study aims to assess the effectiveness of integrating Bulgarian folktales into English lessons to improve language skills among 7–10-year-old learners, while also fostering cultural awareness.

Bulgarian folk stories are steeped with lexical and grammatical structures appropriate for learners of the English language. Their texts are replete with various words and expressions that may be incorporated into language learning in the construction of vocabulary for learners. Grammatical aspects of these stories serve in turn as the ground for exercises aimed at learning grammatical rules and constructions and developing skills of correct sentence formation (Balabanova, M. 2010).

The cultural aspects of Bulgarian folktales are no less important for language learning. Through them, students become familiar with Bulgarian culture, traditions, and customs; they expand their cultural perspective and develop tolerance for cultural diversity. In this way, the use of Bulgarian folktales contributes not only to the improvement

of learners' language proficiency but also to their understanding of the rich cultural heritage of the Bulgarian people (Alinder-Ismailova, 2021). This research is significant because it bridges language acquisition with cultural heritage, offering a fresh and engaging approach to capturing the interest of young learners.

The development of communicative skills is a very complicated process, and it is tightly connected with the process of learning a foreign language. Considering Dimitrova D. (2023), it could be said that one of the determining factors regarding the need for new approaches provides a lack of practices including Bulgarian folk tales in early foreign language learning.

The current problem elaborates a theoretical model, which proposes the enterprise of a novel approach to early language learning-integration of the Bulgarian folktales. It is expected to contribute to more effective development of the students' language and cultural skills.

This theoretical model uses authentic Bulgarian folktales adapted to the level of English proficiency. The model blends language development with cultural enrichment, fostering skills in an interactive, enjoyable way. It is expected to increase motivation, enrich knowledge and stimulate imagination, creativity and communication skills (Wang, J., 2024).

1.2 A Theoretical Model for Integrating Bulgarian Folktales into the English Language Teaching Process

The proposed theoretical model integrates the cultural richness of Bulgarian folktales into English language instruction. Through an in-depth analysis of these narratives, characterized by intricate plots, engaging characters, and moral lessons, the model utilizes folktales as a key pedagogical tool to support students' language development. Folktales serve not only as a source of linguistic input but also as a catalyst for emotional and cultural engagement, fostering a comprehensive learning experience for young learners.

1) Methodological aspects

The model emphasizes the development of core language skills—vocabulary, grammar, reading, writing, and speaking—while simultaneously focusing on enhancing essential personal attributes:

- Creativity: The imaginative nature of folktales encourages creative thinking, allowing students to explore language in more innovative ways.
- Emotional Intelligence: The diverse characters and the moral dilemmas present in folktales offer students opportunities to develop emotional awareness, empathy, and a better understanding of social and moral concepts.
- Cultural Awareness: Folktales introduce students to Bulgarian traditions, customs, and values, promoting cultural identity and intercultural understanding. These narratives provide an authentic context for language learning, linking linguistic progress with cultural education.

2) Effective and interactive learning

This model is structured around principles of interactive learning and active engagement, ensuring that students are involved in the learning process:

- Interactive activities: Lessons go beyond passive listening; students participate in games, songs, dramatizations, and discussions that deepen their understanding and usage of language in context.
- Age-appropriate content: All folktale materials are carefully selected and adapted to match the students' cognitive abilities and language proficiency.
- Motivation and engagement: The interactive nature of the lessons and the integration of folktales stimulate students' curiosity and motivate them to engage more fully with both the language and the culture being taught.

1.3 Steps and strategies

1) Selecting Appropriate Folktales

Stories are chosen based on their relevance to the students' developmental stage and language ability. Suitable examples include "Who Doesn't Work, Shouldn't Eat", "Grandfather and the Turnip", and "The Fox and the Stork." These folktales, with their straightforward narratives and rich cultural meanings, provide effective scaffolding for language learning while being accessible and engaging for young learners.

2) Adapting Folktales for Instruction

The adaptation of folktales is a critical step in ensuring comprehension and language growth:

- Vocabulary and grammar are simplified to match the students' language level.
- Sentence structures are modified to facilitate comprehension.
- Visual aids, such as colorful illustrations, are used to support understanding of the story's content.

3) "Magical" Activities for Enhanced Learning

To spark engagement and enhance language acquisition, the model incorporates activities designed to maximise student participation and skill development:

- Reading comprehension: Students engage with stories using puppets, masks, and sequencing tasks to enhance comprehension. They answer questions and discuss story elements to develop a deeper understanding.
- Story retelling: Students practice retelling stories using visual prompts. This activity reinforces vocabulary and grammar learned through the folktales.
- Creative activities: Students create drawings, puppets, and masks related to folktale characters, encouraging both artistic expression and linguistic engagement. Additionally, they explore Bulgarian cultural traditions connected to the folktales.
- Games and songs: Fun language games, songs, and dramatic reenactments reinforce key language concepts while ensuring a playful and interactive learning environment.

4) Didactic Materials

The model includes a variety of teaching materials to aid learning:

- Adapted versions of Bulgarian folktales.

- Visual materials such as colorful illustrations.
- Puppets and masks for dramatizations.
- Audio recordings of the folktales to develop listening skills.
- Interactive games and applications that provide additional practice.

1.4 Expected Outcomes

The model aims to achieve the following educational outcomes

- Language skill improvement: Students are expected to show progress in vocabulary acquisition, grammar comprehension, and the development of core language skills, including reading, writing, speaking, and listening.
- Increased motivation: The interactive and culturally rich content helps maintain high levels of student interest and engagement throughout the learning process.
- Cultural understanding: By learning through folktales, students are expected to develop a deeper appreciation for Bulgarian culture and folklore, enhancing their intercultural competence alongside their language skills.

2. Practical application of the theoretical model

The practical application of this model supports both language skill acquisition and the development of cultural awareness. Teachers can effectively use Bulgarian folktales as a foundation for early English language learning by presenting the stories through reading, dramatization, and interactive games. In addition to language development, these activities promote creativity, critical thinking, and intercultural understanding. By encouraging students to create their own stories inspired by folktales, teachers foster both linguistic proficiency and creative expression. The discussions and explorations of cultural elements allow students to gain a comprehensive understanding of Bulgarian culture while expanding their English vocabulary.

2.1 Example: Fairytale Journey with "Who Doesn't Work, Shouldn't Eat"

a) Objective:

- To develop students' language skills, including vocabulary, grammar, listening, and speaking.
- To introduce students to Bulgarian cultural elements through folklore.
- To increase students' motivation and engagement in English language learning.

b) Target Age Group: 7-10 years; Lesson Duration: 40 minutes.

c) Didactic Materials

- Adapted English version of the folktale "Who Doesn't Work, Shouldn't Eat".
- Illustrations depicting the story's characters and main events.
- Puppets or masks of the characters to support dramatization activities.
- Flashcards with key vocabulary and phrases from the story.

- Audio recordings for listening comprehension practice.

d) Activities Breakdown

- Introduction (15 min): The teacher introduces the folktale, reads it aloud, and uses visual aids to ensure comprehension. Key vocabulary and story elements are discussed interactively.
- Story Retelling (10 min): Students retell the story using visual cues, focusing on new vocabulary and phrases learned during the lesson.
- Creative Task (15 min): Students choose between drawing characters, creating puppets, or acting out scenes from the story. These creative tasks reinforce the language learned and promote cultural exploration.

The theoretical model for integrating Bulgarian folktales into English language instruction presents a dynamic approach to fostering both language acquisition and cultural awareness. The activities embedded in this model are designed not only to improve students' English proficiency but also to promote creativity, emotional intelligence, and intercultural competence. By providing students with the opportunity to engage deeply with folktales, the model supports holistic child development, preparing students to successfully master the English language while fostering a deep appreciation for their own and others' cultural heritage.

3. Research and Methodology

The research was conducted with two 4th-grade classes, each consisting of 23 students, for a total of 46 participants. The experimental group used Bulgarian folktales as the primary teaching method for improving English language skills, while the control group followed traditional instructional methods without folktales.

The study lasted six months, during which both groups attended four English lessons per week. Pre-tests and post-tests were administered to assess students' progress in vocabulary, grammar, listening, and speaking skills. To ensure fairness, teachers were trained uniformly, and students' prior English language levels were balanced across the two groups.

The folktales used in the experimental group included "The Fox and the Stork" and "Grandfather and the Turnip", which were adapted to match the learners' language proficiency. Lessons incorporated interactive activities such as role-playing, storytelling, and dramatization, in line with the "Magical Journey" model.

The control group, in contrast, was taught using conventional materials, including textbooks, worksheets, and grammar-focused exercises. The objective of the study was to determine whether students in the experimental group showed statistically significant improvement in language acquisition compared to the control group. A t-test was applied to analyse the differences in performance between the pre- and post-tests.

4. Statistical Analysis

Table 1 below illustrates the comparative results of the pre-test and post-test scores for both the experimental group, which was taught using Bulgarian folktales, and the control group, which followed traditional teaching methods. The data reveals a notable difference in the performance improvements between the two groups, particularly in the areas of vocabulary acquisition, grammar comprehension, listening skills, and speaking abilities.

The experimental group showed marked improvement across all measured language skills. In particular, there was a sharp increase in vocabulary acquisition and listening skills, with students showing an average improvement of 25% and 15% respectively. Grammar comprehension and speaking abilities also saw substantial gains, highlighting the effectiveness of incorporating Bulgarian folktales into the teaching process. These results underscore the potential of culturally enriched content to engage students and foster better language retention and application.

On the other hand, the control group, which was taught using conventional language learning methods, showed only modest improvements in each area. While there was some progress in vocabulary and listening skills, the overall improvement was significantly smaller compared to the experimental group. This suggests that traditional methods may not stimulate the same level of engagement or language development as the interactive, story-based learning approach used with the experimental group.

To evaluate the significance of the differences between the groups, a t-test was performed on the post-test results. The

analysis confirmed that the differences between the pre-test and post-test results were statistically significant ($p < 0.05$) for all language skills tested. These findings strongly support the hypothesis that incorporating Bulgarian folktales into English language teaching can lead to superior learning outcomes, particularly for young students in early stages of language development.

This research highlights the importance of integrating cultural elements, such as folktales, into language education. Not only do these elements make learning more engaging and relatable, but they also provide a meaningful context for students to practice and internalize new language skills. The data presented in Table 1 offers compelling evidence that this innovative approach can be more effective than traditional methods in enhancing key language skills, thereby contributing to a more holistic and enriching learning experience.

Table 1: Pre-Test and Post-Test Results for Experimental and Control Groups

Language Skill	Experimental Group Pre-Test	Experimental Group Post-Test	Control Group Pre-Test	Control Group Post-Test
Vocabulary	45%	70%	47%	55%
Grammar	40%	65%	42%	52%
Listening	50%	75%	48%	60%
Speaking	42%	68%	44%	53%

The figure below presents a bar graph comparing the Pre-Test and Post-Test results for both the experimental and control groups across four language skills: vocabulary, grammar, listening, and speaking.

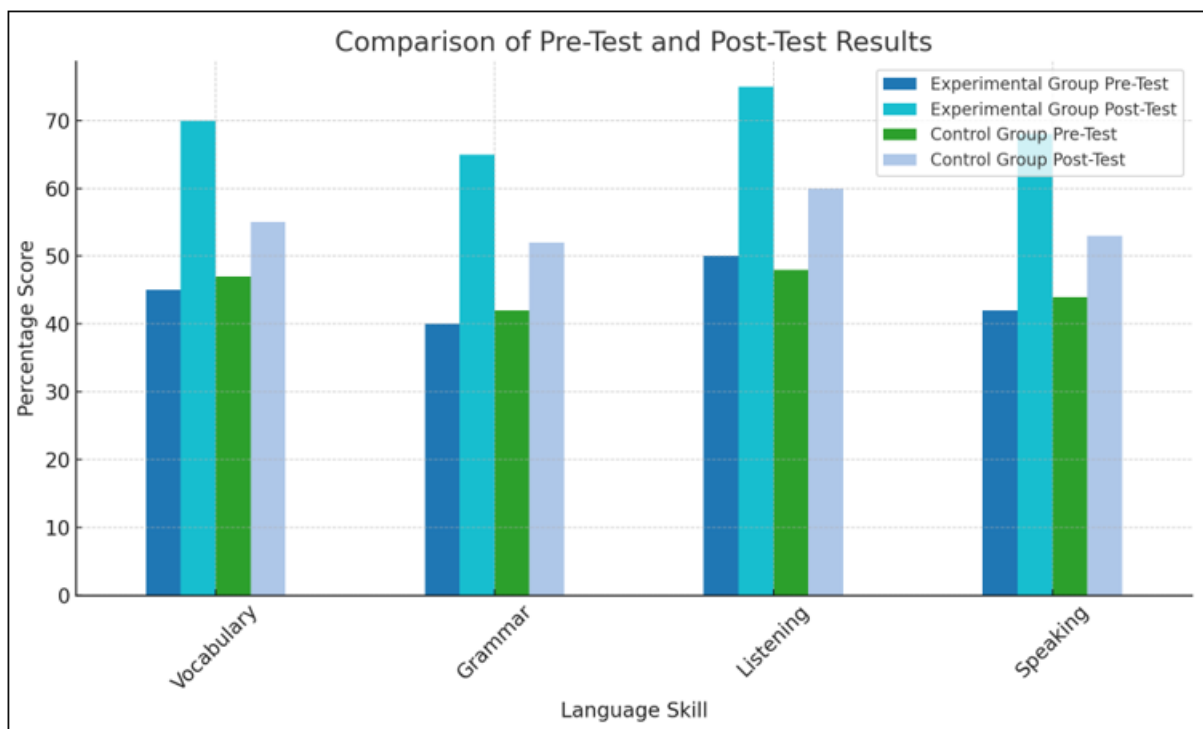


Figure 1: Comparison of Pre-Test and Post-Test Results.

As depicted in the bar graph, the experimental group, which integrated Bulgarian folktales into their English language

lessons, exhibited substantial improvement across all language skills measured. The Post-Test results for this group

demonstrated impressive gains, particularly in vocabulary, which increased from 45% to 70%, reflecting a 25% improvement. Similarly, the group's grammar comprehension improved from 40% to 65%, a significant enhancement in their understanding of language structures. Listening skills saw one of the largest gains, jumping from 50% to 75%, underscoring the value of storytelling in enhancing auditory comprehension. Additionally, speaking abilities increased from 42% to 68%, showcasing the effectiveness of interactive and spoken components within the folktale-based lessons. These results suggest that the use of folktales, with their engaging narratives and cultural richness, provided a more immersive and effective learning environment for the students.

In contrast, the control group, which followed traditional teaching methods without the inclusion of folktales, demonstrated more modest improvements across all areas. In the **Post-Test**, vocabulary increased from 47% to 55%, grammar from 42% to 52%, listening skills from 48% to 60%, and speaking from 44% to 53%. While these results show some progress, the gains are notably smaller compared to the experimental group. This disparity indicates that while conventional methods may still promote incremental improvements in language learning, they may not engage students in the same way or foster as deep an understanding as methods that integrate rich, culturally relevant materials like folktales.

The bar graph offers a clear visual representation of these differences in outcomes, emphasizing the superior performance of the experimental group in each measured language skill. The larger improvements in the experimental group suggest that the interactive, narrative-driven approach of using folktales not only helps in engaging students more deeply but also accelerates their acquisition of new vocabulary, grammar, listening, and speaking skills. This finding reinforces the argument that culturally rich and interactive teaching methods can be more effective than traditional approaches in fostering language development in young learners.

Furthermore, the data suggests that incorporating storytelling and other interactive elements into language lessons can enhance students' ability to retain and apply language skills in meaningful ways. The folktales provided context and cultural depth, which likely contributed to the students' increased motivation and engagement, leading to stronger outcomes across the board. As the results clearly show, the experimental group significantly outperformed the control group, further highlighting the advantages of using innovative teaching strategies like the integration of folktales in the classroom.

5. Benefits and Challenges

Incorporating folktales into language learning presents a variety of advantages alongside certain challenges. The findings from the experimental study provide strong evidence that with careful selection of stories, language adaptation, and the use of diverse teaching strategies, educators can unlock the full potential of this pedagogical model. Folktale-based learning, as demonstrated in the experiment, offers students a

fun, motivating, and rewarding language learning experience that goes beyond the confines of traditional methods.

One of the primary benefits of folktales is their role as rich sources of cultural knowledge and authenticity. Through the narratives, students are introduced to different cultures, traditions, and values, which not only broaden their worldviews but also foster greater cultural awareness and sensitivity. The experimental group in this study, which was taught using Bulgarian folktales, demonstrated significant improvement in their language acquisition, particularly in vocabulary and listening comprehension. Folktales are filled with new words and phrases, and their contextualized presentation—through storytelling and dramatization—facilitates better memorization and understanding. This makes learning both interactive and enjoyable, as students engage in activities such as reading, dramatization, and role-playing, all of which contribute to the development of listening, speaking, reading, and writing skills (Suryawan et.al, 2018).

Moreover, the stories stimulate creativity and imagination, as students immerse themselves in different cultural contexts, engage with the characters and plot, and develop their own interpretations of the stories. This not only enhances linguistic skills but also promotes critical thinking and empathy. As highlighted in the experiment, the folktale-based approach allowed students to interact with the material in a meaningful and culturally enriching way, leading to improved language retention and application (Furkova, G. 2017).

Despite these numerous advantages, the incorporation of folktales into language learning is not without its challenges. Some stories, especially those with archaic language or complex grammatical constructions, may be too difficult for younger students, particularly those aged 7-10. This was a concern in the early stages of the experiment, where some students struggled with unfamiliar words or cultural elements. Without sufficient context, students can become confused or disengaged, which can hinder their progress.

To overcome these difficulties, the experiment underscored the importance of careful story selection. Educators must choose folktales that are appropriate for the students' age and language proficiency level. In the experiment, folktales were adapted to simplify vocabulary and grammar, ensuring that students could follow the story without becoming overwhelmed. Additionally, teachers can use explanations of unfamiliar words, provide visual materials, and incorporate dramatisation, songs, and games to make the stories more engaging and easier to comprehend. These methods helped the experimental group overcome initial language barriers and facilitated a deeper understanding of both the language and the cultural nuances embedded in the stories (Parusheva, S., 2016).

The use of folktales in language learning has proven to be both valuable and effective, as evidenced by the positive outcomes of the experiment. With a thoughtful approach, teachers can address the inherent challenges and transform what might seem like a complex theoretical model into a fun, motivating, and highly beneficial language learning experience. The significant improvements in the experimental

group highlight the potential of folktales to not only teach language skills but also to inspire creativity and foster a lasting interest in learning. This approach can be a powerful tool for educators seeking to create a holistic and enriching language learning environment for their students (Ellis, G. & Brewster, J., 2014).

6. Conclusion

This study confirms that Bulgarian folktales are a powerful tool for teaching English to children aged 7–10, enhancing vocabulary, grammar, listening, and speaking skills while simultaneously fostering curiosity about culture. The “Magical Journey” model, applied over a six-month period, proved more effective than traditional methods by integrating interactive activities such as storytelling, role-playing, and dramatization, which increased student engagement and motivation.

Although certain challenges arose—such as complex vocabulary, archaic expressions, and culturally unfamiliar content—these were effectively addressed through age-appropriate story selection, adapted texts, and the use of visual and musical supports. As a result, learners not only improved their language proficiency but also developed greater cultural awareness and empathy.

For educators, this approach offers a creative and flexible framework that supports both linguistic and personal growth. By combining language learning with cultural heritage, the model provides a meaningful and dynamic learning experience, making it a valuable strategy for early language education

References

Балабанова, М. (2010)	Методика на обучението по чужд език в детската градина, <i>УИ: Н.Рилски</i> , Благоевград, ISBN 978-954-680-670-3
Бубалова -Петрова, Ж., Драмска, В., Шкьопу, С. (2016)	Добри практики в обучението по български език в чуждоезикова среда (Good Practices in Teaching Bulgarian as a Foreign Language), <i>Изд. Азбуки, Bulgarian Language and Literature</i> Volume 58, Number 2, SSN: 0323–9519 (Print), 1314–8516 (Online) (Bubalova-Petrova, Zh., Dramska, V., Shkyopu, S., 2016, Dobri praktiki v obuchenieto po balgarski ezik v chuzhdoezikova sreda, <i>Izd. Azbuki, Bulgarian Language and Literature</i> Volume 58, Number 2, SSN: 0323–9519 (Print), 1314–8516 (Online))
Димитрова, Д. (2023)	Интерактивност при обучението по английски език в началното училище (Interactivity in English Language Teaching in Primary School), <i>УИ: Паусий Хилендарски</i> , Пловдив, ISBN 978-619-202-862-6 (Dimitrova, D., 2023, Interaktivnost pri obuchenieto po angliyski ezik v nachalnoto uchilishte, <i>UI: Paisiy Hilendarski</i> , Plovdiv, ISBN 978-619-202-862-6)
Ергиджан О. Алиндер-Исмаилова (2021)	Успешната комуникация през призмата на чуждоезиковото обучение (Successful Communication through the Lens of Foreign Language Learning), <i>Годишник на Шуменския университет Епископ Константин Преславски, Педагогически факултет</i> https://www.ceeol.com/search/article-detail?id=1057738 (Ergidzhan Alinder-Ismailova. 2021, Uspeshnata komunikatsia prez prizmata na chuzhdoezikovoto obuchenie, <i>Godishnik na Shumenskia universitet Episkop Konstantin Preslavski, Pedagogicheski fakultet</i> https://www.ceeol.com/search/article-detail?id=1057738)
Кънева, П. (2013)	Фолклорът в обучението по английски език на деца (The Role of Folklore in Teaching English to Children), <i>Научни трудове на русенския университет</i> - 2013, том 52, серия 6.3, стр. 135-139 (Kaneva, P., 2013, Folklorat v obuchenieto po angliyski ezik na detsa, <i>Nauchni trudove na rusenskia universitet</i> - 2013, tom 52, seria 6.3, str. 135-139)
Парушева, С. (2016)	Детската приказка като средство за контекстуализиране процеса на усвояване на чужд език в предучилищна възраст (The Fairy Tale as a Tool for Contextualising Foreign Language Acquisition in Preschool Age). <i>Научни трудове. Колеж – Добрич</i> , https://www.ceeol.com/search/article-detail?id=1180474 (Parusheva, S., 2016, Detskata prikazka kato sredstvo za kontekstualizirane protsesa na usvoyavane na chuzhd ezik v preduchilishtna vazrast. <i>Nauchni trudove. Kolezh – Dobrich</i> , https://www.ceeol.com/search/article-detail?id=1180474)
Петкова, М. (2023)	Ефективността на приказките и детските книжки в чуждоезиковото обучение (The Effectiveness of Stories and Children's Books in Foreign Language Learning). <i>Научни трудове. Колеж - Добрич</i> https://www.ceeol.com/search/article-detail?id=1216298 (Petkova, M., 2023, Efektivnostta na prikazkite i detskite knizhki v chuzhdoezikovoto obuchenie. <i>Nauchni trudove. Kolezh - Dobrich</i> https://www.ceeol.com/search/article-detail?id=1216298)
Фъркова, Г. (2017)	Език, култура, комуникация , Език и професионална комуникация (Language, Culture, Communication), vol: <i>УИ: Св. Кл. Охридски</i> , 2017, pages:254-262, ISSN (print): 978-954-07-4230-4, ISBN:978-954-07-4230-4 (Ezik, kultura, komunikatsia, Ezik i profesionalna komunikatsia, vol: <i>UI "Sv. Kl. Ohridski</i> , 2017, pages:254-262, ISSN (print): 978-954-07-4230-4, ISBN:978-954-07-4230-4)
Ellis, G. & Brewster, J. (2014)	<i>Tell it Again! The Storytelling Handbook for Primary English Language Teachers</i> (3rd ed.). London: British Council. ISBN 978-0-86355-723-1
Suryawan, I., Mantra, I.B.N., Wiadnya, D., & Kumara, A. (2018)	<i>Folktales as Meaningful Cultural and Linguistic Resources to Improve Students' Reading Skills</i> . Singaraja: Universitas Pendidikan Ganesha Press. https://doi.org/10.23887/ls.v25i2.18827 , DOI: 10.23887/ls.v25i2.18827, https://www.researchgate.net
Wang, J. (2024).	<i>Enhancing Early Language and Literacy Development: A Data-Driven Approach to Educational Outcomes and Lifelong Learning</i> . Lecture Notes in Education Psychology and Public Media, 50, 249–255. https://doi.org/10.54254/2753-7048/50/20240958