

**INVESTIGATING PRE-SERVICE TEACHERS' PERCEPTIONS AND  
COLLABORATIVE DYNAMICS IN PODCAST CREATION: A CASE  
STUDY OF ENGLISH EDUCATION AT SRIWIJAYA UNIVERSITY**

**A THESIS**

**by:**

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***Magister Program in Language Education***



***MAGISTER PROGRAM IN LANGUAGE EDUCATION***  
**FACULTY OF TEACHER TRAINING AND EDUCATION**  
**SRIWIJAYA UNIVERSITY**  
**PALEMBANG**

**2024**

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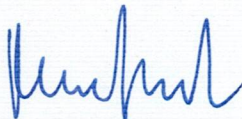
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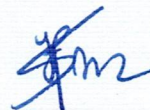
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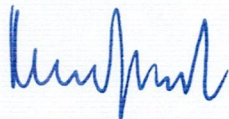
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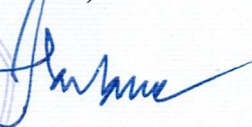
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## DECLARATION

I, the undersigned:

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Hereby certify that the thesis entitled **“Investigating Pre-Service Teachers' Perceptions and Collaborative Dynamics in Podcast Creation: A Case Study of English Education at Sriwijaya University”** is my original work. I affirm that I have not committed any form of plagiarism or inappropriate citation in violation of the ethical standards and regulations outlined in the Ministry of Education of the Republic of Indonesia Regulation Number 17, 2010, regarding plagiarism in higher education.

I fully understand and accept the consequences, including the possibility of legal action, if any violation of these ethical principles is discovered in my work.

Palembang, December 24, 2024

The Undersigned,



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## **DEDICATION**

*With deep gratitude and endless love, I dedicate this thesis to those who have always been by my side at every step of my journey...*

### ***My parents***

*Wasil and Yusnita, who have never tired of offering support and prayers.*

### ***My grandmother***

*Sopiah, who has continuously prayed for me with sincere devotion.*

### ***My sister***

*Ismirani, who has always been an encourager and loyal companion on this journey.*

***My success in completing this academic journey is the result of their love, sacrifices, and unwavering prayers, which have faithfully supported me in facing every challenge. This thesis is a true reflection of their steadfast love and support***

## **MOTTO**

*“Where there is a will, there is a way”*

## ACKNOWLEDGEMENT

*Bismillahirrahmanirrahim*, all praises and gratitude are due to Allah Subhanahu Wata'ala, the Most Gracious and the Most Merciful, the Almighty, and the Ruler of all creation, for granting the writer the strength, guidance, and ability to complete this academic endeavor. Peace and blessings be upon the Prophet Muhammad SAW, who has been a guiding light for all humanity. This thesis was written as a partial fulfillment of the requirements for attaining a Master's degree in the Magister Program in Language Education at Sriwijaya University. On this occasion, the writer would like to express her sincere gratitude and appreciation to the following individuals and parties:

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Palembang, December 24, 2024  
The Writer



Weni Pratiwi

# INVESTIGATING PRE-SERVICE TEACHERS' PERCEPTIONS AND COLLABORATIVE DYNAMICS IN PODCAST CREATION: A CASE STUDY OF ENGLISH EDUCATION AT SRIWIJAYA UNIVERSITY

## ABSTRACT

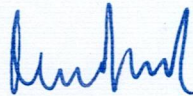
Integrating technology is essential for preparing future educators. Podcasting, especially in English education, enhances learning by developing communication, collaboration, and problem-solving skills. It engages learners, fosters creativity, and promotes active participation. Understanding pre-service teachers' experiences with podcast creation is key to optimizing its use in teacher education. This study investigates pre-service teachers' perceptions and collaborative dynamics in podcast creation within the context of English language education at Sriwijaya University. The research aims to explore how integrating technology through podcasting influences the pedagogical practices of pre-service teachers, enhances their communication skills, and fosters collaborative learning environments. Utilizing a quantitative survey design, data were collected from 113 students across various semesters, employing a structured questionnaire comprising 60 items. Findings reveal that pre-service teachers view technology integration as a transformative approach that enriches English language education, enhances their confidence in utilizing digital tools, and promotes student engagement. Collaborative podcast creation significantly improves their communication skills, teamwork, and problem-solving abilities, despite challenges such as scheduling conflicts and technical issues. The study concludes that podcasting not only prepares pre-service teachers for future educational challenges but also cultivates essential skills for their professional development. Suggestions are provided for lecturers, pre-service teachers, educational institutions, and researchers to optimize the integration of such innovative practices into teacher education programs.

**Keywords:** *Podcast creation, Technology integration, Collaborative learning*

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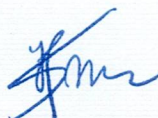
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# CHAPTER I

## INTRODUCTION

This chapter discusses: (1) background of study, (2) problem of study, (3) objective of study, and (4) significance of study

### **1.1 Background of Study**

In the current digital era, technological advancements have significantly impacted education, particularly in the development of communication skills. Digital technologies are now essential due to the globalization of education. Digital technology is an extremely useful tool that may enhance education in a number of ways, including by making it simpler for teachers to create lesson plans and by offering new opportunities for people to learn and work together (Haleem et al., 2022). Mobile technologies have become popular devices in recent years, not only as tools of communication but also as tools of teaching and learning (Ginting, 2019). Moreover, the integration of technology is expected to play a supportive role in the overall learning process, providing learners with valuable tools and resources.

English language education has undergone significant changes in line with the development of technology and current learning trends. Srivani et al. (2022) discuss the implications of Education 4.0 in enhancing English language skills, emphasizing that modern technologies foster positive attitudes and critical thinking among learners, thereby reshaping the educational landscape for English language instruction. Similarly, Opeifa et al. (2022) reports that English language teachers in Nigerian secondary schools have positive perceptions of using technology in teaching oral English, indicating a shift towards integrating technological tools in language education. Constantinou (2024) highlights the role of English in promoting employability skills in a multilingual context, reinforcing the need for educators to adapt to technological advancements in language teaching. Guo and Zeng (2023) emphasize that digital technologies, including big data and artificial intelligence, have revolutionized foreign language teaching, enhancing the quality and accessibility of language education. In conclusion, English language education

has significantly evolved in response to technological advancements and contemporary learning trends.

Despite a lot of research has been done on the use of digital tools like podcasts in the classroom, there is a clear research gap when it comes to the effects of podcasts made by pre-service teachers in the context of collaborative learning. Instead of examining how future educators' active creation of podcasts can impact their own learning and teaching practices, the work currently in publication tends to concentrate more on the use of podcasts as passive learning materials. This disparity is especially noticeable when it comes to university English instruction, where group projects are crucial to the development of critical teaching abilities. In order to close this gap, the current study examines how pre-service teachers at Sriwijaya University's podcast creation process influences their pedagogical growth as well as their capacity to promote a collaborative learning environment.

In the context of English teaching at Sriwijaya University, this study offers a fresh viewpoint by investigating the effects of podcast creation as an active learning approach within a collaborative framework among pre-service teachers. This study presents the act of podcast creation as a pedagogical approach that not only enhances collaborative learning but also fosters the development of critical teaching skills among pre-service teachers. This is in contrast to previous research, which frequently views podcasts as supplemental learning tools. This research provides fresh insights into the relationship between digital literacy, teacher preparation, and collaborative pedagogy by concentrating on the ways that the collaborative creation of podcasts impacts the creators as well as their peers. It is expected that the results will make significant contributions to advanced instructional strategies and the incorporation of technology into teacher preparation courses.

In the era of globalization, the role of English in education has evolved significantly, with many educational systems worldwide prioritizing English language instruction as a critical component of their curricula. Lan (2024) emphasizes that the global prevalence of English necessitates its inclusion in educational frameworks, particularly in primary and secondary education, to

prepare students for a competitive global landscape. This sentiment is echoed by Chen et al. (2021), who argue that teacher education must adapt to incorporate global English, ensuring that future educators are equipped to teach English effectively in diverse contexts. The integration of English into educational policies reflects a broader recognition of its importance in fostering intercultural competence and enhancing employability in a globalized job market (Ruiz et al., 2024; Yang, 2023). Furthermore, with the help of developing technology, English has been playing a major role in many sectors including medicine, engineering, and education (Dash, 2022). Therefore, English is very important to be learn.

Podcasting is one of interesting and innovative way for learning English. One significant contribution comes from Saragih et al. (2022), who investigated the influence of podcasts on improving listening skills among senior high school students. Their findings indicate that podcasts play a crucial role in teaching English as a foreign language, benefiting learners at various proficiency levels. The authors emphasize that podcasts can enhance the English learning process, making them a valuable educational tool. Chaves-Yuste and de-la Peña (2023) also contributed to this discourse by demonstrating that podcasts improve English language proficiency in EFL classrooms. Their data indicated that podcast usage led to enhancements in listening and speaking skills, further validating the effectiveness of podcasts as a learning tool. Furthermore, podcasts are beneficial learning tools that facilitate vocabulary acquisition and enhance listening skills. The study supports the idea that podcasts allow for flexible learning opportunities, enabling students to learn at their own pace and convenience (Ghoorchaei et al., 2021). Additionally, podcasts serve as authentic materials that significantly assist learners in developing their listening skills. The findings suggest that podcasts provide a dynamic and engaging way to access language learning resources, reinforcing the convenience and effectiveness of this medium (Cao & Bui, 2023). This emphasizes that podcasts provide a variety of materials that can support EFL learning activities.

Moreover, pre-service teachers possess significant potential to influence the future of education, particularly through collaborative projects such as podcast creation. Engaging in such projects not only equips them with practical experience

in utilizing technology but also encourages innovative methods of delivering instructional content. Chen et al. (2022) examined how pre-service teachers' behaviors affected their innovations in lesson designs during co-design activities, highlighting the importance of preparing pre-service teachers for instructional innovation with ICT. Similarly, Enriques et al. (2023) emphasize that podcasts serve as a versatile educational tool, enabling students to learn at their own pace while sharing resources with peers, thus enhancing their engagement and learning outcomes. The integration of Information and Communication Technology (ICT) in education has been shown to significantly impact student learning outcomes. This aligns with the findings of Islamov et al. (2020), who note that ICT fosters collaborative learning environments, allowing students to share diverse experiences and take control of their learning. Moreover, the dynamics of collaboration in projects like podcast creation can provide valuable insights into effective integration of collaborative learning within the English education curriculum. Voytecki and Anderson (2021) discuss the importance of conspicuous collaboration in teacher education, suggesting that observing collaborative efforts can clarify the benefits and processes involved in teamwork. This perspective is supported by Jain and Alam (2021), who highlight that ICT-enabled applications promote collaborative learning and enhance the overall educational experience. Thus, investigating how pre-service teachers collaborate in such projects can yield significant insights into their interpersonal skills and ability to work effectively as part of a team. In summary, collaborative projects like podcast creation not only enhance pre-service teachers' technological skills but also foster critical thinking and collaboration, which are essential for their future roles in education. The integration of ICT in these projects provides a rich platform for developing innovative teaching strategies that can significantly impact student learning outcomes.

After conducting preliminary interviews with prospective teachers from Sriwijaya University who developed podcasts as part of their semester-end projects, intriguing findings surfaced. The students revealed that their primary motivation was to hone the communication skills required in the field and create a more



interactive learning experience. In the process of creating podcasts, the majority of participants expressed enthusiasm for the use of this technology as a tool for learning English. However, challenges also surfaced, particularly regarding the limitations of technology access in the learning environment. Some students faced difficulties in overcoming these constraints, and there was confusion in selecting podcast content that aligned with the English curriculum. Nevertheless, the results indicated that the positive response from fellow students, who served as the audience for their podcasts, provided a boost of positivity and personal satisfaction. The importance of integrating podcasts as part of the semester-end projects was acknowledged by students as an opportunity to blend academic knowledge with practical skills relevant to English language learning. These findings offer valuable initial insights for designing curricula that support the development of creative and technological skills for prospective teachers in higher education settings.

Researchers conducted studies on pre-service teachers' perceptions and collaborative dynamics in podcast creation. One notable study by Deda (2023) examined the views of pre-service teachers regarding the use of podcasts in English as a Foreign Language (EFL) contexts. The findings revealed that pre-service teachers had extensive exposure to podcasts and reported positive attitudes towards their use in future teaching, recognizing podcasts as effective tools for enhancing listening and speaking skills. This study underscores the potential of podcasts to foster collaborative learning environments where pre-service teachers can share insights and resources. In a different context, Almendingen et al. (2021) conducted an exploratory study that investigated the use of small group student-produced podcasts as an assignment tool in interprofessional learning. This research involved students from teacher education, health, and social care programs, and it highlighted how collaborative podcast creation can enhance communication skills and foster teamwork among pre-service teachers. The study found that students appreciated the collaborative aspect of podcasting, which allowed them to engage with real-life scenarios and learn from one another's perspectives. This aligns with the notion that collaborative projects can significantly enrich the learning experience for pre-service teachers.

Furthermore, Ferdiansyah et al. (2023) focused on incorporating cultural content into English language learning through collaborative podcast projects. This study demonstrated that engaging in podcast creation not only improved students' language skills but also enhanced their cultural awareness and collective reflective practices. The collaborative nature of the project encouraged pre-service teachers to work together, share their insights, and reflect on their learning experiences, thereby fostering a sense of community and collaboration. Additionally, Saito & Tangkiengsirisin (2023) explored the perceptions of pre-service EFL teachers towards a training program that integrated online coaching. Their findings indicated that the collaborative dynamics fostered through online platforms, including podcast creation, positively influenced pre-service teachers' readiness to teach and their professional growth. This study emphasizes the importance of collaborative learning experiences in shaping pre-service teachers' perceptions and skills.

Based on the explanation above, the researcher would like to investigate the podcast created by pre-service teacher in collaborative learning at Sriwijaya University.

## **1.2 Problems of the Study**

The problems of the study are formulated in the following questions:

1. What are pre-service teachers' perceptions of integrating technology in creating podcast in English language education?
2. How does the collaborative creation of podcasts by pre-service teachers impact their communication development skills at Sriwijaya University?
3. What are the dynamics of collaboration among pre-service teachers in the creation of podcasts for English education?
4. What challenges and benefits do pre-service teachers encounter when collaborating on podcast projects?

## **1.3 Objectives of the Study**

Based on the problem above, the objectives of this study are as follows:

1. To investigate pre-service teachers' perceptions of integrating technology in creating podcast in English language education at Sriwijaya University.
2. To examine the impact of the collaborative creation of podcasts by pre-service teachers on their communication development skills at Sriwijaya University.
3. To explore the dynamics of collaboration among pre-service teachers in the creation of podcasts for English education?
4. To identify and analyze challenges and benefits experienced by pre-service teachers when collaborating on podcast projects for English education at Sriwijaya University.

#### **1.4 Significance of the Study**

This study is expected to provide significant importance in the context of the development of English language education, collaborative learning methods, and the utilization of technology in the educational environment at Sriwijaya University Palembang. For lecturers, it is expected that this can provide a comprehensive understanding of the integration of podcasts into English language education through the perspective of pre-service teachers. Lecturers gain insights into the effectiveness of collaborative projects in incorporating innovative tools like podcasts into the curriculum. This knowledge empowers lecturers to adapt their teaching methodologies, ensuring they stay abreast of evolving trends and technology in language education.

For pre-service teachers, this research is expected to enhance their professional development. Engaging in collaborative podcast creation not only provides practical experience with technology but also enhances their ability to creatively deliver educational content. The study offers insights to pre-service teachers regarding the challenges and successes of such projects, fostering adaptability and innovation crucial for their future roles as educators.

In the broader context of English language education, this research is expected to inform curriculum development, instructional strategies, and the

integration of technology into language education. English language education stands to benefit from the insights gained, promoting a more dynamic and effective learning environment for students, aligning with the needs and advancements of contemporary education.

## REFERENCES

- Aase, I., Tjoflåt, I., & Urstad, K. H. (2021). Using the 'huddle' to enhance interprofessional teamwork among nursing students through a podcast: a qualitative and exploratory pilot study. *BMC Nursing*, 20(235), 1-8. <https://doi.org/10.1186/s12912-021-00747-4>
- Adeleye, O. O., Eden, C. A., & Adeniyi, I. S. (2024). Educational technology and the digital divide: a conceptual framework for technical literacy inclusion. *International Journal of Science and Research Archive*, 12(1), 150-156. <https://doi.org/10.30574/ijrsra.2024.12.1.0405>
- Ahmed, M. A., Naqi, S. M. A., & Cheema, S. M (2023). Leadership styles and their influence on project team performance. *Sjesr*, 6(2), 153-159. [https://doi.org/10.36902/sjesr-vol6-iss2-2023\(153-159\)](https://doi.org/10.36902/sjesr-vol6-iss2-2023(153-159))
- Almahdi, M. H., Murshidi, G. A., & Al-Mahdi, O. (2022). Being socially present in a time of social distancing: investigating the online social learning experiences of teacher-trainees during covid-19. *Higher Education, Skills and Work-Based Learning*, 13(4), 667-681. <https://doi.org/10.1108/heswbl-03-2022-0066>
- Aidoo, B. (2023). Teacher educators experience adopting problem-based learning in science education. *Education Sciences*, 13, 1-13. <https://doi.org/10.3390/educsci13111113>
- Al-Abdullatif, A. M., & Gameil, A. A. (2021). The effect of digital technology integration on students' academic performance through project-based learning in an e-learning environment. *International Journal of Emerging Technologies in Learning (IJET)*, 16(11), 189-210. <https://doi.org/10.3991/ijet.v16i11.19421>
- Alastuey, M. C. B., & Nemeth, K. (2020). Quizlet and podcasts: effects on vocabulary acquisition. *Computer Assisted Language Learning*, 35(7), 1407-1436. <https://doi.org/10.1080/09588221.2020.1802601>
- Alian, E. M. I., & Alhaj, A. A. M. (2023). Investigating the significance and benefits of incorporating innovative educational technology in teaching the English language to Saudi learners at the tertiary level: the university faculty's perspectives. *International Journal of Linguistics, Literature and Translation*, 6(1), 170-179. <https://doi.org/10.32996/ijllt.2023.6.1.22>
- Almendingen, K., Torbjørnsen, A., Sparboe-Nilsen, B., Kvarme, L. G., & Benth, J. Š. (2021). Small group student-produced podcasts were favoured as assignment tool for large-scale interprofessional learning: an exploratory study among health, social care, and teacher education program. *Frontiers in Education*, 6, 1-10. <https://doi.org/10.3389/feduc.2021.622716>
- Alshammari, A. M., Alshammari, F. F., Thomran, M., & Altwaiji, M. (2023). Integrating technological knowledge into higher education curricula: an essential measure for attaining sustainable development in Saudi Arabia. *Sustainability*, 15(22), 1-18. <https://doi.org/10.3390/su152215956>
- Aremu, B. V., Ayodeji, M. A., & Adeoluwa, O. V. (2023). Utilization of podcast and students' learning attitude at the universities in Ekiti state. *African*

- Multidisciplinary Journal of Development*, 12(1), 93-102.  
<https://doi.org/10.59568/amjd-2023-12-1-09>
- Arici, Ö., & Kutlu, Ö. (2023). An investigation of factors related to collaborative problem-solving skills with mediation models. *International Journal of Assessment Tools in Education*, 10, 97-115.  
<https://doi.org/10.21449/ijate.1349918>
- Aurelliana, I., & Nugraha, S. S. (2022). Impact of using podcasts on students learning motivation. *Curricula: Journal of Curriculum Development*, 1(1), 61-72. <https://doi.org/10.17509/curricula.v1i1.47883>
- Avivar-Cáceres, S., Prado-Gascó, V., & Parra-Camacho, D. (2022). Effectiveness of the fhace up! program on school violence, school climate, conflict management styles, and socio-emotional skills on secondary school students. *Sustainability*, 14(24), 1-15. <https://doi.org/10.3390/su142417013>
- Ayson, K. L., Bernardez, J. P., Garcia, A. F., Garlejo, V. G., & Laurentino, J. R. (2024). Digital divide as a dynamic challenge and a leveraging opportunity: a phenomenological study on seasoned TLE/TVL teachers' adaptive pedagogy. *International Journal of Multidisciplinary Research and Analysis*, 7(7), 3141-3149. <https://doi.org/10.47191/ijmra/v7-i07-11>
- Aziz, N. V. A. (2022). The use of podcast as an e-learning medium in teaching vocabulary students of MI Nurul Huda Serang Cipari Cilacap. *International Proceedings of Nusantara Raya*, 1(1), 350-354.  
<https://doi.org/10.24090/nuraicon.v1i1.154>
- Baecker, D. (2022). Introducing audio podcasts into a practical laboratory course for pharmacy students as a novel tool for performance assessment. *Pharmacy*, 10(2), 1-14. <https://doi.org/10.3390/pharmacy10020040>
- Bakhsh, H. S., & Gilakjani, A. P. (2021). Investigating the effect of podcasting on Iranian intermediate EFL learners' listening comprehension skill. *Language Education and Acquisition Research Network Journal*, 14(2), 247-281.  
<https://so04.tci-thaijo.org/index.php/LEARN/index>.
- Bakht, K., Mir, S., & Shah, S. A. (2024). Nursing teamwork: an in-depth concept analysis with walker & avant's framework. *Journal of Health and Rehabilitation Research*, 4(2), 1500-1505.  
<https://doi.org/10.61919/jhrr.v4i2.1118>
- Basenko, G., & Baskakova, V. (2021). Podcasts in the teaching media space. *E3S Web of Conferences*, 273 (12122), 1-8.  
<https://doi.org/10.1051/e3sconf/202127312122>.
- Bhatarai, L., Wagle, S. K., (2023). Teacher-student relationships and students' learning experiences: a narrative inquiry. *American Journal of Multidisciplinary Research and Innovation*, 2(4), 48-55.  
<https://doi.org/10.54536/ajmri.v2i4.1864>
- Ben-Atar, E. (2022). Creating radio podcasts as pedagogy that promotes learning skills. *Journal of Education in Black Sea Region*, 8(1), 46-56.  
<https://doi.org/10.31578/jebs.v8i1.276>
- Bouzar, A., EL., Idrissi, K., & Ghourdou, T. (2024). Gender differences in perceptions and usage of chatgpt. *International Journal of Humanities and*

- Educational Research*, 6(2), 571-582. <https://doi.org/10.47832/2757-5403.25.32>
- Brew-Girard, E., Brown, R., Salter, E., Hattersley, C., Hodge, O., Leonard, X., & De Souza, S. (2023). Hunting for pearls: a qualitative analysis of the reflections of students creating psychiatric podcasts. *Advances in Medical Education and Practice*, 14, 1157-1166. <https://doi.org/10.2147/amep.s411072>
- Byron, K., Keem, S., Darden, T. R., Shalley, C. E., & Zhou, J. (2022). Building blocks of idea generation and implementation in teams: a meta-analysis of team design and team creativity and innovation. *Personnel Psychology*, 76(1), 249-278. <https://doi.org/10.1111/peps.12501>
- Cao, T. B. N., & Bui, D. B. H. (2023). Examining students' perceptions of podcasts as authentic materials for self-access listening practice. *Journal of Research on English and Language Learning (J-REaLL)*, 5(1), 13-23. <https://doi.org/10.33474/j-reall.v5i1.20725>
- Carvalho, S. d. O., Silva, G. A. d. A. d., Moura, M. C. S., Santos, B. K. I., Medeiros, A. M. d. B., Duarte, G. M., & Silva, G. R. F. d. (2022). Podcasting for education in enterostomal therapy during the covid-19 pandemic. *ESTIMA, Brazilian Journal of Enterostomal Therapy*. [https://doi.org/10.30886/estima.v20.1207\\_in](https://doi.org/10.30886/estima.v20.1207_in)
- Çebi, A., & Reisoğlu, İ. (2020). Digital competence: a study from the perspective of pre-service teachers in turkey. *Journal of New Approaches in Educational Research*, 9(2), 294-308. <https://doi.org/10.7821/naer.2020.7.583>
- Chaves-Yuste, B., & De-la Pena, C. (2023). Podcasts' effects on the EFL classroom: a socially relevant intervention. *Smart Learning Environments*, 10(1), 1-18. <https://doi.org/10.1186/s40561-023-00241-1>
- Chen, L., & Lertamornsak, G. (2023). Internet of things (IOT) based investigation between instructors' insight of constructivist learning theory and learners' performance analysis in higher vocational accounting training. *International Journal on Recent and Innovation Trends in Computing and Communication*, 11(6s), 217-227. <https://doi.org/10.17762/ijritcc.v11i6s.6824>
- Chen, W., Pi, Z., Tan, J. S. H., & Lyu, Q. (2022). Preparing pre-service teachers for instructional innovation with ICT via co-design practice. *Australasian Journal of Educational Technology*, 38(5), 133-145. <https://doi.org/10.14742/ajet.7743>
- Chen, Z., Chen, X., & Fang, F. (2021). Global Englishes and teacher education: present cases and future directions. *RELC Journal*, 54(3), 873-880. <https://doi.org/10.1177/00336882211044872>
- Childs, M., et al. (2023). A word in your ear: What do podcasters' experiences tell us about creating podcasts for professional development. *Journal of Play in Adulthood*. [www.journalofplayinadulthood.org.uk](http://www.journalofplayinadulthood.org.uk).
- Chuang, S. (2021). The applications of constructivist learning theory and social learning theory on adult continuous development. *Performance Improvement*, 60(3), 6-14. <https://doi.org/10.1002/pfi.21963>

- Constantinou, E. K. (2024). The multidimensional role of the English for specific purposes practitioner in today's changing societies: voices from around the globe. *Journal of Teaching English for Specific and Academic Purposes*, 11(3), 621-632. <https://doi.org/10.22190/jtesap230811048k>
- Cowan, R., Ganderton, C., Cook, J. L., Semciw, A., Long, D. M., & Pizzari, T. (2021). Does menopausal hormone therapy, exercise, or both improve pain and function in postmenopausal women with greater trochanteric pain syndrome? a 2 × 2 factorial randomized clinical trial. *The American Journal of Sports Medicine*, 50(2), 515-525. <https://doi.org/10.1177/03635465211061142>
- Darkwa, B. F, Agyei, D. D, & Kwarteng, J. T. (2024). Developing interactive pedagogies: a case of accounting pre-service teachers from Ghana. *African Journal of Teacher Education*, 13(1), 105-125. <https://doi.org/10.21083/ajote.v13i1.7218>
- Dash, B. B. (2022). Significance of globalization and English language. *International Journal on Studies in English Language and Literature*, 10(5), 10-16. <https://doi.org/10.20431/2347-3134.1005002>
- de la Peña, I. A., & Cassany, D. (2024). Student podcasting for teaching-learning at university. *Journal of Technology and Science Education*, 14(1), 123-141. <https://doi.org/10.3926/jotse.2509>
- Deda, S. H. (2023). Podcasts in EFL: the views of pre-service teachers. *European Journal of English Language Teaching*, 8(3), 134-158. <https://doi.org/10.46827/ejel.v8i3.4902>
- Dia, A. A. (2024). Teaching and learning English in the digital era: opportunities and challenges. *Proceedings of the International Conference on Research in Teaching and Education*, 1(1), 13-25. <https://doi.org/10.33422/rteconf.v1i1.183>
- Ding, X., & Li, Z. (2022). A review of the application of virtual reality technology in higher education based on web of science literature data as an example. *Frontiers in Education*, 7, 1-10. <https://doi.org/10.3389/feduc.2022.1048816>
- Dissanayake, W., & Kodagoda, D. (2021). Nexus of emotional intelligence (EI), need for affiliation (naff), integrating style of conflict resolution: a case study of dispute resolution among undergraduates in Sri Lankan state universities. *KDU Journal of Multidisciplinary Studies*, 3(2), 35-47. <https://doi.org/10.4038/kjms.v3i2.27>
- Eden, C. A., Chisom, O. N., & Adeniyi, I. S (2024). Online learning and community engagement: strategies for promoting inclusivity and collaboration in education. *World Journal of Advanced Research and Reviews*, 21(3), 232-239. <https://doi.org/10.30574/wjarr.2024.21.3.0693>
- Ekambaram, K., Lamprecht, H., Lalloo, V., Engelbrecht, A., & Jooste, W. (2021). An electronic survey of preferred podcast format and content requirements among trainee emergency medicine specialists in four southern African universities. *African Journal of Emergency Medicine*, 11(1), 3-9. <https://doi.org/10.1016/j.afjem.2020.10.014>



- Enríquez, I. G., Cutuli, M., & Mancha-Cáceres, O. (2023). Enhancing collaborative learning in higher education through podcast production: an experiential approach with anthropology and tourism students. *Education Sciences*, 13(9), 1-16. <https://doi.org/10.3390/educsci13090898>
- Fachriza, A., Virgiyanti, D. F., Nuraini, E. I., Dipta, D., & Luthfi, M. (2023). The significance of podcasting for EFL learning. *Journal of English Language Teaching and Learning (JETLE)*, 5(1), 60-75. <https://doi.org/10.18860/jetle.v5i1.23582>
- Faridi, M., & Izadpanah, S. (2024). The study of EFL learners' perception of using e-learning, self-regulation and constructivism in English classrooms: teachers, intermediate and advanced learners' attitude. *Journal of Language and Education*, 10(2), 45-58. <https://doi.org/10.17323/jle.2024.12492>
- Ferdiansyah, S., Humairoh, M. F. N., Royani, A., & Marsitoh, R. S. (2023). Incorporating cultural content into English language learning through collaborative podcast series project. *On the Horizon: The International Journal of Learning Futures*, 31(2), 123-130. <https://doi.org/10.1108/oth-06-2022-0030>
- Folger, T., Bostic, J. D., & Krupa, E. E. (2023). Defining test-score interpretation, use, and claims: Delphi study for the validity argument. *Educational Measurement: Issues and Practice*, 42(3), 22-38. <https://doi.org/10.1111/emip.12569>
- Frانيا, M., & Correia, F. L. d. S. (2022). Interpersonal competences and attitude to online collaborative learning (OCL) among future pedagogues and educators—a polish and Portuguese perspective. *Education Sciences*, 12(23), 1-12. <https://doi.org/10.3390/educsci12010023>
- García-Estévez, N., & Cartes-Barroso, M. J. (2022). The branded podcast as a new brand content strategy. analysis, trends and classification proposal. *El Profesional De La Información*, 31(5), 1-18. <https://doi.org/10.3145/epi.2022.sep.23>
- Gcabashe, N. B., & Ndlovu, N. S. (2022). Exploring business studies teachers' technology self-efficacy on their technology integration to create learner-centered teaching environment. *International Journal of Learning, Teaching and Educational Research*, 21(12), 238-259. <https://doi.org/10.26803/ijlter.21.12.13>
- Ghoorchaei, B., Rastegar, H., Shomoossi, N., & Amiri, M. (2021). Podcasting and vocabulary learning in an EFL context: a mixed methods study. *Research Square*, 1-10. <https://doi.org/10.21203/rs.3.rs-141387/v1>
- Ginting, S.R. (2019). *Exploring the use of podcasts on students' language learning and change of students' self-efficacy about the use of podcasts*. Graduate Research Theses & Dissertations. <https://huskiecommons.lib.niu.edu/allgraduate-thesesdissertations/7067>
- Gönülal, T. (2022). Improving listening skills with extensive listening using podcasts and vodcasts. *International Journal of Contemporary Educational Research*, 7(1), 311-320. <https://doi.org/10.33200/ijcer.685196>
- González-Cespón, J. L., Alonso-Rodríguez, J. A., Rodríguez-Barcia, S., Gallego, P. P., & Pino-Juste, M. R. (2024). Enhancing employability skills of biology

- graduates through an interdisciplinary project-based service-learning experience with engineering and translation undergraduate students. *Education Sciences*, 14(95), 1-15. <https://doi.org/10.3390/educsci14010095>
- Gue, S., Cohen, S., Tassone, M., Walker, A., Little, A., Morales-Cruz, M., & Ganti, L. (2023). Disaster day: a simulation-based competition for educating emergency medicine residents and medical students on disaster medicine. *International Journal of Emergency Medicine*, 16(59), 1-7. <https://doi.org/10.1186/s12245-023-00520-1>
- Gullino, S., Shtebunaev, S., & Wakerley, E. (2023). Podcasting and collaborative learning practices in place-making studies. *Engaged Urban Pedagogy*, 144-161. <https://doi.org/10.2307/j.ctv33pb026.17>
- Guo, H., & Zeng, G. (2023). Comprehensive evaluation of online foreign language teaching satisfaction under the green and sustainable background. *Polish Journal of Environmental Studies*, 32(5), 4579-4592. <https://doi.org/10.15244/pjoes/167399>
- Gu, J. (2021). Family conditions and the accessibility of online education: the digital divide and mediating factors. *Sustainability*, 13, 1-14. <https://doi.org/10.3390/su13158590>
- Habibah, L., Suratno, S., & Iqbal, M. (2023). The effect of collaborative learning model combined with problem solving on critical thinking ability and mastery of biology concept of high school students in coffee plantation area. *International Journal of Research and Review*, 10(2), 588-595. <https://doi.org/10.52403/ijrr.20230270>
- Haerazi, H. (2023). Mobile-assisted flipped learning integrated with metacognitive skills in the teaching of speaking and listening skills. *Journal of English Education and Teaching*, 7(3), 632-651. <https://doi.org/10.33369/jeet.7.3.632-651>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*. 275-285. <https://doi.org/10.1016/j.susoc.2022.05.004>.
- Hamid, S. F., Forsia, L., & Isnaniah, I. (2024). Beyond the classroom: fostering English communication skills in vocational education through podcasting and radio broadcasting. *Jurnal Pembelajaran Pemberdayaan Masyarakat (JP2M)*, 5(2), 317-330. <https://doi.org/10.33474/jp2m.v5i2.21688>
- Harahap, H. F., & Fithriani, R. (2024). Employing reflective practice to capture Indonesian EFL pre-service teachers' conceptions of English learning. *Journal on English as a Foreign Language*, 14(1), 209-237. <https://doi.org/10.23971/jevl.v14i1.7796>
- Harahap, M. Q. A., & Rizal, D. (2023). Promoting EFL listening and speaking skills through podcast: teachers' beliefs and practices. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, 7(2), 458-468. <https://doi.org/10.30743/ll.v7i2.8251>
- Hashmi, A., Wishal, H., & Kiyani, T. (2021). The constructivist teaching approach and academic achievement in English: an empirical evidence of secondary school students. *Journal of Arts & Social Sciences*, 8(1), 6-15. [https://doi.org/10.46662/jass-vol8-iss1-2021\(6-15\)](https://doi.org/10.46662/jass-vol8-iss1-2021(6-15))

- Hasibuan, M. E., & Male, H. (2022). Pre-service EFL teachers' perception of using podcast as a learning media to improve listening skills. *JET (Journal of English Teaching)*, 8(2), 300-311. <https://doi.org/10.33541/jet.v8i2.4068>
- Hassan, A., Alshahrani, S., & Alharbi, A. (2022). The Role of Podcasts in Teaching Chemistry during the COVID-19 Pandemic: Enhancing Learning Experiences and Fostering Community. *Journal of Chemical Education*, 99(5), 1234-1241. <http://dx.doi.org/10.31686/ijer.vol10.iss10.3980>
- Hendarwati, E., Nurlaela, L., Bachri, B. S., & Sa'ida, N. (2021). Collaborative problem-based learning integrated with online learning. *International Journal of Emerging Technologies in Learning (iJET)*, 16(13), 29-38. <https://doi.org/10.3991/ijet.v16i13.24159>
- Herayanti, L., Widodo, W., Susantini, E., & Gunawan, G. (2020). The effectiveness of blended learning model based on inquiry collaborative tutorial toward students' problem-solving skills in physics. *Journal for the Education of Gifted Young Scientists*, 8(3), 959-972. <https://doi.org/10.17478/jegys.675819>
- Holdhus, K., Christophersen, C., & Parti, H. (2022). Soundtrapped? socio-material perspectives on collaborative teaching within the music classroom. *Research Studies in Music Education*, 45(3), 539-554. <https://doi.org/10.1177/1321103x221115978>
- Hovlin, L., Gillsjö, C., Aslan, A. K. D., & Hällgren, J. (2021). Mutual trust is a prerequisite for nurses' sense of safety and work satisfaction – mobile integrated care model: a qualitative interview study. *Nordic Journal of Nursing Research*, 43(1), 1-8. <https://doi.org/10.1177/20571585211062166>
- Huang, S. (2023). Incorporating data-driven learning approach into English language teaching by using corpus-based tools. *Advances in Intelligent Systems Research*, 713-720. [https://doi.org/10.2991/978-94-6463-238-5\\_93](https://doi.org/10.2991/978-94-6463-238-5_93)
- Huang, T. (2024). Dilemma of teaching Chinese abroad: constructive teaching strategies for TCSL teachers. *Journal of Education, Humanities and Social Sciences*, 30, 47-51. <https://doi.org/10.54097/p9gwv982>
- Hussein, B. (2021). Addressing collaboration challenges in project-based learning: the student's perspective. *Education Sciences*, 11(434), 1-120. <https://doi.org/10.3390/educsci11080434>
- Ibrahim, A. (2022). The positive impact of using podcasts in education in El Baha university college of science and arts Imikhwa branch. *International Journal of Educational Research Review*, 7(4), 324-328. <https://doi.org/10.24331/ijere.1174579>
- Inderawati, R. (2024). Crafting a survey instrument for educational podcasts: Integrating technology in English language teaching enhancement. *English Review: Journal of English Education*, 12(2), 753-764. <https://journal.uniku.ac.id/index.php/ERJEE>
- Insani, N. N. (2022). Podcasts: media to increase student learning motivation. *Advances in Social Science, Education and Humanities Research*, 636, 519-522. <https://doi.org/10.2991/assehr.k.220108.093>
- Islamov, R., Greenwald, O., & Tunyova, N. (2020). Information and communication technologies in foreign language teaching in multinational

- higher education environment of mining region. *E3S Web of Conferences*, 174, 1-7. <https://doi.org/10.1051/e3sconf/202017404042>
- Jabeen, M., Shahzadi, M., & Amin, Z. (2023). Demographic predictors of conflict resolution styles among Pakistani adults. *Journal of Professional & Applied Psychology*, 4(4), 568-578. <https://doi.org/10.52053/jpap.v4i4.215>
- Jain, S., & Alam, M. A. (2021). Review of forthcoming ICT-enabled applications promoting learning in higher education. *ICT With Intelligent Applications*, 613-621. [https://doi.org/10.1007/978-981-16-4177-0\\_61](https://doi.org/10.1007/978-981-16-4177-0_61)
- Jie, Z., Puteh, M., & Sazalli, A. H. (2020). A social constructivism framing of mobile pedagogy in English language teaching in the digital era. *Indonesian Journal of Electrical Engineering and Computer Science*, 20(2), 830-836. <https://doi.org/10.11591/ijeecs.v20.i2.pp830-836>
- Johler, M. (2022). Collaboration and communication in blended learning environments. *Frontiers in Education*, 7, 1-14. <https://doi.org/10.3389/educ.2022.980445>
- Jordan, K. (2020). Examining educational technology and research impact: the two roles of e-learning and related terms in the 2014 ref impact case studies. *Research in Learning Technology*, 28, 1-17. <https://doi.org/10.25304/rlt.v28.2306>
- Jovanović-Nikolić, I., & Stojković-Trajković, M. (2022). Fostering the development of future tourism and hospitality professionals' employability skills through the use of podcasting technology. *Bizinfo Blace*, 13(2), 21-28. <https://doi.org/10.5937/bizinfo2202021j>
- Kafes, H., & Caner, M. (2020). Impact of podcasting on pronunciation skills of pre-service EFL teachers. *Turkish Online Journal of Distance Education*, 21(3), 36-47. <https://doi.org/10.17718/tojde.762022>
- Kaloka, P. T., Yulianto, H., & Wulandari, P. P. (2023). Validity and reliability of a nonlinear pedagogy assessment test (GPAI) in invasion games. *Advances in Health Sciences Research*, 73, 97-103. [https://doi.org/10.2991/978-94-6463-356-6\\_12](https://doi.org/10.2991/978-94-6463-356-6_12)
- Karaoglan-Yılmaz, R., Üstün, A., Zhang, K., & Yılmaz, F. G. K. (2023). Metacognitive awareness, reflective thinking, problem solving, and community of inquiry as predictors of academic self-efficacy in blended learning: a correlational study. *Turkish Online Journal of Distance Education*, 24(1), 20-36. <https://doi.org/10.17718/tojde.989874>
- Kazempour, M., & Amirshokoochi, A. (2020). Pre-service teachers' collaborative learning experiences in a science content course. *Science Education International*, 31(4), 379-385. <https://doi.org/10.33828/sei.v31.i4.6>
- Kervinen, A., Portaankorva-Koivisto, P., Kesler, M., Kaasinen, A., Juuti, K., & Uitto, A. (2022). From pre- and in-service teachers' asymmetric backgrounds to equal co-teaching: investigation of a professional learning model. *Frontiers in Education*, 7, 1-17. <https://doi.org/10.3389/educ.2022.919332>
- Kiyici, G., Bilici, S. C., Yamak, H., & Kavak, N. (2022). Engineering design-based thematic activities: an investigation of pre-service science teachers' entrepreneurship mindsets. *Science Insights Education Frontiers*, 11(2), 1531-1549. <https://doi.org/10.15354/sief.v11i2.722>

- Komala, I., Umar, F. A., & Kunaedi, J. (2023). Utilizing RASCH analysis to analyze and identify students' attitude toward economics. *Jurnal Pendidikan Ekonomi (JURKAMI)*, 8(2), 465-476. <https://doi.org/10.31932/jpe.v8i2.2488>
- Kumar, T., Malabar, S., Benyo, A., & Amal, B. K. (2021). Analyzing multimedia tools and language teaching. *Linguistics and Culture Review*, 5(S1), 331-341. <https://doi.org/10.21744/lingcure.v5ns1.1400>
- Lan, Z. (2024). The development of China's English education policy in primary and middle schools within the framework of language-in-education planning (from 1949 to 2023). *Journal of Education, Humanities and Social Sciences*, 26, 108-112. <https://doi.org/10.54097/6jzfl1t44>
- Laiya, R. E., Khasanah, U., Sulistiani, I., Sudrajat, D., & M, M. (2022). Podcast-mediated students learning English in the second grade of senior high school. *QALAMUNA: Jurnal Pendidikan, Sosial, dan Agama*, 14(2), 1011-1024. <https://doi.org/10.37680/qalamuna.v14i2.3749>
- Lassoued, Z., Alhendawi, M., & Bashitialshaaer, R. (2020). An exploratory study of the obstacles for achieving quality in distance learning during the covid-19 pandemic. *Education Sciences*, 10(232), 1-13. <https://doi.org/10.3390/educsci10090232>
- Lee, E. S., & Garg, N. (2020). Reliability of multiple-choice versus problem-solving student exam scores in higher education: empirical tests. *6th International Conference on Higher Education Advances (HEAd'20)*, 1399-1407. <https://doi.org/10.4995/head20.2020.11303>
- Liu, J. (2024). Deep learning backward recognition model to improve pronunciation accuracy in the teaching of spoken English. *Journal of Electrical Systems*, 20(6s), 1516-1527. <https://doi.org/10.52783/jes.3071>
- Liao, M., Wu, S., Lee, C., Shieh, S., & Tsai, Y. (2023). Relationship between teamwork climate, job satisfaction and healthcare quality: a cross-sectional study. *Research Square*, 1-24. <https://doi.org/10.21203/rs.3.rs-2938317/v1>
- Luo, F., Antonenko, P. D., Valle, N., Sessa, E. B., Burleigh, G., Endara, L., & Davis, E. G. (2020). Collaborative design reasoning in a large interdisciplinary learning tool design project. *International Journal of Designs for Learning*, 11(1), 85-97. <https://doi.org/10.14434/ijdl.v11i1.25633>
- Macedo, G. T. d., Fontão, A., & Gadelha, B. (2024). Building soft skills through a roleplay-based approach for requirements engineering remote education. *Journal of the Brazilian Computer Society*, 30(1), 1-16. <https://doi.org/10.5753/jbcs.2024.3071>
- McNamara, S. W. T., & Min, S. D. (2024). Understanding why educational professionals engage with podcasts: educational podcasts motivational scale development and validation. *British Journal of Educational Technology*, 55(4), 1728-1746. <https://doi.org/10.1111/bjet.13428>
- Makarenko, O., Borysenko, O., Horokhivska, T., Kozub, V., & Yaremenko, D. (2024). Embracing artificial intelligence in education: shaping the learning path for future professionals. *Multidisciplinary Science Journal*, 6, <https://doi.org/10.31893/multiscience.2024ss0720>

- Maqsood, M., Zahid, A., Asghar, T., Farooqi, S., & Shahbaz, M. (2024). Issues in teaching English in a cultural context. *Migration Letters*, 21(S4), 1020-1027. <https://doi.org/10.59670/ml.v21is4.7411>
- Memon, S. A., Rowlinson, S., Sunindijo, R. Y., & Zahoor, H. (2021). Collaborative behavior in relational contracting projects in Hongkong—a contractor’s perspective. *Sustainability*, 13(5375), 1-15. <https://doi.org/10.3390/su13105375>
- Men, C., & Jia, R. (2021). Knowledge-oriented leadership, team learning and team creativity: the roles of task interdependence and task complexity. *Leadership & Organization Development Journal*, 42(6), 882-898. <https://doi.org/10.1108/lodj-11-2020-0506>
- Merlo, A., Ediger, A., & Sasaki, C. (2022). The use of collaborative testing in entry-level physical therapist education: a retrospective case report. *Journal of Physical Therapy Education*, 36(2), 171-175. <https://doi.org/10.1097/jte.0000000000000223>
- Mersin, N., & Danişman, Ş. (2023). The impact of instruction on web 2.0 tools on pre-service mathematics teachers' self-efficacy beliefs and their activity development experiences. *Management and Administrative Professional Review*, 14(10), 18655-18676. <https://doi.org/10.7769/gesec.v14i10.3069>
- Mesuwini, J., & Mokoena, S. (2024). Exploring online teaching and learning challenges for the technical and vocational education and training lecturer. *Journal of Education and E-Learning Research*, 11(1), 193-202. <https://doi.org/10.20448/jeelr.v11i1.5423>
- Mishoe, S. C., Elçi, M. A., Poston, R., Tufts, K. A., & Thompson, B. M. (2021). Nursing, physical therapy, and cytotechnology graduate and undergraduate students’ attitudes toward teamwork before and after participation in an interprofessional education experience. *Health, Interprofessional Practice and Education*, 4(2), 1-12. <https://doi.org/10.7710/2641-1148.2167>
- Moumoutzis, N., Xanthaki, C., Maragkoudakis, I., Christodoulakis, S., Paneva-Marinova, D., Pavlova, L., & Kalmpourtzis, G. (2022). Cooking steam: a case study on establishing a steam learning community using a performative framework and cooking. *New Realities, Mobile Systems and Applications*, 907-916. [https://doi.org/10.1007/978-3-030-96296-8\\_82](https://doi.org/10.1007/978-3-030-96296-8_82)
- Mulyadi, E., Riyanto, Y., & Kristanto, A. (2023). Developing CBL through WISGUD in teaching and learning of English writing skill. *Advances in Social Science, Education and Humanities Research*, 1135-1143. [https://doi.org/10.2991/978-2-38476-152-4\\_115](https://doi.org/10.2991/978-2-38476-152-4_115)
- Newington, L., Alexander, C. M., & Wells, M. (2021). What is a clinical academic? qualitative interviews with healthcare managers, research-active nurses and other research-active healthcare professionals outside medicine. *Journal of Clinical Nursing*, 31(3-4), 378-389. <https://doi.org/10.1111/jocn.15624>
- Ngereja, B. J., Hussein, B., & Andersen, B. (2020). Does project-based learning (PBL) promote student learning? a performance evaluation. *Education Sciences*, 10(330), 1-15. <https://doi.org/10.3390/educsci10110330>
- Nisa, H. F., Izzah, L., & Hadi, M. S. (2022). The use of podcast to improve students’ listening comprehension. *Eltin Journal: Journal of English Language*

- Teaching in Indonesia*, 10(1), 45-54.  
<https://doi.org/10.22460/eltin.v10i1.p45-54>
- Noetel, M., Griffith, S., Voss-Fels, K. P., Sanders, T., Parker, P. D., Cruz, B. d. P., & Lonsdale, C. (2021). Video improves learning in higher education: a systematic review. *Review of Educational Research*, 91(2), 204-236.  
<https://doi.org/10.3102/0034654321990713>
- Norsworthy, C. G., & Herndon, K. L. (2020). Leading by ear: podcasting as an educational leadership tool. *Journal of Leadership Education*, 19(3), 61-68.  
<https://doi.org/10.12806/v19/i3/a1>
- Nova, M. (2022). Using online podcast as a speaking activity in online classroom. *Pedagogy: Journal of English Language Teaching*, 10(1), 38.  
<https://doi.org/10.32332/joelt.v10i1.4602>
- Nugroho, D. A., & Anwar, W. Y. C. (2022). Strategy to empower Pancasila values through podcast media as digital citizens innovation. *Jurnal Civics: Media Kajian Kewarganegaraan*, 19(2), 245-254.  
<https://doi.org/10.21831/jc.v19i2.53562>
- Nurmukhamedov, U., & Sharakhimov, S. (2021). Corpus-based vocabulary analysis of English podcasts. *RELC Journal*, 54(1), 7-21.  
<https://doi.org/10.1177/0033688220979315>
- O'Connor, S., Daly, C. S., MacArthur, J., Borglin, G., & Booth, R. (2020). Podcasting in nursing and midwifery education: an integrative review. *Nurse Education in Practice*, 47, 1-14.  
<https://doi.org/10.1016/j.nepr.2020.102827>
- Ohiri, S. C., Ihebom, D., & Nnennaya, C. (2024). Psychometric properties of a test: An overview. *International Journal of Research Publication and Reviews*, 5(2), 2217-2224. <https://doi.org/10.55248/gengpi.5.0224.0539>
- Opeifa, O., Adelana, O. P. Atolagbe, O. D. (2022). Teaching oral English through technology: perceptions of teachers in Nigerian secondary schools. *International Journal of Learning and Teaching*, 14(1), 41-54.  
<https://doi.org/10.18844/ijlt.v14i1.6434>
- Park, N. K., Jang, W., Thomas, E. L., & Smith, J. P. (2020). How to organize creative and innovative teams: creative self-efficacy and innovative team performance. *Creativity Research Journal*, 33(2), 168-179.  
<https://doi.org/10.1080/10400419.2020.1842010>
- Pietro, G. D. (2021). Changes in Italy's education-related digital divide. *Economic Affairs*, 41(2), 252-270. <https://doi.org/10.1111/ecaf.12471>
- Quines, L. A., & Piñero, M. Y. (2022). The mediating effect of job satisfaction on the relationship between team work skills and work values of teachers. *European Journal of Education Studies*, 9(11), 22-53.  
<https://doi.org/10.46827/ejes.v9i11.4520>
- Reeson, M. G. (2021). The professional experiences and development of dental technology students to work based learning a five-year study. *Journal of Dental Health and Oral Research*, 2(1), 1-12.  
<https://doi.org/10.46889/jdhor.2021.2108>

- Reith-Hall, E., & Montgomery, P. (2022). The teaching and learning of communication skills in social work education. *Research on Social Work Practice, 32*(7), 793-813. <https://doi.org/10.1177/10497315221088285>
- Resch, K., & Schrittester, I. (2021). Using the service-learning approach to bridge the gap between theory and practice in teacher education. *International Journal of Inclusive Education, 27*(10), 1118-1132. <https://doi.org/10.1080/13603116.2021.1882053>
- Riddell, J., Kobner, S., & Padilla, G. (2023). An evaluation of emergency medicine core content covered by podcasts. *Western Journal of Emergency Medicine, 24*(1), 15-22. <https://doi.org/10.5811/westjem.2022.11.57717>
- Ridwan, A., & Athena, T. (2023). Professional development altogether: pre-service and in-service EFL teacher collaboration in doing classroom action research. *Elsya: Journal of English Language Studies, 5*(2), 147-158. <https://doi.org/10.31849/elsya.v5i2.11929>
- Rime, J., Pike, C., & Collins, T. (2022). What is a podcast? considering innovations in podcasting through the six-tensions framework. *Convergence: The International Journal of Research into New Media Technologies, 28*(5), 1260-1282. <https://doi.org/10.1177/13548565221104444>
- Rodina, O. (2023). Implementing it in engineering education. *E3S Web of Conferences, 460*, 1-8. <https://doi.org/10.1051/e3sconf/202346004038>
- Romadona, M. R., Febrianda, R., & Setiawan, S. (2022). Individual intangible factor aspect co-creation as collaboration research product activities HFNC 01 in pandemic as a case study. *STI Policy and Management Journal, 7*(2), 161-177. <https://doi.org/10.14203/stipm.2022.353>
- Ruiyao, M., Keat, O. B., & Ahmad, A. (2023). The impact of female leadership style on team creativity in rising English education group in China. *International Journal of Professional Business Review, 8*(9), 1-26. <https://doi.org/10.26668/businessreview/2023.v8i9.3237>
- Ruiz, M. R., Bula, L. M., Meza, L. G., & Luna, A. G. (2024). Perspectives for the implementation of the SDGS as an innovative strategy for teaching English in professional practice scenarios. *Journal of Law and Sustainable Development, 12*(2), 1-17. <https://doi.org/10.55908/sdgs.v12i2.3402>
- Saad, S., Abdullah, A., & Syazwanie Mansor, N. (2024). Empowering ESL learners: the role of fun language activities in developing autonomous learning in highly immersive programs. *International Journal of Research and Innovation in Social Science, VIII*(IX), 42-53. <https://doi.org/10.47772/ijriss.2024.809004>
- Sabrila, R. A. P., & Apoko, T. W. (2022). The effectiveness of podcast on listening skill for vocational school students. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature, 10*(2), 1177-1186. <https://doi.org/10.24256/ideas.v10i2.2897>
- Saeedakhtar, A., Haqju, R., & Rouhi, A. (2021). The impact of collaborative listening to podcasts on high school learners' listening comprehension and vocabulary learning. *System, 101*, 102588. <https://doi.org/10.1016/j.system.2021.102588>



- Saito, S., & Tangkiengsirisin, S. (2023). The perceptions of pre-service EFL teachers toward a training program integrating online coaching. *European Journal of Education Studies*, 10(6), 298-311. <https://doi.org/10.46827/ejes.v10i6.4845>
- Saltanat, K., Semenova, Y., Goremykina, M., Moldagaliyev, T., Kauysheva, A., Azizov, S., & Trincherro, E. (2021). Cross-cultural adaptation and validation of patient safety culture assessment tool for clinical staff in Kazakhstan. *Open Access Macedonian Journal of Medical Sciences*, 9(E), 340-345. <https://doi.org/10.3889/oamjms.2021.5769>
- Santoso, I. (2021). How do students learn German cultural values throughout podcast-mediated project-based learning amidst covid-19 pandemic?. *Research and Innovation in Language Learning*, 4(3), 299-303. <https://doi.org/10.33603/rill.v4i3.6769>
- Saragih, D., Marpaung, A., & Saragih, R. P. S. (2022). Influence of podcast in improving students' listening skill of senior high school. *International Journal Corner of Educational Research*, 1(2), 57-68. <https://doi.org/10.54012/ijcer.v1i2.81>
- Sasan, J. M. (2023). Enhancing English proficiency for Filipinos through a multimedia approach based on constructivist learning theory. *Lingua Franca*, 2(2), 51-65. [https://doi.org/10.37680/lingua\\_franca.v2i2.2422](https://doi.org/10.37680/lingua_franca.v2i2.2422)
- Schaller, M. D., & Gatesman-Ammer, A. (2022). Introducing conflict resolution and negotiation training into a biomedical sciences graduate curriculum. *BMC Medical Education*, 22(1), 1-14. <https://doi.org/10.1186/s12909-022-03494-5>
- Schneider, S., Bergmann, C., Becker, F., Risse, L., Isner, C., Stocker, H., Feufel, M. A., Rohrig, A., Kurzai, O., Lam, T., Hagel, S., Pletz, M. W., Gastmeier, P., & Wiese-Posselt, M. (2024). Teaching prudent antibiotic use on the go: a descriptive report on development, utilization and listener satisfaction of an educational podcast format for medical students and young professionals. *Antimicrobial Resistance & Infection Control*, 13(50), 1-9. <https://doi.org/10.1186/s13756-024-01402-8>
- Sellas, T., & Bagant, M. B. (2022). Independent podcast networks in Spain: a grassroots cultural production facing cultural industry practices. *Convergence: The International Journal of Research into New Media Technologies*, 29(4), 801-817. <https://doi.org/10.1177/13548565221142147>
- Shroff, R. H., Ting, F. S. T., Chan, C. L., Garcia, R. C. C., Tsang, W. P., & Lam, K. W. (2023). Conceptualization, measurement and preliminary validation of learners' problem-based learning and peer assessment strategies in a technology-enabled context. *Australasian Journal of Educational Technology*, 1-18. <https://doi.org/10.14742/ajet.7214>
- Shukla, T., Dosaya, D., Nirban, V. S., & Vavilala, M. P. (2020). Factors extraction of effective teaching-learning in online and conventional classrooms. *International Journal of Information and Education Technology*, 10(6), 422-427. <https://doi.org/10.18178/ijiet.2020.10.6.1401>
- Siraj, D., & Kirmani, N. S. (2022). Effect of technology-supported collaborative learning techniques on prospective teachers' sense of learning community

- through the use of moodle. *Global Educational Studies Review*, 7(2), 107-115. [https://doi.org/10.31703/gesr.2022\(vii-ii\).10](https://doi.org/10.31703/gesr.2022(vii-ii).10)
- Smith, B. E., Pacheco, M. B., & Khorosheva, M. (2020). Emergent bilingual students and digital multimodal composition: a systematic review of research in secondary classrooms. *Reading Research Quarterly*, 56(1), 33-52. <https://doi.org/10.1002/rrq.298>
- Song, Y., Qian, C., & Pickard, S. (2021). Age-related digital divide during the covid-19 pandemic in China. *International Journal of Environmental Research and Public Health*, 18, 1-13. <https://doi.org/10.3390/ijerph182111285>
- Sotlikova, R., & Haerazi. (2023). Students' perceptions towards the use of podcasts in EFL classroom: A case study at a university of Uzbekistan. *Journal of Languages and Language Teaching*, 11(3), 461-474. doi: <https://doi.org/10.33394/jollt.v%vi%i.8172>
- Sprowls, E. D. (2020). Collaborative learning tools to foster inclusive participation and sense of belonging in a microbiology outreach partnership. *Journal of Microbiology & Biology Education*, 21(1), 1-4. <https://doi.org/10.1128/jmbe.v21i1.2079>
- Srivani, V., Hariharasudan, A., Nawaz, N., & Ratajczak, S. (2022). Impact of education 4.0 among engineering students for learning English language. *Plos One*, 17(2), 1-12. <https://doi.org/10.1371/journal.pone.0261717>
- Stranger, A. P., Varas, G., & Mobuchon, G. (2023). Managing european interuniversity collaboration: a bottom-up approach to identify digital education challenges from below. *9th International Conference on Higher Education Advances (HEAD'23)*, 1039-1046. <https://doi.org/10.4995/head23.2023.16242>
- Sulindra, E., Cendra, A. N., & Hartani, T. (2024). Utilization of instructional technology in English language teaching (ELT) based on constructivism: a literature review. *English Education and Literature Journal (E-Jou)*, 4(02), 141-153. <https://doi.org/10.53863/ejou.v4i02.1150>
- Sumarni, S., Ifan Iskandar, & Imam Santosa (2023). Assessing digital competence among pre-service English language teachers: strengths and weaknesses. *Journal of English Education and Teaching*, 7(3), 613-631. <https://doi.org/10.33369/jeet.7.3.613-631>
- Suratno, S., Sari, S. N., & Hana, B. (2023). Metacognitive thinking ability and mastery of biology concepts of students in regional schools coffee plantations with collaborative learning. *International Journal of Research and Review*, 10(2), 580-587. <https://doi.org/10.52403/ijrr.20230269>
- Susanti, Y. D., Wahyuni, S., & Sakhiyya, Z. (2023). Unraveling EFL pre-service teachers' TPACK through self-report data. *English Education Journal*, 13(2), 246-257. <https://doi.org/10.15294/eej.v13i2.72586>
- Taherdoost, H. (2022). Designing a questionnaire for a research paper: A comprehensive guide to design and develop an effective questionnaire. *Asian Journal of Managerial Science*, 11(1), 8-16. doi: <https://doi.org/10.51983/ajms-2022.11.1.3087>

- Tan, R. K. J., Mpofu, R., Kay, P., Sebastian, D., Novakovic, D., Lo, Y., & Tucker, J. D. (2022). Audio innovation and songs to spur change in global health: evidence from a national crowdsourcing open call for youth social innovation in Malaysia. *BMJ Innovations*, 8(3), 199-206. <https://doi.org/10.1136/bmjinnov-2021-000905>
- Terzioğlu, Y., & Kurt, M. (2022). Elevating English language learners' speaking fluency and listening skill through a learning management system. *Sage Open*, 12(2), 1-15. <https://doi.org/10.1177/21582440221099937>
- Theonardo, V., Lohil, J., Chantesuta, G., Chandra, W., & Halim, A. (2021). Sistem rekomendasi podcast menggunakan metode n-gram dan term frequency. *Jurnal SIFO Mikroskil*, 21(2), 51-60. <https://doi.org/10.55601/jsm.v21i2.729>
- Turner, M., Schaeffer, M. R., & Lowe, R. J. (2021). Teacher development through podcast engagement. *JALT Postconference Publication*, (24), 53-60. <https://doi.org/10.37546/jaltpcp2020-07>
- Uslu, E. M., & Özgün T. (2023). The structure of primary literacy teaching curriculum and its relationship with technology: A qualitative research. *Necmettin Erbakan Üniversitesi Eregli Eğitim Fakültesi, Necmettin Erbakan University*, 5(1), 46-58. <https://doi.org/10.51119/ereegf.2023.30>
- Uslu, N. A. (2022). Öğretmen adaylarının teknoloji entegrasyonundaki faktörlere ilişkin algılarının q metodolojisi ile incelenmesi. *Bartın University Journal of Faculty of Education*, 11(3), 543-558. <https://doi.org/10.14686/buefad.1001562>
- Vaidehi, R., Reddy, A. B., & Banerjee, S. (2021). Explaining caste-based digital divide in India, 1-23. <https://doi.org/10.48550/arxiv.2106.15917>
- Vaskov, Y. (2022). Enhancing the quality of physical culture education: exploring the role of communicative competence in physical culture teachers. *Physical Culture, Recreation and Rehabilitation*, 1(2), 30-33. <https://doi.org/10.15561/physcult.2022.0203>
- Voytecki, K., & Anderson, P. J. (2021). Modeling conspicuous collaboration for preservice teacher candidates enrolled in higher education courses. *Theory & Practice in Rural Education*, 11(1), 113-123. <https://doi.org/10.3776/tpre.2021.v11n1p113-123>
- Wang, M., Tang, J., Liu, Y., Chuang, C., & Shih, C. (2023). Innovative digital technology adapted in nursing education between eastern and western countries: a mini-review. *Frontiers in Public Health*, 11, 1-7. <https://doi.org/10.3389/fpubh.2023.1167752>
- Wyatt, M. (2023). Constructivism on an award-bearing in-service English language teacher education program in Oman. *TESOL Journal*, 15(1), 1-11. <https://doi.org/10.1002/tesj.727>
- Xie, L., Han, S. K., Beyerlein, M., Lu, J., Vukin, L., & Boehm, R. (2021). Shared leadership and team creativity: a team level mixed-methods study. *Team Performance Management: An International Journal*, 27(7/8), 505-523. <https://doi.org/10.1108/tpm-11-2020-0097>

- Xu, Z., Adeyemi, A. E., Landaverde, R., Kogut, A., & Baker, M. (2023). A scoping review on the impact of educational technology in agricultural education. *Education Sciences*, 13(910), 1-24. <https://doi.org/10.3390/educsci13090910>
- Yang, L. (2023). English language teaching: policy and practice across the European union (1<sup>st</sup> edition). *Porta Linguarum*, (40), 313-314. <https://doi.org/10.30827/portalin.vi40.27507>
- Yang, Y. (2024). Argumentation training boosts the outcome of negotiation in collaborative learning. *Science Insights Education Frontiers*, 22(1), 3495-3497. <https://doi.org/10.15354/sief.24.co297>
- Yersel, B., Kalkan, B., ER, F., Ozer, A. C., & Korul, A. U. (2023). Digital divide and emergency remote education: reconsidering the use of educational radio during the pandemic. *Turkish Online Journal of Distance Education*, 24(4), 238-256. <https://doi.org/10.17718/tojde.1101847>
- Yunus, M., Setyosari, P., Utaya, S., & Kuswandi, D. (2021). The influence of online project collaborative learning and achievement motivation on problem-solving ability. *European Journal of Educational Research*, 10(2), 813-823. <https://doi.org/10.12973/eu-jer.10.2.813>
- Zahra, I., Neo, M., & Hew, S. H. (2022). Online game-based learning to enhance student engagement, motivation and 21st-century skills. *2nd International Conference on Creative Multimedia*, 706, 192-202. [https://doi.org/10.2991/978-2-494069-57-2\\_21](https://doi.org/10.2991/978-2-494069-57-2_21)
- Zajac, S., Woods, A. L., Tannenbaum, S. I., Salas, E., & Holladay, C. L. (2021). Overcoming challenges to teamwork in healthcare: a team effectiveness framework and evidence-based guidance. *Frontiers in Communication*, 6, 1-20. <https://doi.org/10.3389/fcomm.2021.606445>
- Zhang, Z. L. A. (2023). Collaborative learning in social constructivism: promoting English learning in a secondary classroom in China. *Journal of Education and Educational Research*, 3(3), 1-5. <https://doi.org/10.54097/jeer.v3i3.9509>
- Zhao, D. (2021). Innovative applications of computer-assisted technology in English learning under constructivism. *Mobile Information Systems*, 1-9. <https://doi.org/10.1155/2021/1676197>
- Zhou, J. (2021). The role of libraries in distance learning during covid-19. *Information Development*, 38(2), 227-238. <https://doi.org/10.1177/02666669211001502>
- Zureehan, M. Z. F. M., & Lee, K. L. (2022). The effect of top management support and collaborative team on project performance in Malaysian construction industry: moderating effect of trust. *International Journal of Industrial Management*, 13(1), 422-437. <https://doi.org/10.15282/ijim.13.1.2022.6921>