The Development of ESP Media Through Interactive HOTS e-Book Based on Local Wisdom in West Sulawesi

Kurnia[1] , **Salasiah A[2]** **Areski Wahid[3]** **Pratiwi Samad[4]**

[1]Universitas Muhammadiyah Mamuju, Indonesia
[2]Universitas Muhammadiyah Parepare, Indonesia
[3]Universitas Negeri Makassar, Indonesia
[4]Universitas Pohuwato, Indonesia

ABSTRACT

Background. The urgency of this research is developing an interactive media HOTS e-book based on the local wisdom in West Sulawesi. It is collaborative and participatory of interactive media HOTS e-book will improve interest in learning and motivate ESP students to master English skills.

Purpose. The purpose of this research is to improve English language skills students orally and in writing, develop learning media with Higher Order Thinking Skill (HOTS) combined with local knowledge of West Sulawesi.

Method. The method of R&D was applied by using the DDDE (Decide, Design, Develop, and Evaluate) model which was chosen to develop this HOTS interactive e-book for ESP learners based on local wisdom at West Sulawesi. The small-scale trial of the HOTS E-book was carried out by experts of teacher, lecturers and also a large-scale trial was carried out by 46 students. The test subject was determined using the purposive sampling technique. The collecting research is carried out by providing questionnaire tests that have been collected descriptively.

Results. Results shows that the ESP interactive HOTS e-book based on local wisdom, developed using the DDD-E model, meets the validity criteria with an average score of 3.89, is deemed practical with an average score of 3.67, and shows the effectiveness with 86.8% from the score test results of the ESP students at Unimaju.

Conclusion. The ESP interactive HOTS e-book based on local wisdom in West Sulawesi, developed using the DDD-E model, is valid, practical, and effective. It equips lecturers and other educators with innovative tools to enhance critical literacy and critical thinking and promoting better learning outcomes for the local culture of West Sulawesi.

KEYWORDS

ESP Interactive Learning, HOTS e-Book, Learning Apps, Local Wisdom

INTRODUCTION

The latest program policy from the Ministry of Education, Culture, Research and Technology is Merdeka Belajar Kampus Merdeka (MBKM) (Sabatini, Novianri, and Amijaya 2022), which is implemented in order to create an autonomous and flexible learning process for optimal learning outcomes in the aspects of attitude, knowledge, and skills.

Using digital e-books manifests MBKM's innovative and creative learning, which has significantly improved students' English language skills (Rafiqa et al. 2023; Setianingrum et al. 2023). The application of e-books with HOTS content impacts participatory learning and brings learners to think more complexly in understanding the material and the environment (Widiyastuti, Slamet, and Kurniawan 2021). This curriculum development in the national education system is based on local excellence or local wisdom, as stated in article 36 of Law No. 20 of 2003 concerning the National Education System (Aunimo et al. 2022). The use of technology at Universitas Muhammadiyah Mamuju (The article using LMS), but there is still a need for further development of learning media (Alsumri 2022; Darmayenti, Besral, and Yustina 2021; Surdyanto and Kurniawan 2020). The results of observations and initial surveys of 2nd-semester students majoring in Management showed that 167 out of 235 students had difficulty understanding English grammatically and speaking. The test results through Quizizz showed that 96 students had difficulty answering questions on multiple choice and reading even though they had been provided with English language learning. Referring to these problems, it is necessary to continue the development of interactive media that is more effective in increasing students' interest and ability in ESP through digital book design combined with local nuances of West Sulawesi in the form of interesting readings related to rich culture, typical food, and tourism.

Relevant research has consistently collaborating local nuances with interactive media with HOTS content can improve students' thinking, literacy, and behaviour through local wisdom values (Setianingrum et al. 2023; Wahyuni et al. 2023). To convey information with HOTS content (Maxnun, Kristiani, and Sulistyaningrum 2024; Safirah, Nasution, and Dewi 2024), visual communication media through film, audio, video, animation, performance and various other literacy media are needed so that students focus their attention and more easily master the English component (Rostikawati, Suhara, and Ismayani 2023; Safirah et al. 2024; Wahyuni et al. 2023). Currently, textbooks used in learning are still limited in terms of content, animation, and learners' environmental conditions, so the development of teacher creativity (Nadya Eka Aristyasari, Yuliani, and Indana 2023; Nikghadam-Hojjati et al. 2018)is needed to produce teaching media updates (Fadilah et al. 2023; Fujiawati and Raharja 2021; Rahmatullah, Inanna, and Ampa 2020; Supangat 2021). For this reason, interactive learning media that is under the curriculum and contains HOTS material based on local wisdom is the main focus of this research, and it is also able to solve problems related to the National Research Master Plan (RIRN).

Therefore, the development of HOTS e-books with a blend of nuances of West Sulawesi local wisdom (Darmayenti et al. 2021; Nadya Eka Aristyasari et al. 2023; Sukadari et al. 2023; Widiyastuti et al. 2021) is a solution to solving the problem of English language mastery of ESP students at Muhammadiyah Mamuju University using the decide, design, develop and evaluate model to improve English language skills and developing materials with higher order thinking skills. The urgency of the sustainability of English learning media at Universitas Muhammadiyah Mamuju plays an important role in improving the quality of learning and students' understanding of English. The Research (Hamzar and Kurnia 2021; Kurnia and Hamzar 2021) related to the application of HOTS-based learning media still requires follow-up on the content of the material so that students are actively involved in exploring critical thinking (Darmayenti et al. 2021; Iswati and Triastuti 2021; Ritonga et al. 2024) and providing problem-solving from the application of the learning presented (Surdyanto and Kurniawan 2020). Much literature shows an understanding of the importance of HOTS and interactive media development (AM 2021; Audina, Rostikawati, and Gani 2022; Ricu Sidiq and Najuah 2020) for improving the quality of students both in the scope of

schools and universities (Bogusevschi, Maddi, and ... 2019; Mar'atussolichah et al. 2024; Purnama, Wilujeng, and Jabar 2023). One of the solutions that can be used is to combine local nuances material in e-books so that there is an increase in English and tourism potential and the love of students for their region is increasing (Kagungan et al. 2022)

The novelty of this research lies in addressing the urgency of developing an interactive media HOTS e-book based on the local wisdom in West Sulawesi. The novelty offered focuses on increasing students' critical thinking in understanding English language skills (speaking, reading and writing) with HOTS content by presenting gamification and animation materials based on local culture and tourism in West Sulawesi (such as Sekomandi, the oldest silk in the world, sambuq weaving, Bau Peapi, Pais Penja, Karampuang Island, Buntu Liarra, Dato' Beach, Gonda mangrove, etc.) which have never been studied in depth by previous researchers. This interactive (Martín-Sómer, Casado, and Gómez-Pozuelo 2024)media HOTS e-book will improve interest in learning and motivate ESP students to master English, especially reading, speaking and writing skills (Guerrero-Alcedo, Espina-Romero, and Nava-Chirinos 2022; Iswati and Triastuti 2021). The learning design of higher-order thinking skills through local wisdom-based e-books has a percentage of material and visual displays, videos, and interactive quizzes that can involve learners thinking critically (López-Belmonte et al. 2021) and creatively (Ajisoko 2020; Asfihana et al. 2022; Kanoksilapatham and Suranakkharin 2021; Simamora & Oktaviani 2020) . Unlike the previous research, which has not focused deeply on West' Sulawesi's rich cultural context as well as the gamified learning HOTS. Therefore this study aims to fill that gap by offering materials that not only contributed the ESP learners in english HOTS skills but also immers the elarners in their local culture of ceremonial, traditional food and other contents of their local wisdom in West Sulawesi.

The primary purpose of this research is to develop an e-book design to meet the needs of ESP students at University of Muhammadiyah Mamuju. The problem is that ESP students in UNIMAJU do not have learning materials that are in accordance with the specifications of the ESP field. ESP students have very poor English language skills, so learning media that collaborates with technology in the form of e-books with easier access is needed with the result that ESP students are motivated and able to master English according to their fields (Garim et al. 2023; Pratiwi et al. 2023; Zabadi et al. 2023). In addition, many ESP students are not familiar with the rich local culture of West Sulawesi. The Ebook can be a medium of information and learning. This research is a follow-up to the results of researchers' studies on the use of application-based English learning media (Hamzar and Kurnia 2021; Kurnia and Hamzar 2021), so there needs to be an update on the development of learning media as an innovative, effective and efficient solution. This research will utilize (DDD-E) model to guide the develoment of hese materials, ultimately contributing to both english proficiency and regional pride.

RESEARCH METHODOLOGY
Research design

This research adopted a Research and Development (R&D) specified in using the Decide, Design, Develop, and Evaluate (DDD-E) model (Zulkarnain, Budiarti, and Saudah 2022), to create Higher-Order Thinking Skills (HOTS)-based interactive e-modules integrated with gamification (Rojabi et al. 2022; Safirah et al. 2024) (Guerrero-Alcedo et al. 2022; Mee Mee et al. 2021; Sandoval and Lamb 2023; Shortt et al. 2023; Tamtama, Suryanto, and Suyoto 2020). The DDD-E model was chosen as it aligns with the objective of systematically developing e-modules that enhance critical thinking and creativity in prospective elementary school teachers. The approach

enables a structured process to set learning goals, design the e-modules, develop the content, and evaluate their effectiveness.

Research procedure

The research utilized two key istruments: a Likert-scale questionnaire and an expert validation process. The questionnaire, administered to 46 ESP Manajemen students of Unimaju, measured perceptions of the e-module's usability, content relevance, engagement, and its impact on critical thinking and literacy, using a five-point scale. The expert validation involved three experts, including english lecturer, IT specialists and cultural expert from West Sulawesi. The procedure of this research followed by the DDD-E model, the procedures were structured into four key stages of decide, design, develop and evaluate.

Research Subjects

The research involved a sample of 46 students from the ESP manajemen students if Unimaju. These participants were the 2nd-semester students which has been selected through purposive sampling to make sure regarding they represent the target audience for the developed e-book. The students were involved in case of they are strightly related directly engaged in the english subject eading, speaking and other elements to improve their learning ability.

Research Ethics

The research followed ethical guidelines by obtaining informed consent from all participants, ensuring they understood the study's purpose and their right to withdraw at any time. Participants' identities were anonymized to maintain confidentiality, and data collection was handled without coercion or bias. Expert validators were also informed of their role, and their feedback was kept confidential. The study prioritized participants' well-being and focused on improving educational practices ethically.

Data collection and Alaysis Technique

The result of the questionnaires were analyzed using descriptive statistics to measure the feasibility and impact of the e-module. Scores from the Likert scale were analyzed to evaluate students' perceptions of the module's ability to improve critical thinking and creativity. For the qualitative feedback provided by the experts, thematic analysis was applied to identify areas of improvement and confirm the validity of the module's design and content.

RESULT AND DISCUSSION

This findings of this research is focusing on developing the content of the interactive English language learning media e-book collaborated to the HOTS based on the local wisdom in West Sulawesi. The result of this research highlighted several key stages based on the design of the method of the research (development, evaluation, adn revision) which contributed to the overall effectiveness and practically of the e-book. These findings are structured as follow:

Decide Stage

At the Deciding stage, this research aims to improve critical thinking skills and through developing an interactive e-book based on the local wisdom in West Sulawesi. The learning design of the e-book includes a variety of interactive elements, such as material and visual displays, videos, and quizzes, all designed to engage learners in critical and creative thinking. The research participants were ESP students in UNIMAJU who already have prior knowledge of learning media and science. The prerequisite for this trial is that students must have an Android phone to access the HOTS e-book design.

Design Stage

The material developed consists of local wisdom content on culture, dance, traditional food and interesting tourist attractions in West Sulawesi with HOTS questions, which are then combined with interactive learning apps such as Mentimeter, Quizizz, Wardwall, and Kahoot, designed in an interesting way to increase motivation, critical thinking skills, and creativity so that students can develop their creativity motivated and able to master English according to their fields.

Develop Stage

E-book of this HOTS design was developed using Canva dan Heziein flipbook as the next design of this research development consist of reading local culture specified from West Sulawesi which are commonly known as cultural heritage that are very famous in this region. The results of the development of this hots local reading culture content was created as following results:
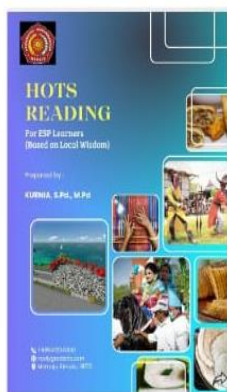
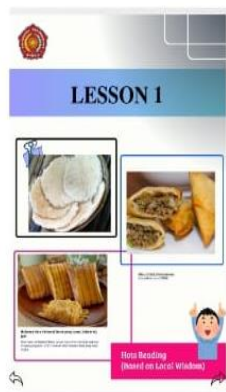| Figure 1.	Figure 2.	Figure 3.	Figure 4.	Figure 5.
(e-book Cover)	(e-book preface)	(Lesson's topic)	(Reading Text)	(Feedback)

Figure 1 is the cover of the interactive HOTS e-book in which covering the whole criteria of the them mentioned in thsi book. Whicle the preface explained in picture two with its purpose and benefits of this e-book and the interactive participation through gamified learning apps were shown from the pictures. The specific praticipation content hots developed from the design of these following pictures:
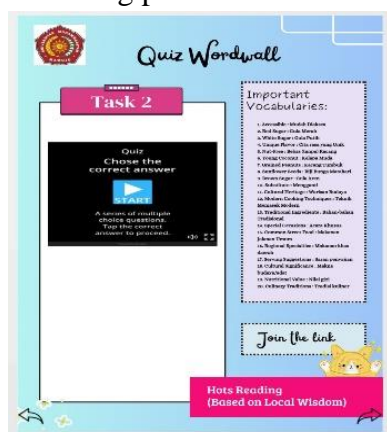
Figure 6.	Figure 7.	Figure 8.
(Wardwall HOTS quiz)	(Respond on Menti.com)	(Task and Feedback)

Students following the link instruction and they are linked to the task and participated as well as doing conversation, drilling to their friends during the progress of delivering the HOTSe-book based on local widom as West Sulawesi.

Evaluate Stage

The feasibility of the HOTS e-book based on local wisdom at West Sulawesi has been validated by 3 experts as validators, each with their own expertise: a computer design expert, a media expert, and the local culture expert as following description data results:

Table 1.

Validator's Assessment Results

Aspects Assessed	Validator			Average	Qualification
	1	2	3		
Media content	4	4	3.67	3.89	Valid
Langauge and visualitation	3.8	4	4	3.93	Valid
Illustration and layout	3.67	3.75	3.75	3.72	Valid
Benefits	4	4	4	4	Very valid
Overall average score				3.89	Valid

The results of the validator test indicate that the HOTS e-book reading based on local wisdom content media product which has been developed meets the valid criteria with a score of 3.89. Expert validators provided several revisions to further optimize the development of the HOTS e-book based on local wisdom before it is declared valid, requiring the following improvements as following data description:

Table 2.

Before and After Revidsed HOTS E-Book Based on Local Wisdom

Before revision	After revision
Difficulties to access the link of learning apps	The link has been prepared
The colour was too contrast	The colors has been changed to soft colors
The HOTS task was mistaken at the written error in grammar	The written has been changed to correct sentences
The content of HOTS e-book has small size to see	The instruction of the size has been changed

After the media was deemed valid, a trial was conducted with prospective PGSD teacher students at Pohuwato University to evaluate whether the developed product met the standards of practicality and effectiveness.

Figure 8.

Implementing the test of HOTS e-book based on local wisdom

Table 3.

Students' Respond of the Media

No	Statements	Average	Qualification
1	The initial interface of the media program is visually appealing.	3.86	Very good
2	The application features attractive colour schemes.	3.56	Very good
3	The text presented in the media is easy to read.	3.60	Very good
4	The material aligns seamlessly with HOTS science content.	3.63	Very good
5	The background music within the application is pleasant and engaging.	3.19	Good
6	The gamification elements are well-integrated with the HOTS science content.	3.76	Very good
7	The material is presented in a manner that is easy to comprehend.	3.78	Very good
8	Examples and practice questions are relevant to the HOTS science curriculum.	3.78	Very good
9	This media effectively enhances students' critical thinking and creativity.	3.83	Very good
10	The media is intuitive and user-friendly	3.72	Very good
	The Overall Average Score	**3.67**	**Very good**

The average score from student responses was 3.67, which falls under the "very good" category. At this point, it can be concluded that the media developed meets the practicality criteria. Following this, a learning outcome test was conducted with the students at the end of the lesson to evaluate the effectiveness of the media.

The development of the HOTS-based interactive e-book, enriched with the local wisdom of West Sulawesi, has demonstrated its potential as an effective educational tool. By integrating local cultural elements and interactive learning technologies such as Mentimeter, Quizizz, Wardwall, and Kahoot, the e-book successfully enhances students' critical thinking and creativity. The validation process by experts and the revisions made to optimize the design have further strengthened the content's alignment with educational standards, ensuring both its practicality and validity for student engagement. The trial conducted with the students of ESP at the University confirmed that the e-book is not only easy to use but also visually appealing and relevant to the students' learning needs. The positive feedback, with an overall average score of 3.67, highlights the e-book's practicality in fostering an interactive and stimulating learning environment. Moreover, the learning outcome test results, where 86.8% of students achieved satisfactory scores, underscore the effectiveness of the e-book in improving students' academic performance and higher-order thinking skills. Moving forward, this research opens up avenues for future developments in e-learning media that integrate local culture and modern teaching strategies. The success of this project provides a framework for similar initiatives that aim to enhance student engagement, critical thinking, and creativity. As education continues to evolve, incorporating innovative, culturally relevant tools like this e-book will be crucial in preparing students and future teachers to meet the dynamic challenges of the educational landscape.

The integration of HOTS-based e-books linked to interactive learning apps provides significant benefits to students, particularly in enhancing critical thinking and creativity. By

incorporating tools like Mentimeter, Quizizz, Wardwall, and Kahoot (Basra 2023; Rojabi et al. 2022; Rostikawati et al. 2023; Samad and Munir 2022; Wang and Tahir 2020), students engage in interactive learning that makes complex topics more accessible and enjoyable. This approach encourages active participation and deeper understanding, which are key to fostering higher-order thinking skills. For students in West Sulawesi, these digital tools offer a modern and engaging way to learn while also building essential problem-solving abilities that are vital for their academic and professional futures. By embedding the local wisdom of West Sulawesi into the e-book, students are given a platform to connect with their cultural heritage in meaningful ways. Learning through content based on local dances, traditional foods, and tourist attractions allows students to develop a sense of pride in their culture while gaining valuable educational insights. This connection between modern technology and local traditions not only enhances the learning experience but also helps preserve and promote the region's cultural identity, ensuring that students remain rooted in their heritage while exploring new knowledge pathways.

The benefits extend beyond the classroom, as this innovative approach contributes to the cultural and educational development of West Sulawesi as a whole. By promoting local wisdom through modern educational tools, the e-book serves as a means to showcase the region's unique cultural assets to a broader audience. This can have long-term positive impacts on tourism, cultural preservation, and community pride. For the citizens of West Sulawesi, the e-book offers a bridge between tradition and innovation, fostering a greater sense of community engagement and encouraging future generations to value and sustain their cultural heritage. The research findings suggest that combining HOTS incorporated to local wisdom offers significant beneficial of education. Students not only improve their problem-solving skills but also deepen their connection to their cultural roots. The inclusion of interactive learning tools makes complex topics more accessible and enjoyable, fostering active participation and enhancing creativity. The e-book's success in engaging students and improving their academic performance validates its practical application in educational settings.

Future studies could explore expanding this approach to other regions, incorporating different aspects of local wisdom, and experimenting with additional interactive learning tools. Further research could also assess the long-term impact of such media on student retention of cultural knowledge and academic skills. Moreover, collaboration with schools and educational institutions could help refine the e-book's content and design to meet the evolving needs of students and educators alike

CONCLUSION

This research highlights the beneficial of adopting development of a HOTS-based interactive e-book for ESP students at Unimaju, which is both practical and effective are valid to be applied among the ESP learners. The integration of the DDD-E model with its interactive session enhances not only the learning experience but also the ability of future educators to teach with creativity and critical thinking. The HOTS-based interactive e-book, enriched with the local wisdom of West Sulawesi, shows promising potential as an effective educational tool. By integrating local cultural elements with interactive learning platforms like Mentimeter, Quizizz, Wardwall, and Kahoot, the e-book has proven its ability to enhance students' critical thinking and creativity. The trial with students from the ESP program at the university demonstrated that the e-book is user-friendly, visually appealing, and highly relevant to the students' learning needs. The positive feedback, with an overall average score of 3.67, reinforces the e-book's practicality in fostering an interactive and stimulating learning environment. Embedding the local wisdom of West Sulawesi into the e-book

allows students to connect with their cultural heritage through content related to local dances, traditional foods, and tourist attractions. The interactive HOTS e-Book for ESP learners, developed using the DDD-E model, has proven to be valid, practical, and effective. It serves as a valuable resource for future educators, researchers, and readers, providing comprehensive insights into the DDD-E-designed e-book. By incorporating innovative tools, the e-book fosters critical thinking, enhances literacy related to local wisdom, and boosts student engagement. Through its gamified educational approach, it promotes improved learning outcomes, making it a powerful tool for modern teaching and learning environments.

ACKNOWLEDGEMENT

AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.
Author 2: Conceptualization; Data curation; In-vestigation.
Author 3: Data curation; Investigation.
Author 4: Formal analysis; Methodology; Writing - original draft.

REFERENCES

Ajisoko, Pangkuh. 2020. "The Use of Duolingo Apps to Improve English Vocabulary Learning." *International Journal of Emerging Technologies in Learning* 15(7). https://doi.org/10.3991/IJET.V15I07.13229.

Alsumri, Hana. 2022. "Contraception Utilization in the Developing World and the Role of Women Autonomy." *International Journal of Advanced Academic Studies* 4(4). https://doi.org/10.33545/27068919.2022.v4.i4a.862.

Am, Kajp. 2021. "Media Interaktif Berbasis Budaya Lokal Untuk Meningkatkan Keterampilan Bahasa Inggris Siswa Sekolah Menengah Kejuruan …." *Suluh Pendidikan*.

Asfihana, Raida, Kisman Salija, Iskandar, and Idawati Garim. 2022. "Students' English Learning Experiences on Virtual Project-Based Learning Instruction." *International Journal of Language Education* 6(2). https://doi.org/ 10.26858/ijole.v6i2.20506.

Audina, Lia, Teti Rostikawati, and Resyi A. Gani. 2022. "Pengembangan Media Game Interaktif Elektronik Berbasis Quizwhizzer pada Subtema Usaha Pelestarian Lingkungan." *Primary: Jurnal Pendidikan Guru Sekolah Dasar* 11(6):1996. https://doi.org/ 10.33578/jpfkip.v11i6.9212.

Aunimo, Lili, Maja Brkljacic, Taina Lintilä, Antonius Camara, and Leo Mrsic. 2022. "Curriculum Development for Cloud Services: Answering the Needs of the Job Market." in *EDULEARN22 Proceedings*. Vol. 1.

Basra, Hasniar. 2023. "Pembelajaran Berdiferensiasi Dengan Quizizz." *JURNAL SIPATOKKONG BPSDM SULSEL* 3(4). https://doi.org/10.58643/sipatokkong.v3i4.177.

Bogusevschi, D., M. Maddi, and ... 2019. "Teachers' Impact and Feedback Related to Technology Enhanced Learning in STEM Education in Primary and Secondary Schools." *Proceedings of the Ireland …*.

Darmayenti, Besral, and Luli Sari Yustina. 2021. "Developing Efl Religious Characters and Local Wisdom Based Efl Textbook for Islamic Higher Education." *Studies in English Language and Education* 8(1). https://doi.org/10.24815/siele.v8i1.18263.

Fadilah, Aisyah, Kiki Rizki Nurzakiyah, Nasywa Atha Kanya, Sulis Putri Hidayat, and Usep Setiawan. 2023. "Pengertian Media, Tujuan, Fungsi, Manfaat Dan Urgensi Media Pembelajaran." *Journal of Student Research (JSR)* 1(2).

Fujiawati, Fuja Siti, and Reza Mauldy Raharja. 2021. "Pemanfaatan Media Sosial (Instagram) Sebagai Media Penyajian Kreasi Seni Dalam Pembelajaran." *JPKS (Jurnal Pendidikan Dan Kajian Seni)* 6(1).

Garim, Idawati, Nurlaela Latief, Suci Amaliah, and Jusmianti Garing. 2023. "Writing with Cultural Insight: Elevating Analytical Exposition through Local Culture and Project-Based Learning." *International Journal of Language Education* 7(4). https://doi.org/ 10.26858/ijole.v7i4.58368.

Guerrero-Alcedo, Jesús Manuel, Lorena C. Espina-Romero, and Ángel Alberto Nava-Chirinos. 2022. "Gamification in the University Context: Bibliometric Review in Scopus (2012-2022)." *International Journal of Learning, Teaching and Educational Research* 21(5).

Hamzar, and Kurnia. 2021. "The Vocabulary Memorisation Strategy before Entering the Classroom and the Usage of The Memorisation Card." *Journal of Applied Linguistics and Language Research* 7(2).

Iswati, Luluk, and Anita Triastuti. 2021. "Voicing the Challenges of Esp Teaching: Lessons from Esp in Non-English Departments." *Studies in English Language and Education* 8(1). https://doi.org/10.24815/siele.v8i1.17301.

Kagungan, Dian, Bambang Utoyo Sutiyoso, Rahayu Sulistiowati, and Intan Fitri Meutia. 2022. "Pelatihan Dasar Sumber Daya Manusia Kepariwisataan Bagi Kelompok Sadar Wisata, Pemuda Dan Karang Taruna (Goes To Digital Tourism)." *Seandanan: Jurnal Pengabdian Pada Masyarakat* 2(2). https://doi.org/10.23960/seandanan.v2i2.35.

Kanoksilapatham, Budsaba, and Todsapon Suranakkharin. 2021. "Enhancing Thai Elementary Students' English and Maintaining Thainess Using Localized Materials: Two Putative Confronting Forces." *Studies in English Language and Education* 8(3). https://doi.org/10.24815/siele.v8i3.19988.

Kurnia, Kurnia, and Hamzar Hamzar. 2021. "Enhancing ESP Students Writing Skill During the Covid-19 Pandemic by Using Instagram." *ANGLO-SAXON: Jurnal Ilmiah Program Studi Pendidikan Bahasa Inggris* 12(2). https://doi.org/ 10.33373/as.v12i2.3565.

López-Belmonte, Jesús, Adrián Segura-Robles, Antonio José Moreno-Guerrero, and María Elena Parra-González. 2021. "Projection of E-Learning in Higher Education: A Study of Its Scientific Production in Web of Science." *European Journal of Investigation in Health, Psychology and Education* 11(1).

Mar'atussolichah, Hamidulloh Ibda, Muhammad Fadloli Al-Hakim, Faizah Faizah, Aniqoh Aniqoh, and Mahsun Mahsun. 2024. "Benkangen Game: Digital Media in Elementary School Indonesian Language." *Journal of Education and Learning* 18(2). https://doi.org/10.11591/edulearn.v18i2.21091.

Martín-Sómer, Miguel, Cintia Casado, and Gema Gómez-Pozuelo. 2024. "Utilising Interactive Applications as Educational Tools in Higher Education: Perspectives from Teachers and Students, and an Analysis of Academic Outcomes." *Education for Chemical Engineers* 46. https://doi.org/ 10.1016/j.ece.2023.10.001.

Maxnun, Lu'luil, Kristiani Kristiani, and Cicilia Dyah Sulistyaningrum. 2024. "Development of Hots-Based Cognitive Assessment Instruments: ADDIE Model." *Journal of Education and Learning* 18(2). https://doi.org/10.11591/edulearn.v18i2.21079.

Mee Mee, Rita Wong, Lim Seong Pek, Wong Yee Von, Khatipah Abd Ghani, Tengku Shahrom Tengku Shahdan, Md Rosli Ismail, and Yugeshineey Subba Rao. 2021. "A Conceptual Model of Analogue Gamification to Enhance Learners' Motivation and Attitude." *International Journal of Language Education* 5(2). https://doi.org/ 10.26858/ijole.v5i2.18229.

Nadya Eka Aristyasari, Yuliani Yuliani, and Sifak Indana. 2023. "The Development of an E-Book Based on Local Wisdom Around Bromo Tengger Semeru National Park to Train High School Students' Creative Thinking Skill." *IJORER : International Journal of Recent Educational Research* 4(6). https://doi.org/10.46245/ijorer.v4i6.333.

Nikghadam-Hojjati, Sanaz, Ali Rajabzadeh-Ghatari, Mahmood Alborzi, and Gholamreza Hassanzadeh. 2018. "How Simple Funny Video Games and Short Comedy Movies Impact Creative Idea Generation." *International Journal of Innovation and Technology Management* 15(4). https://doi.org/10.1142/S0219877018500372.

Pratiwi, Damar Isti, Rengganis Siwi Amumpuni, Ainun Fikria, and Riana Eka Budiastuti. 2023. "Enhancing Students' Learning Outcomes through MALL in TOEFL Preparation Class for Railway Mechanical Technology." *International Journal of Language Education* 7(2). https://doi.org/10.26858/ijole.v7i2.22839.

Purnama, Herwulan Irine, Insih Wilujeng, and Cepi Safruddin Abdul Jabar. 2023. "Blended Learning in Elementary School Science Learning: A Systematic Literature Review." *International Journal of Evaluation and Research in Education* 12(3). https://doi.org/10.11591/ijere.v12i3.25052.

Rafiqa, Rafiqa, Muhammad Aswad, Raida Asfihana, and Amreet Kaur Jageer Singh. 2023. "Implementation of Â€œMerdeka Belajarâ€• : Evolving Learner Autonomy and Speaking Skill through Cultural Discovery Learning Model." *Script Journal: Journal of Linguistics and English Teaching* 8(1). https://doi.org/ 10.24903/sj.v8i01.1237.

Rahmatullah, Rahmatullah, Inanna Inanna, and Andi Tenri Ampa. 2020. "Media Pembelajaran Audio Visual Berbasis Aplikasi Canva." *Jurnal Pendidikan Ekonomi Undiksha* 12(2).

Ricu Sidiq, and Najuah. 2020. "Pengembangan E-Modul Interaktif Berbasis Android Pada Mata Kuliah Strategi Belajar Mengajar." *Jurnal Pendidikan Sejarah* 9(1). https://doi.org/ 10.21009/jps.091.01.

Ritonga, Mahyudin, Adam Mudinillah, Wasehudin Wasehudin, Julhadi Julhadi, Amrina Amrina, and Muhammad Husni Shidqi. 2024. "The Effect of Technology on Arabic Language Learning in Higher Education." *Journal of Education and Learning* 18(1). https://doi.org/10.11591/edulearn.v18i1.20867.

Rojabi, Ahmad Ridho, Slamet Setiawan, Ahmad Munir, Oikurema Purwati, Rizka Safriyani, Nina Hayuningtyas, Siti Khodijah, and Rengganis Siwi Amumpuni. 2022. "Kahoot, Is It Fun or Unfun? Gamifying Vocabulary Learning to Boost Exam Scores, Engagement, and Motivation." *Frontiers in Education* 7. https://doi.org/10.3389/feduc.2022.939884.

Rostikawati, Yeni, Alfa Mitri Suhara, and Mekar Ismayani. 2023. "Strategi Pembelajaran Berbasis Neurosains Berbantuan Aplikasi Wordwall Dalam Menganalisis dan Merancang soal HOTS." *Semantik* 12(1). https://doi.org/10.22460/semantik.v12i1.p114-124.

Sabatini, Stefani Natalia, Patricia Pahlevi Novianri, and Sita Yuliastuti Amijaya. 2022. "Strategi Adaptasi Penerapan Program MBKM Yang Kolaboratif Dan Partisipatif." *Scholaria: Jurnal Pendidikan Dan Kebudayaan* 12(3). https://doi.org/10.24246/j.js.2022.v12.i3.p182-192.

Safirah, Adita Dwi, Nasution Nasution, and Utari Dewi. 2024. "Analysis of the Development Needs of HOTS-Based Electronic Student Worksheets with Culturally Responsive Teaching Approach in Elementary Schools." *IJORER : International Journal of Recent Educational Research* 5(1). https://doi.org/10.46245/ijorer.v5i1.533.

Samad, Pratiwi, and Fairus Suryani Munir. 2022. "The Utilizing of Mentimeter Platform in Enhancing the EFL Students' English Skills in Digital Era." *Edumaspul: Jurnal Pendidikan* 6(2). https://doi.org/ 10.33487/edumaspul.v6i2.4380.

Sandoval, Scott, and Jodi A. Lamb. 2023. "Gamification: The Experiences of International Baccalaureate (IB) Teachers Shared." *International Journal of Technology in Education* 6(2). https://doi.org/ 10.46328/ijte.375.

Setianingrum, Dwi Agnes, Dhiarrafii Bintang Matahari, Jumadi Jumadi, and Insih Wilujeng. 2023. "Development of Science E-Book Containing Gamelan's Local Wisdom Based on STEAM-POE to Facilitate Students' Love of Local Culture." *Jurnal Penelitian Pendidikan IPA* 9(6). https://doi.org/ 10.29303/jppipa.v9i6.3760.

Shortt, Mitchell, Shantanu Tilak, Irina Kuznetcova, Bethany Martens, and Babatunde Akinkuolie. 2023. "Gamification in Mobile-Assisted Language Learning: A Systematic Review of

Duolingo Literature from Public Release of 2012 to Early 2020." *Computer Assisted Language Learning* 36(3). https://doi.org/ 10.1080/09588221.2021.1933540.

Simamora & Oktaviani, 2020. 2020. "A Strategy of English Education Students To Improve English Vocabulary." *Journal of English Language Teaching and Learning (JELTL)* 1(2).

Sukadari, Mahilda Dea Komalasari, Nina Widyaningsih, Gulzhaina K. Kassymova, Fang Yuqi, Lily Muliana Mustafa, and Nurudeen Babatunde Bamiro. 2023. "Exploring the Potential of Integrating Local Wisdom into the Development of Pocket Book Learning Media: A Systematic Literature Review." *International Journal of Learning, Teaching and Educational Research* 22(10). https://doi.org/ 10.26803/ijlter.22.10.8.

Supangat. 2021. "Strategi Marketing Melalui Media Sosial Instagram (Analisis DIGITAL SOCIAL MEDIA MARKETING) UAS E-BISNIS." *Ekonomis: Journal of Economics and Business*.

Surdyanto, Annas, and Wiwit Kurniawan. 2020. "Developing Critical Reading Module Using Integrated Learning Content and Language Approach." *Studies in English Language and Education* 7(1). https://doi.org/doi: 10.24815/siele.v7i1.15098.

Tamtama, Gabriel Indra Widi, Paulus Suryanto, and Suyoto. 2020. "Design of English Vocabulary Mobile Apps Using Gamification: An Indonesian Case Study for Kindergarten." *International Journal of Engineering Pedagogy* 10(1). https://doi.org/10.3991/ijep.v10i1.11551.

Wahyuni, Erly, Hartono Hartono, Santi Prastyowati, and Roeslaini Roeslaini. 2023. "Pengintegrasian Tpack dan HOTS dalam mendesain perangkat PEMBELAJARAN INOVATIF pelajaran BAHASA INGGRIS." *JMM (Jurnal Masyarakat Mandiri)* 7(2). https://doi.org/ 10.31764/jmm.v7i2.13840.

Wang, Alf Inge, and Rabail Tahir. 2020. "The Effect of Using Kahoot! For Learning – A Literature Review." *Computers and Education* 149. https://doi.org/10.1016/j.compedu.2020.103818.

Widiyastuti, Tri, Sty Slamet, and Sandra Bayu Kurniawan. 2021. "Development of Science Comic Media Based on Local Culture Wisdom to Improve HOTS." in *Proceedings of the 5th International Conference on Arts Language and Culture (ICALC 2020)*. Vol. 534.

Zabadi, Fairul, Besse Darmawati, Dessy Wahyuni, Sri Kusuma Winahyu, Dewi Nastiti Lestaningsih, and Amirullah Abduh. 2023. "Revealing the Kafoa Language Vitality through the Basic Cultural Vocabulary Mastery: Implications for Language Education." *International Journal of Language Education* 7(4). https://doi.org/ 10.26858/ijole.v7i4.53017.

Zulkarnain, Iskandar, Indah Budiarti, and Antung Saudah. 2022. "Development of Android-Based Mathematics Learning Media with Wet Land Environment Context for Junior High School Student." *Math Didactic: Jurnal Pendidikan Matematika* 8(1). https://doi.org/10.33654/math.v8i1.1458.