Analysis of the Need for Interactive Multimedia Development for Second Language Learning in Primary Schools

Ali Mustadi[1], Setiawan Edi Wibowo[2], Tampi Prehadini[3]

Abstract

Nowadays, there are still many students who still have difficulty learning a second language—Indonesian, especially in the city of Yogyakarta. Students still have difficulty mastering the system or rules of the language used and understanding the social rules of using a language. The next problem is that students are less able to interact using a second language. Therefore, this study aims to analyze the need for the development of interactive multimedia for second language learning in elementary school. This research is included in the type of qualitative research. The data sources in this study are students and teachers of grade II elementary school in Yogyakarta City. The data collection techniques used are questionnaires, observations, interviews, and documentation. The instruments used are questionnaires, observation sheets, interview guidelines, and documentation equipment. Meanwhile, the data analysis technique used is the Miles Huberman interactive model data analysis technique which includes data condensation, data display, and conclusion drawing/verification. The findings of this study are that the development of effective and relevant interactive multimedia is needed to facilitate more optimal second language learning in elementary schools. The implication is that the development of interactive multimedia for second language learning in elementary schools is expected to have a positive impact on improving the quality of education and student learning outcomes.

Keywords: *Interactive Multimedia, Second Language, Primary School.*

Introduction

Indonesian society is one of the societies that is by the majority of God endowed with a *very good Language Acquisition Device* (LAD)—the part of the human brain that functions to understand language. This causes Indonesian society to be included in the category of diglossian society, which is a society that has the ability to master and use more than one language in one context. In Indonesia, the languages that the community controls—in general-collective-functional—are regional languages, Indonesian, English. The regional language became the mother tongue—the language that was first mastered. Meanwhile, Indonesian and English are second languages. Second Language Acquisition is usually learned and mastered by the community at the formal education level. Indonesian is mastered at the age when children enter the elementary school education level of grade I and the same goes for English.

The problem is that in Indonesia there are still many students whose Indonesian language skills—especially reading and speaking skills—are not good until grade III or IV. This is of course not in accordance with the development of language. Supposedly, up to the second grade level—which is included in phase A of the independent curriculum—the achievement of learning Indonesian is that students are able to read simple sentences. Sentences that are structurally and phonotactic rules are not too complex. Furthermore, students still have difficulty mastering the system or rules of the language used and understanding the social rules of using a language. The next problem is that students do not interact using a second language. This means that functionally the language of the two students has not been implemented properly. Learning activities have not been actively carried out by students through the activities or learning experiences they go through in learning. There is no effective media to support students' understanding of second languages.

[1] Department of Elementary School Education, Faculty of Educational Sciences and Psychology, Universitas Negeri Yogyakarta Colombo Street No.1 Sleman, Yogyakarta, Email: ali_mustadi@uny.ac.id
[2] Department of Elementary School Education, Faculty of Educational Sciences and Psychology, Universitas Negeri Yogyakarta Colombo Street No.1 Sleman, Yogyakarta, Email: setiawanediwibowo@uny.ac.id
[3] Department of Elementary School Education, Faculty of Educational Sciences and Psychology, Universitas Negeri Yogyakarta Colombo Street No.1 Sleman, Yogyakarta, Email: tampi_prehadini@uny.ac.id

Then, the most important thing is that students learn still based on what has been understood or mastered before.

The problem in learning the second language will be solved by the development of interactive multimedia. This solution was chosen based on the following considerations: 1) the results of previous studies that show the high effectiveness of the use of interactive multimedia in second language learning, 2) the advantages of interactive multimedia, 3) the characteristics of students who are still in the age range of children (elementary school in the early grade), 4) functionally interactive multimedia makes it easier for students to learn independently and be guided in an effort to improve second language skills, and 5) novelty that will emerge, namely the development of interactive multimedia based on the independent curriculum. The claim is based on the fact that there has been no research that has developed interactive multimedia to improve students' ability to learn a second language. Scientific evidence related to this problem has indeed been studied by many researchers. Some of them are research on the intersection of second language and culture (Stone, 2023). Action research on second language learning (Alomari, 2023); (Mohamed, 2023). Exploration of the second language learning curriculum (Zou dkk., 2018). Student motivation in learning a second language (Amoush dkk., 2023); (Kitila dkk., 2023); (Dewaele dkk., 2018); (Lamb & Arisandy, 2020). The ability to write a second language (Custodio-Espinar & López-Hernández, 2023); (Kitila dkk., 2023); (Abed, 2023); (Cao, 2023). The use of technology in learning second language reading skills (Al-Othman, 2023); (Manoharan & Ramachandran, 2023); (Abdulaal dkk., 2023). Use of a variety of media in second language learning (Lee & Sylvén, 2021); (Kao, 2020); (Cao, 2023); (Jensen, 2017).

Second language learning needs good media to support students' understanding of the relationship between the first and second languages with objects. The media is used to channel messages from the messenger to the recipient of the message so as to stimulate the child's thoughts, feelings and attention. In terms of language acquisition of the two children, the right media for the effectiveness of children to achieve language acquisition is grouped into three major groups, namely 1) Visual Media, 2) Audio Media, and 3) Audiovisual Media. Visual media is a media in the form of images and tends to use the sense of sight, be it still or model. Meanwhile, audio media is a media that relies on children's auditory (hearing). Audiovisual media is a combination of visual media and audio media which is better known as video media. This learning media is able to stimulate children's stimulus in acquiring a second language significantly (Widya, 2020).

Based on the background that has been described earlier, the formulation of the problem in this study is how to analyze the need for interactive multimedia development for second language learning in elementary school? Meanwhile, the purpose of this study is to describe the analysis of the need for interactive multimedia development for second language learning in elementary school.

Literature Review

In this section, various theories, concepts, and findings from previous research will be critically discussed to build a deeper understanding of the problem being studied. In addition, the literature review also helps to identify gaps in the research that have not been answered, so that this research can make new contributions in related fields of study. Some of the theories used in this study are the theory of interactive multi-media (Widiartha dkk., 2018; Wijaya, 2017). Information elements in interactive multimedia, such as graphics, images, text, animations, photos, videos, and audio (Widiartha dkk., 2018). Interactive multimedia is made with a display that fulfills the function of conveying messages and has interactivity with its users. Multimedia is said to be interactive if users have the freedom to manage the course of multimedia. Multimedia is the integration of various elements. Summarizing from various sources, there are at least seven interactive multimedia elements, namely text, graphics, images, videos, animations, audio, and interactivity (Surjono, 2017).

Method

- *Type of Research*

This research is a qualitative descriptive research regarding needs analysis based on initial observations in the field and also a study of the literature relevant to this research. The implication for students is to increase the effectiveness of student learning by utilizing the development of information technology to learn independently, creatively, and happily so that students are able to easily and well understand a second language. This research is a qualitative descriptive research, which is a research method used to find knowledge or theory of research at a certain time. According to Bogdan and Taylor Moleong (2012:4) Qualitative methods are research that produces descriptive data in the form of written or spoken words from observable people or behaviors. The reason for using this approach. Namely, the data that will be disclosed is in the form of opinions, views, comments, criticisms, reasons and so on.

- *Place and Time of Research*

The research will be carried out at elementary schools in Yogyakarta City in January – August 2024.

- *Data Source*

The data sources in this study are included in the primary data sources, namely students and teachers of grade II elementary school in Yogyakarta City. This primary data source will later be used to obtain primary data. So, categorically the data obtained is included in the primary data. Primary data is the type and source of research data obtained directly from the first source (not through an intermediary), both individuals and groups. So the data is obtained directly. Primary data is specifically done to answer research questions. The author collected primary data by questionnaire method, interview, and observation method.

- *Data Collection Techniques and Instruments*

  - *Questionnaire*

  Questionnaires are a number of written questions that are used with the aim of obtaining information or data from respondents regarding matters related to their personal (Suharsimi Arikunto, 2006: 151). The questionnaire in this study is used to find out the difficulties, desires, and needs of students in learning a second language.

  - *Interview*

  The interview in this study is a semi-structured interview. Semi-structured interviews refer to constructs that have been compiled according to the research topic, and consist of open-ended questions and theoretically supported follow-up questions to obtain data based on the respondent's experience. The purpose of this interview is to find out more information about the factors that cause teachers to have very high and very low readiness.

  - *Observation*

  Observation is one of the empirical scientific activities that is based on field facts and texts, through the experience of the five senses without using any manipulation. The purpose of observation is description, in qualitative research it gives birth to theories and hypotheses, or in quantitative research it is used to test theories and hypotheses. To be able to approach social phenomena, an observer needs to have close access to the setting and subject of research.

- *Research Instruments*

The instruments used in qualitative research include questionnaires, interview guidelines, observation guidelines, and documentation guidelines. Here is a further explanation of the three techniques. Semi-structured interview guidelines consist of two levels of questions, namely the main question and the follow-up question (Kallio et al., 2016). The main questions cover the core related to the research topic. This main question can be about a problem that is familiar to the respondent, so that it can dilute the atmosphere, but still refer to the main point of the research. After that, you can move on to more emotional and in-depth questions. Next, it is continued by providing follow-up questions to maintain the flow of the interview and get accurate and optimal information. These follow-up questions can be designed in advance or spontaneously based on respondents' answers.

- *Data Validity*

The validity of the data in this study was carried out by the triangulation method. Triangulation was carried out to support the findings by showing that at least three independent measures agreed with it or, at least, did not contradict it. For example, for a particular finding, when one says yes and one disagrees, it will be difficult to determine which is correct (Miles, Huberman, & Saldana, 2014). Therefore, the next measure is needed until the information obtained is saturated. Of the four types of triangulation (Miles & Huberman, 2014), two of them are used in this study, namely method triangulation and source triangulation. Method triangulation means checking with different methods to the same source. The methods used are interviews, observations, and documentation. While source triangulation means checking with the same method on different sources. Triangulation of sources was carried out by conducting interviews with different sources, namely several teachers who had very high and very low readiness.

- *Data Analysis*

Qualitative data in this study is analyzed using data analysis (Miles & Huberman, 2014) which includes data *condensation, data display, and conclusion drawing/verification*.

Results and Discussion

Result

The need analysis related to the need for the development of interactive multimedia for second language learning, which in the context of this study is English. This research was carried out from June to August 2024 by taking primary data from students and teachers of grade II through questionnaires and in-depth interviews. The description of the data is as follows.

Table 1. Student Gender Frequency

Gender	Sum	Percentage
Man	16	31%
Woman	36	69%
Sum	52	100%

Table 2. Teacher Gender Frequency

Gender	Sum	Percentage
Man	1	33%
Woman	2	67%
Sum	3	100%

Tables 1 and 2 show that the distribution of questionnaires is relatively evenly based on gender. Both students and male and female teachers participated in filling out a questionnaire to capture an analysis of the needs of English learning media in grade II of elementary school.

Table 3. Results of Filling Out Student Questionnaires

Indicator	Percentage
Students' perspective on English as a second language	94%
Schools as the main place for students to learn English	69%
Parental assistance in learning English at home	31%
The use of games in learning English	62%
Availability of English learning media in schools	12%
Integration of technology in learning English	20%
Students' needs for interactive multimedia English	100%

In table 3, indicator 1 shows that as many as 94% or 49 students like English as a second language because: 1) by being proficient in English students become more confident to communicate in a general audience, especially if there are foreigners; 2) as a provision to achieve the goal of continuing higher education abroad; 3) can interpret songs and movies in English; 4) want to participate in *public speaking* in English, both speeches and debates. The remaining 6% or 3 students did not like English because it was difficult to write and pronounce. Indicators 2 and 3 show the relevance of parental attention and guidance to students' English proficiency. As many as 69% or 36 students only learn English at school and only 31% are used to learning English at home, meaning that the majority of students do not receive English tutoring from their parents at home because: 1) the language used at home is Javanese and Indonesian only; 2) parents are busy working; 3) there is no medium to learn English at home; and 4) the parents do not speak English.

Indicator 4 shows that the majority of English in grade II is taught through games and songs, while the remaining 38% stated that English is taught through reading (Student Worksheets) or English package books. Indicator 5 shows that out of 52 new students, 6 students have learning media in their schools, in the form of LKS, package books, and various posters in English. Indicator 6 shows that 20% of English learning activities have integrated technology in it, namely by showing images and/or videos through LCDs. This is supported by the availability of educational infrastructure in the form of laptops and LCDs in schools. The last indicator is the need for interactive English learning multimedia, as many as 100% or 52 students stated that they need interactive multimedia to support English learning in grade II.

As a comparison to Table 3 regarding the results of filling out student questionnaires, the following are the results of filling out questionnaires by teachers.

Table 4. Results of Filling out Teacher Questionnaires

Indicator	Percentage
English Language Provision in Grade II	100%
Discovery of difficulties in learning English in grade II	100%
The use of games in learning English	67%
Availability of English learning media in schools	67%
Preparation of teaching modules, teaching materials, Student Worksheets, and English assessment instruments	0%
Teachers' needs for interactive multimedia in English	100%
Implementation of English learning with a differentiated approach	33%

Indicator 1 shows that all teachers have taught English in grade II in extracurricular activities. Through in-depth interviews, the reason why teachers teach English in grade 2 is obtained because: 1) it is in line with the Independent Curriculum which makes English a compulsory subject in grade III; 2) familiarizing students with English from a young age; and 3) build a solid foundation and gradually improve students'

English skills. Indicator 2 shows that all teachers experience difficulties when learning English in grade II because: 1) lack of availability of learning media; 2) students' mastery of the mother tongue is still low, making it difficult to learn a new language; 3) students' concentration time is relatively short when studying; 4) lack of English practice outside the classroom; and 5) teachers have not found an English learning method that can activate all students.
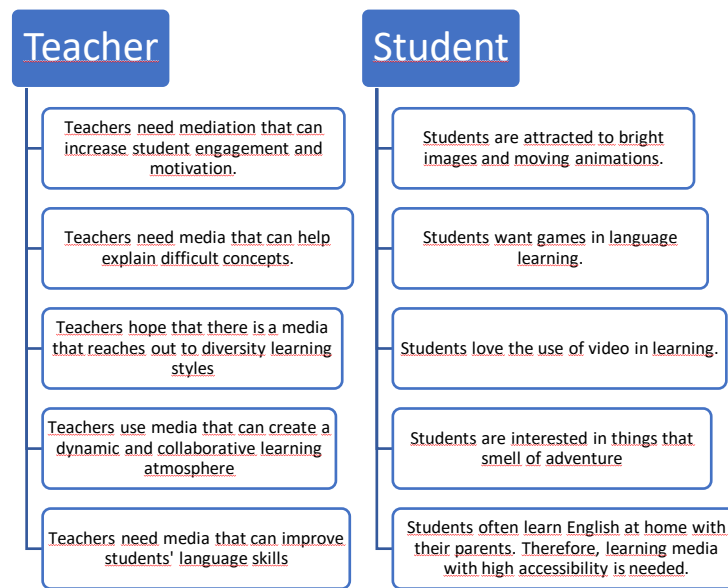
Indicator 3 shows that 67% of teachers use games in learning English in grade II because: 1) teaching through games can make children learn while playing according to their growth and development phases; 2) games have the potential to increase students' interest and motivation in learning English which seems difficult; 3) interactive games provide opportunities for students to practice vocabulary and grammar, so as to strengthen their understanding and practical use of language; 4) games often involve cooperation and communication that helps students develop speaking and listening skills; and 5) games help reduce stress and increase material retention because students learn while playing and doing activities, so that learning takes place naturally and fun. Indicator 4 shows that 67% of schools have media in learning English, but the media referred to in this study are package books and Student Worksheets. Indicator 5 shows that all teachers do not prepare teaching modules, teaching materials, Student Worksheets, and assessment instruments when teaching English in grade II.

Indicator 6 shows that 100% of teachers need interactive multimedia to teach English in grade II, while the proposed media is in the form of videos or animations of singing and dancing students' daily life materials, such as limbs and objects around them. Some teachers also proposed that interactive package books are still needed to support English learning in grade II. Indicator 7 shows that 33% of teachers have implemented English learning with a differentiated approach through diagnostic assessments at the beginning of the semester. This assessment involves a simple test designed to identify whether students are more likely to learn through audio, visual, or a combination of both. For example, teachers assign tasks that involve listening to instructions, looking at pictures or videos, and doing practical activities. By analyzing student outcomes and reactions to different types of media, I was able to determine the most effective teaching methods to meet students' learning needs and preferences. This approach ensures that the learning strategies applied are in accordance with the student's individual learning style so as to increase the effectiveness of learning, especially in English learning. Therefore, interactive multimedia is expected to facilitate the difference in students' learning tendencies.

Discussion

The findings of this study show several things, namely 1) schools that teach English in grade II experience difficulties in the learning process; 2) not all schools use the language game method in second language learning; 3) the availability of appropriate learning media to support second language learning in the classroom; 4) all teachers are confused in developing second language learning; 5) the need for teachers and students for interactive multimedia is very high; 6) Schools that use a differentiated learning approach in second language learning are still low. Based on these facts, it can be explained that learning a second language in Indonesia—especially in Yogyakarta—is not an easy thing. This is because in learning a second language, where this second language is a foreign language, what is taught is not only related to the language but also related to culture. These findings are in line with (Stone, 2023); (Pimpuang & Yuttapongtada, 2023) which states that culturally relevant communicative competency modeling, the importance of "teaching culture," the difficulties of teaching culture with language instruction, communicative competency theory, and model elements to create a new meta-linguistic model.

In addition, the results of the research from the questionnaire, interview and observation process show the results as shown in the following table 5.

Table 5. Needs of Teachers and Students in Second Language Learning

Teacher	Student
Teachers need mediation that can increase student engagement and motivation.	Students are attracted to bright images and moving animations.
Teachers need media that can help explain difficult concepts.	Students want games in language learning.
Teachers hope that there is a media that reaches out to diversity learning styles	Students love the use of video in learning.
Teachers use media that can create a dynamic and collaborative learning atmosphere	Students are interested in things that smell of adventure
Teachers need media that can improve students' language skills	Students often learn English at home with their parents. Therefore, learning media with high accessibility is needed.

In teaching a second language—English—the game method should be used. This method is considered effective to help second language learners to be more interested and motivated to learn. This concept was put forward by (Tunca et al., 2023); (Sinnivasagam & Hua, 2023); (Kacetl & Klímová, 2019). In addition, the use of game methods can increase student motivation and engagement (Al-Kahdi, 2018). Language methods can enable the use of language in real contexts (Aydin & Zengin, 2020). On the other hand, language play methods can also reduce anxiety and increase confidence (Mair, 2020); improve vocabulary and grammar retention (Gozcu & Caganaga, 2016); and assists with collaboration and communication skills (González-Fernández & Schmitt, 2019).

The use of media in English learning is very important because it helps to increase the effectiveness of the learning process by making the material easier to understand, engaging, and interactive. Some of the main reasons are that Media, such as video, audio, and images, help students understand English concepts more easily because they can present information visually and auditively. According to Bajrami and Ismaili (2016), the use of video media in English learning significantly improves students' understanding of the material being taught. The use of media also increases students' motivation to learn because it provides variety in teaching methods. A study by Al-Mansour and Al-Shorman (2020) showed that audio-visual media, such as videos and movies, make learning English more engaging and enjoyable, which in turn increases students' active participation. The use of technology and digital media allows students to learn languages in situations that are more contextual and relevant to real life (Zhao, 2017). Audio media, such as podcasts and recorded conversations, are essential in practicing listening and speaking skills (Shrosbree, 2016). In addition, the use of digital media in English language learning allows students with visual, auditive, and kinesthetic learning styles to benefit according to their preferences (Liu, Wang & Lee, 2021).

Preparing learning tools before teaching English is very important because good learning tools ensure that the teaching and learning process runs systematically, effectively, and in accordance with educational goals. Learning tools include lesson plans, teaching materials, teaching methods, evaluation tools, and learning strategies. Here are some reasons why it is important for English teachers to prepare learning tools: 1) Learning tools help teachers organize the teaching and learning process in a systematic and structured manner (Ginanjar, 2020); 2) Learning tools allow teachers to set clear and measurable learning goals (Guskey, 2016); 3) Pre-arranged learning tools help teachers choose teaching materials that are appropriate to the student's level and ensure that the materials support the mastery of English skills such as listening, speaking, reading, and writing (Suparman, 2018); 4) With good learning tools, teachers can ensure that the teaching methods used are the most effective for the needs of students. Mahardika et al. (2021) revealed that good planning allows teachers to apply student-centered learning approaches and diverse evaluation

methods; 5) Learning tools allow teachers to design varied and innovative learning activities, which is important to maintain students' motivation in learning English (Rahman, 2020); and 6) Learning tools help teachers anticipate various challenges that may be faced in the teaching and learning process, such as different levels of student understanding, difficulties in English mastery, or time constraints (Lestari, 2019).

The use of interactive multimedia in English learning is very important because it can increase the effectiveness of the learning process, strengthen student engagement, and facilitate understanding of language concepts. Interactive multimedia can increase student engagement and motivation in English language learning (Wang et al. (2020). Interactive multimedia allows for contextual and realistic presentation of content, which is crucial in language learning. Amin & Sundari (2021) highlight that multimedia can be used to create real-life situations that resemble real communication contexts, such as simulations of everyday conversations or work environments. This helps students apply vocabulary and grammar in meaningful and easier to understand contexts. Improving understanding through multimodality. According to Zhao (2022), the use of interactive multimedia allows students to process information through various sensory pathways, including visual, auditory, and kinesthetic. In this way, students can more easily understand and remember the material being taught. Interactive multimedia also allows for more independent and flexible learning (Ahmadi, 2018). Interactive multimedia accelerates the mastery of language skills such as listening, speaking, reading, and writing (Aloraini (2020). Research by Nguyen and Ngo (2021) shows that interactive multimedia plays a role in improving English learning outcomes.

A differentiated approach to English language learning is essential because students have different abilities, learning styles, backgrounds, and needs. By emphasizing this approach, teachers can tailor teaching strategies to meet the individual needs of each student, thus creating an inclusive and more effective learning environment. The differentiated approach allows teachers to adjust materials, teaching methods, and evaluations to meet the needs of different students (Tomlinson, 2020). By providing learning tailored to students' interests and needs, a differentiated approach can increase motivation and active participation in the classroom (Santangelo & Tomlinson, 2021). Wu and Chang (2019) showed that differentiation allows teachers to provide materials that match individual ability levels and provide additional assistance to students who need them. The differentiated approach encourages students to engage more deeply with the learning content (Brighton & Moon, 2020). Differentiated learning helps create an inclusive learning environment, where every student feels valued and supported in the learning process (Ford, 2021). In addition, Subban and Round (2021) showed that the differentiated approach significantly improves student learning outcomes. Learning tailored to individual needs allows students to learn more effectively, which leads to improved English language skills. Differentiation in terms of assignments, content, and teaching methods helps students understand language concepts better, thereby improving their abilities in various aspects of the language, including grammar, vocabulary, and fluency.

Conclusion

Based on the analysis of the need for the development of interactive multimedia for second language learning in elementary schools (SD), it can be concluded that interactive multimedia plays an important role in improving the effectiveness of the teaching and learning process. The use of this media is able to provide a more interesting, contextual learning experience, and in accordance with the diverse learning styles of students. The need to develop interactive multimedia includes aspects such as the provision of materials that support the mastery of second language skills (listening, speaking, reading, and writing), interactive features that can increase student engagement, and flexibility in its use to support independent and collaborative learning. In addition, teachers also need clear guidance in integrating interactive multimedia into the curriculum, so that second language learning becomes more structured and directed. In conclusion, the development of effective and relevant interactive multimedia is urgently needed to facilitate more optimal second language learning in elementary school.

References

Abdulaal, M. A. A.-D., Shaalan, I. E.-N. A., Aly, M. S. A., Khalifa, A. M. A., Mohamed, A., & Abuslema, N. F. M. A. (2023). The Effects of Achievement-Based Assessment on Reading Proficiency, Academic Impulse, Language

Apprehension, and Learners' Self-Perceptions. Journal of Language Teaching and Research, 15(1), 235–245. https://doi.org/10.17507/jltr.1501.26

Abed, T. B. (2023). Implementing the Process Writing Approach to Teach Paragraph Writing at Birzeit University. Journal of Language Teaching and Research, 15(1), 24–34. https://doi.org/10.17507/jltr.1501.04

Ahmadi, M. R. (2018). The use of technology in English language learning: A literature review. International Journal of Research in English Education, 3(2), 115-125. https://doi.org/10.29252/ijree.3.2.115

Al-Kadi, A. (2018). The effect of using language games on young learners' vocabulary acquisition in English. Journal of Education and Learning, 7(3), 273-280. https://doi.org/10.5539/jel.v7n3p273

Amin, F. M., & Sundari, H. (2021). Multimedia-enhanced learning in EFL classrooms: Impact on student engagement and language proficiency. Journal of Language Teaching and Research, 12(3), 527-536. https://doi.org/10.17507/jltr.1203.14

Aloraini, S. (2020). The effect of using multimedia technology on improving the learning outcomes of students in the English language classroom. International Journal of Educational Technology, 7(3), 65-78. https://doi.org/10.23977/ijet2020.070303

Alomari, N. M. (2023). Action Research in ESL: Enhancing English Oral Proficiency in an Asynchronous Speech Course. Journal of Language Teaching and Research, 15(1), 1–8. https://doi.org/10.17507/jltr.1501.01

Al-Mansour, N. S., & Al-Shorman, R. A. (2020). The effect of computer-assisted instruction on Saudi University students' learning of English. Journal of Educational Technology & Society, 19(3), 109-122. https://doi.org/10.1037/edu0000370

Al-Othman, A. A.-A. M. (2023). Assistive Technology for Enhancing Saudi Female Undergraduate Students' Reading Cognitive Abilities: An Investigation of Reading Models and Their Impacts on Reading Performance. Journal of Language Teaching and Research, 15(1), 116–127. https://doi.org/10.17507/jltr.1501.14

Amoush, K. H., Mizher, R. A., & Alzoubi, M. F. (2023). Exploring English Major Students' Readiness and Its Influence on the Students' Motivation for Online English Courses. Journal of Language Teaching and Research, 15(1), 55–64. https://doi.org/10.17507/jltr.1501.07

Aydin, S., & Zengin, B. (2020). The effects of games on young learners' vocabulary learning. Journal of Educational Technology & Online Learning, 3(1), 31-45. https://doi.org/10.31681/jetol.676256

Bajrami, L., & Ismaili, M. (2016). The role of video materials in EFL classrooms. Procedia - Social and Behavioral Sciences, 232, 502-506. https://doi.org/10.1016/j.sbspro.2016.10.068

Brighton, C. M., & Moon, T. R. (2020). Differentiation and its impact on student learning: A review of research. Gifted Child Quarterly, 64(3), 200-217. https://doi.org/10.1177/0016986220923296

Cao, D. T. P. (2023). Online Collocation Dictionary in L2 Writing: How Learners Use and Perceive Its Effectiveness. Journal of Language Teaching and Research, 14(1), 108–120. https://doi.org/10.17507/jltr.1401.12

Custodio-Espinar, M., & López-Hernández, A. (2023). Beyond Written-Linguistic Modes of Meanings: Multimodal Representations to Extend the Range of Literacy Learning in EMI Students. Journal of Language Teaching and Research, 14(1), 6–19. https://doi.org/10.17507/jltr.1401.02

Darmawan, E. W. (2018). Analisis Kebutuhan Pengembangan Media Pembelajaran Sesuai dengan Guided Discovery. Prosiding Seminar Nasional Etnomatnesia, 222–224.

Dewaele, J.-M., Witney, J., Saito, K., & Dewaele, L. (2018). Foreign language enjoyment and anxiety: The effect of teacher and learner variables. Language Teaching Research, 22(6), 676–697. https://doi.org/10.1177/1362168817692161

Ford, K. (2021). Inclusive teaching and differentiated instruction: Bridging the gap for diverse learners. Journal of Inclusive Education and Development, 15(2), 98-112. https://doi.org/10.3102/01623737211019534

Ginanjar, A. (2020). The importance of lesson planning in teaching English: A study on English teachers' perspectives. International Journal of Innovation, Creativity and Change, 13(2), 422-432. https://doi.org/10.1007/s11092-021-09350-7

Gozcu, E., & Caganaga, C. K. (2016). The importance of using games in EFL classrooms. Cypriot Journal of Educational Sciences, 11(3), 126-135. https://doi.org/10.18844/cjes.v11i3.625

González-Fernández, B., & Schmitt, N. (2019). Word knowledge: Exploring the relationships and order of acquisition of vocabulary knowledge components. Applied Linguistics, 40(4), 571-597. https://doi.org/10.1093/applin/amy053

Guskey, T. R. (2016). What makes professional development effective? Phi Delta Kappan, 97(7), 38-44. https://doi.org/10.1177/0031721716641647

Jensen, S. H. (2017). Gaming as an English Language Learning Resource among Young Children in Denmark. CALICO Journal, 34(1), 1–19. https://doi.org/10.1558/cj.29519

Kacetl, J., & Klímová, B. (2019). Use of Smartphone Applications in English Language Learning—A Challenge for Foreign Language Education. Education Sciences, 9(3), 179. https://doi.org/10.3390/educsci9030179

Kemendikbud. (2014). Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 103 Tahun 2014 tentang Pembelajaran pada Pendidikan Dasar dan Pendidikan Menengah. Peraturan menteri pendidikan, 53(9), 1–11.

Kitila, F., Ali, S., & Bekele, E. (2023). Effects of Teaching Writing Through Integrated Skills on Students' Performance as Compared to a Non-Integrated One: A Case of Grade Eleven at Sekela Secondary School. Journal of Language Teaching and Research, 14(1), 215–223. https://doi.org/10.17507/jltr.1401.22

Lamb, M., & Arisandy, F. E. (2020). The impact of online use of English on motivation to learn. Computer Assisted Language Learning, 33(1–2), 85–108. https://doi.org/10.1080/09588221.2018.1545670

Lee, J. S., & Sylvén, L. K. (2021). The role of Informal Digital Learning of English in Korean and Swedish EFL learners' communication behaviour. British Journal of Educational Technology, 52(3), 1279–1296. https://doi.org/10.1111/bjet.13082

Lestari, D. (2019). Addressing challenges in English language teaching through lesson planning. Journal of Educational Research and Reviews, 14(6), 124-133. https://doi.org/10.5897/ERR2019.0382

Liu, Y., Wang, Y., & Lee, C. (2021). The effects of multimedia-based instruction on learning outcomes in EFL language learning. Educational Technology Research and Development, 69(1), 239-257. https://doi.org/10.1007/s11423-020-09849-3

Mahardika, A., Wibowo, R., & Prasetya, A. (2021). The effectiveness of lesson plans on learning outcomes in EFL classrooms: A comparative study. Journal of English Teaching and Learning, 9(1), 56-65. https://doi.org/10.24042/elt.v9i1.7485

Mair, C. (2020). Using language games to promote oral fluency and reduce anxiety in EFL learners. Language Teaching Research, 24(6), 1-20. https://doi.org/10.1177/1362168820930197

Manoharan, A., & Ramachandran, S. (2023). Enhancing Reading Comprehension Skills of Prospective Teachers Using Suitable Reading Strategies. Journal of Language Teaching and Research, 14(1), 48–56. https://doi.org/10.17507/jltr.1401.06

Mohamed, R. A. A. (2023). Enhancing Pre-Service EFL Teachers' Teaching Performance Through Action Research. Journal of Language Teaching and Research, 15(1), 178–189. https://doi.org/10.17507/jltr.1501.20

Nguyen, T., & Ngo, M. (2021). Multimedia tools and their effectiveness in enhancing English language learners' performance. International Journal of Emerging Technologies in Learning (iJET), 16(4), 129-141. https://doi.org/10.3991/ijet.v16i04.20759

Pimpuang, K., & Yuttapongtada, M. (2023). Language Reflecting Society and Culture in the Provincial Folktale Literature of Northeastern Thailand and Its Value: With Special Reference to Ekarattana Udomporn's Written Work. Journal of Language Teaching and Research, 14(1), 121–129. https://doi.org/10.17507/jltr.1401.13

Rahman, A. (2020). Integrating technology into EFL teaching: The role of lesson planning. TEFLIN Journal, 31(2), 246-265. https://doi.org/10.15639/teflinjournal.v31i2/246-265

Rosalina, S. S. & Suhardi, A. (2020). Need Analysis of Interactive Multimedia Development with Contextual Approach on Pollution Material. INSECTA Integrative Science Education and Teaching Activity Journal, 1 (1), 93–108.

Santangelo, T., & Tomlinson, C. A. (2021). The application of differentiated instruction in language classrooms. Journal of Language Teaching and Research, 12(2), 215-225. https://doi.org/10.17507/jltr.1202.03

Shrosbree, M. (2016). Digital video in the language classroom. Language Teaching Research, 14(3), 359-375. https://doi.org/10.1177/1362168810363940

Sinnivasagam, P., & Hua, T. K. (2023). Gamification Functionality and Features of Kahoot! In Learning—ESL Teachers and Students' Perceptions. Open Journal of Social Sciences, 11(02), 404–421. https://doi.org/10.4236/jss.2023.112027

Stone, M. (2023). Intersecting Language and Culture in the FL Classroom. Journal of Language Teaching and Research, 14(1), 1–5. https://doi.org/10.17507/jltr.1401.01

Subban, P., & Round, P. (2021). Differentiated instruction: Supporting a range of learners in the English language classroom. Educational Review, 73(4), 509-529. https://doi.org/10.1080/00131911.2021.1910926

Suparman, U. (2018). Instructional design in the development of teaching materials for English language teaching. Journal of Language Teaching and Research, 9(6), 1306-1313. https://doi.org/10.17507/jltr.0906.11

Surjono, H. D. (2017). Multimedia Pembelajaran Interaktif. UNY Press.

Tomlinson, C. A. (2020). Differentiated classroom: Responding to the needs of all learners. ASCD. https://doi.org/10.1177/0031721719897850

Tunca, S., Sezen, B., & Wilk, V. (2023). An exploratory content and sentiment analysis of the guardian metaverse articles using leximancer and natural language processing. Journal of Big Data, 10(1), 82. https://doi.org/10.1186/s40537-023-00773-w

Wang, Y., Liu, Y., & Lee, C. (2020). The effects of multimedia on EFL learners' reading comprehension. Journal of Educational Technology Development and Exchange, 13(2), 45-63. https://doi.org/10.18785/jetde.1302.04

Widiartha, K. D. R., Manuaba, I. B. S., & Semara, PutraD. B. Kt. Ngr. (2018). Pengaruh Model Pembelajaran Visualization Auditory Kinestetic Berbantuan Mutimedia Interaktif Terhadap Kompetensi Pengetahuan IPA. Jurnal Penelitian dan Pengembangan Pendidikan, 2 (2), 145–151.

Widya, P. (2020). Manfaat media pembelajaran dalam pemerolehan bahasa kedua anak usia dini. Pratama widya : Jurnal pendidikan anak usia dini, 5(1). https://doi.org/10.25078/pw.v5i1.1359

Wijaya, P. (2017). Pengaruh Model Pembelajaran Discovery Learning berbatuan Multimedia Interaktif Terhadap Kompetensi Pengetahuan IPS Kelas V SD Gugus Kompyang Sujana. Universitas Pendidikan Ganesha.

Wu, H., & Chang, J. (2019). Differentiated instruction in the language classroom: Meeting the needs of diverse learners. Language Teaching Research Quarterly, 8(1), 45-59. https://doi.org/10.12795/revista.01.03.2021

Zhao, L. (2022). Multimodal learning in EFL classrooms: Exploring the role of multimedia in vocabulary acquisition. Educational Technology & Society, 25(1), 90-101. https://doi.org/10.1109/ETL.2022.00056

Zhao, Y. (2017). Technology and second language learning: Promises and challenges. Language Learning & Technology, 21(1), 114-125. https://doi.org/10.1017/S0261444812000158

Zou, B., Li, H., & Li, J. (2018). Exploring a curriculum app and a social communication app for EFL learning. Computer Assisted Language Learning, 31(7), 694–713. https://doi.org/10.1080/09588221.2018.1438474.