



Information and Communication Technology (ICT) Integration in Teaching English for Young Learners

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Article Info

Abstract

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Information and communication technology is not a new issue in education world, but it is interesting to follow its development. Teachers can use this kind of technology to increase work ethos. Besides, this technology makes it possible to do many kinds of activity fast, precisely, and accurately. The development of information technology shows that there appears varieties of activity based on technology. Teaching English as second language becomes more challenging to teach, particularly for young learners. The research method used Systematic Literature Review, namely a literature search both international and national using the Google Scholar website. Data collection was carried out by documenting and reviewing all articles related to ICT media in English for young learners. So it can be concluded that the use of ICT media in early childhood English learning can be done and has a positive impact that benefits both teachers and children.

Kata kunci:

*Integrasi ICT;
Pengajaran Bahasa
Inggris untuk Anak*

Teknologi informasi dan komunikasi bukanlah suatu hal yang baru dalam dunia pendidikan, namun menarik untuk disimak perkembangannya. Guru dapat memanfaatkan teknologi semacam ini untuk meningkatkan kinerja. Selain itu, teknologi ini memungkinkan melakukan berbagai macam aktivitas dengan cepat, tepat, dan akurat. Perkembangan teknologi informasi menunjukkan munculnya berbagai macam kegiatan yang berbasis teknologi. Mengajar bahasa Inggris sebagai bahasa kedua menjadi lebih menantang untuk diajarkan, khususnya bagi anak Usia dini. Metode penelitian yang digunakan adalah Literature Review yaitu pencarian literatur baik internasional maupun nasional dengan menggunakan *website Google Scholar*. Pengumpulan data dilakukan dengan mendokumentasikan dan mengkaji seluruh artikel terkait media ICT untuk pembelajaran Bahasa Inggris Anak usia dini. Jadi dapat disimpulkan bahwa pemanfaatan media ICT dalam pembelajaran bahasa Inggris anak usia dini dapat dilakukan dan memberikan dampak positif yang bermanfaat baik bagi guru maupun anak.

1. INTRODUCTION

Educational technology has become increasingly significant, particularly with the advancement of information and communication technology (ICT). It plays a vital role in contemporary education, with ICT developments enhancing its impact (Nadeem, 2024). The proliferation of educational technology and other modern educational alternatives encourages teachers to maximize the use of computers in their teaching practices. Integrating computers into education is now indispensable, providing teachers with various tools and resources to improve the learning experience (Zubaidi and Velusamy, 2024). Educational technology involves the development, application, and assessment of systems, techniques, and tools to enhance human learning. It applies scientific knowledge about learning processes and conditions to boost the effectiveness and efficiency of both teaching and learning. The ICT curriculum is designed to prepare students to navigate the rapid changes in the workforce and other areas influenced by technological advancements, promoting adaptability and proficiency in various technological applications.

Today's young children interact with a wide range of digital technologies (ICT) in their everyday lives and become competent users of devices, such as computers, tablets, video game consoles, digital video and communication based devices, without any formal instruction (Stephen & Edwards, 2018; Ofcom, 2019; Nikolopoulou et al., 2019). Lately, mobile technology has become popular among young children in both informal and formal educational environments (Nikolopoulou, 2019, 2020; Papadakis & Kalogiannakis, 2020; Dorouka et al., 2020). Research studies throughout the years (e.g., Clements, 1994; Clements & Sarama, 2003; Stephen & Plowman, 2003; McKenney & Voogt, 2012; Nikolopoulou, 2018) have indicated that ICT/technology can be used as a tool to support children's learning and development, a tool which can assist communication, collaboration, creativity and language development in young children. Studies indicated a positive impact of digital technologies' usage on children's literacy skills (Neumann, 2018; Gray et al., 2017), mathematical skills (Gray et al., 2018; Outhwaite et al., 2017), science, problem-solving, and self-efficacy (Herodotou, 2017).

Language is highly complex, and teachers are responsible for making this complexity more understandable and accessible, especially when teaching English to young learners. Information and Communication Technology (ICT) can be effectively utilized in language education. Many children enjoy using the internet, television, radio, YouTube, and other mobile learning platforms, particularly for learning English. ICT is crucial in language development, including second language acquisition for young learners. The integration of technology in learning is evident through e-learning, which facilitates educational transformation via electronic media such as audio/video, interactive TV, CDs, and the internet (Jamun, 2018). Technology is not only used by university and high school students but also in early childhood education institutions (PAUD). During the Covid-19 pandemic, all learning activities shifted online, necessitating educators to become proficient in technology-based learning tools like Android devices, personal computers, and iPads (Asmawati, 2021). ICT makes classrooms more flexible and communicative, offering numerous ways to motivate students to learn English through the internet, music, YouTube, and other media. Integrating technology in teaching not only aids in language mastery but also in embedding cultural values, whether local or international. According to UNESCO, education aims to: (1) Instill community core values and cultural heritage, (2) Support personal development of children, youth, and adults, (3) Promote democracy and societal participation, especially among women and minorities, (4) Encourage cross-cultural understanding and peaceful conflict resolution, improve health and well-being, and (5) Support economic development, reduce poverty, and enhance widespread prosperity (UNESCO, 2011).

This ICT based media can be used in the educational sector, one of which is to improve children's English language skills. English is an international language that has an important role in the daily lives of everyone throughout the world (Arumsari et al., 2017). According to Oktaria & Putra (2020), English is a foreign language in Indonesia, but it is very important to teach it to children from an early age, perhaps because English is an international language used by all corners of the world so it can make it easier to communicate when outside Indonesia as the main form of communication. In early childhood education, according to Kayode & Olaronke (2014 in Nurjanah & Mukarromah, 2021) the term ICT or ICT (Technology, Information and Communication) includes video cameras, digital computers, software (applications) and creativity and communication tools, the internet, mobile phones, tape recorders, computer games, programmable toys, and others. English learning can be implemented by utilizing technology today.

Teachers are required to be able to create ICT based media to suit children's developmental characteristics. Digital media-based learning in early childhood certainly involves educators and parents in its implementation. Educators and parents need to collaborate and communicate with each other regarding learning in early childhood. Educators play an important role in basic planning for effective learning by utilizing digital media to support learning and achieve learning goals, namely helping to optimize the growth and development of young children, so that young children can fulfill their subsequent developmental tasks. Meanwhile, parents play a role in assisting children's learning while at home or online learning so that children are protected from the negative impacts of using digital technology. Parents must of course be responsible. If children are not supervised and accompanied, they will do undesirable things, for example accessing pornographic sites, which will damage the child's brain (Alia & Irwansyah, 2018). Apart from that, children's development will be disrupted because they spend more time with technology than with the people around them.

Therefore, it is necessary to study in more depth the role of ICT-based media in children's learning, especially in early childhood English learning. Teaching foreign languages to children certainly requires appropriate strategies and varied media so that children feel comfortable and like learning English. The choice of learning media in developing early childhood English language skills must be adjusted to the child's interests and characteristics. However, in choosing ICT based media for children, extra assistance is needed.

2. METHODS

The research design is a Systematic Literature Review (SLR). SLR is a research method that combines primary study findings to present a more comprehensive and balanced set of facts (Rahmawati, Juandi, & Nurlaelah, 2022). The SLR method was chosen because it can identify articles systematically with each process following predetermined steps or rules. Research steps using the SLR include formulating questions, searching for articles or literature that are appropriate to the research topic, establishing inclusion criteria to select articles, and analyzing data from the articles obtained. and then reporting research findings from the articles reviewed.

Therefore, the inclusion criteria for this SLR study were determined based on the method PICOS is as follows: (1) focuses on early childhood learning in Indonesia (population), (2) preliminary study discussing the use of learning media (intervention), (3) control intervention in basic learning. Implementing group conventional learning media as a control (comparison) class, (4) media multilingual learning (results), (5) primary research using this type of research qualitative and quantitative (6) in the last 3 years (2018-2023) in country and research published in international journal articles, both whether indexed by Scopus or not (revised as necessary). Data were collected from articles included in Google Scholar, Sinta, Semantic Scholar, Educational Resources Information Center (ERIC), and Directory Open Access Journal (DOAJ). The selected articles are appropriate to the question study. Keywords to search for articles are "Media, language learning" "Language skills, Media" and "Preschool, Learning Media, Language". The article selected based on the year of publication in 2018 - 2023 there are 80 article obtained in a literature search based on the keywords above. Based on The inclusion criteria established in this study used 35 articles selected as primary study. Data analysis uses analysis of existing articles or primary studies collected, namely each primary study, then classified based on title, year of study, level of education, and type of learning media. Next, it's done analyze the articles included in this study one by one to obtain findings and discussion to draw conclusions on SLR research

3. RESULT AND DISCUSSION

Based on the results of the articles collected and the author's analysis, it was found that early childhood English language skills can be developed using ICT based media or digital media adapted to current developments. Learning media that utilizes technological developments is considered capable of helping in learning. The introduction of English can begin with a vocabulary enrichment process taught through songs, picture cards, sports, films, or other *media* (Purandina, 2021). With the internet, it now feels easier to access this learning media via the internet (Veza & Nurlinda, 2021). digital media can help teachers provide detailed learning material and this will motivate children to accept learning. Apart from that, the opinion of Nurjanah & Mukaromah

(2021) states that digital media can also provide variations in teaching methods for teachers, this will prevent children from getting bored during learning activities. Munir (2017) in (Hendraningrat & Fauziah, 2021) stated that digital-based learning media can be an alternative that can be used by teachers to package learning materials to make them more attractive to children. Learning using digital media can facilitate children to learn more widely, more and more variedly. Apart from that, research conducted by Adisty & Kurnia (2021) obtained a hypothesis calculation which shows that classes with ICT-based learning media, namely experimental classes, have a greater influence in developing early childhood English than classes that use demonstration methods, namely control classes. Next, Jumiatin & Lestari (2021) stated that ICT-based learning media can help teachers introduce English by pronouncing simple words or sentences according to native speakers. With the demands of teachers to use ICT as a learning medium, teachers need to master these abilities so that teachers are capable create a different learning atmosphere. Apart from that, through ICT teachers can innovate and be creative in carrying out learning, especially in introducing English well and appropriately.

From the opinions above, it can be concluded that the role of ICT-based media can be beneficial for teachers and students because digital media will train creativity and increase teachers' knowledge regarding the development of information and communication technology. For young children, it can help children's development from several aspects, prevent children from getting bored when learning activities take place, and as a medium to motivate children. However, the use of digital media in learning requires collaboration between teachers and parents. In line with this, Muzdalifah & Moulita (2021) stated that parents need to collaborate with teachers at school to supervise children's use of digital media, so that supervision can run well and smoothly. Parents must wisely direct their children in using smartphones, namely by filtering what they access or what games they play played by children (Mufida, 2021). There are many ICT-based media that can be used to introduce English to young children, for example the use of video game series, multimedia applications, audio and videos, web-based, and other digital applications as a means to support the learning process.

Video Game Series

Using video game series to teach English to young learners is an innovative approach that leverages the engaging and interactive nature of games to enhance language acquisition. These games capture students' interest and motivation, providing a fun and immersive environment where they can practice vocabulary, grammar, and conversational skills in context. The interactive elements of video games, such as immediate feedback and repetitive practice, help reinforce learning, while the narrative and cultural aspects introduce language in real-life scenarios, promoting better understanding and retention. By integrating video games into the curriculum, educators can create a dynamic and effective learning experience that blends education with entertainment. This media can help develop children's English language skills because it is interesting and will give children a sense of enjoyment. The Video Game Series is a series of video games that use user interface interaction through images produced by videos and provide a reward system as a form of appreciation when you have successfully completed the challenges in the game. This video game series is ICT-based media that is educational, especially in developing children's English pronunciation skills. Through this media, children can improve their English pronunciation skills because in video games there are audio and visuals in English that children can follow and remember. This can have a positive impact on English learning, such as when playing, children will often say vocabulary that they often hear through the video games they play (Putri & Muryanti, 2020).

Quizizz and Kahoot

Quizizz and Kahoot are dynamic tools for teaching English to young learners, offering interactive and game-based learning experiences that enhance engagement and motivation. These platforms allow educators to create quizzes and learning games that students can participate in using their devices, fostering a fun and competitive environment. Through immediate feedback and real-time results, students can quickly see their progress and understand their mistakes, aiding retention and comprehension. The playful format of Quizizz and Kahoot transforms traditional learning into an exciting activity, making the acquisition of vocabulary, grammar, and language skills more enjoyable and effective

for young learners. One form of ICT development currently is Quizizz and Kahoot which can be a medium for introducing learning material, such as English, to early childhood. Using the Quizizz and Kahoot applications or web in general can have a positive impact on the learning process at the early childhood education (PAUD) level. With Quizizz and Kahoot, it can provide new experiences and increase teacher creativity in creating media using technology. One of the implementations, namely learning with material about introducing animal names to students, is considered more effective by using Quizizz and Kahoot because there is a feature to display animal videos and sounds. The quizizz and kahoot applications are actually widely known among educational staff such as teachers and kindergarten management staff who think that the use of this media is quite interesting in learning. The use of Quizizz itself was proven effective by research conducted by Girsang & Shabayar (2022) which introduced the use of the Quizizz application in learning English to educators and children aged 5 - 6 years accompanied by the child's parents. When the activity took place, both teachers, parents and children were very enthusiastic in participating in the series of activities until completion. This is proven by the understanding of teachers and children in using the application. Apart from that, parents can accompany their children in using quizizz media or kahoot, apart from being a form of supervision for children, it can also provide new knowledge for parents.

Use of the YouTube Application

Using the YouTube application in teaching English to young learners offers an engaging and versatile educational tool that brings language learning to life through multimedia content. Teachers can leverage a wide array of videos, from animated stories and songs to educational channels specifically designed for children, to introduce and reinforce vocabulary, grammar, and pronunciation. The visual and auditory elements of YouTube videos cater to different learning styles and help maintain students' interest and motivation. Additionally, YouTube allows for the incorporation of authentic language use and cultural context, making the learning experience more dynamic and relatable. With its vast resources and accessibility, YouTube is an invaluable aid in creating an interactive and enjoyable language learning environment for young learners. In its implementation, educators first determine the steps and SOPs that can be used as a reference for creating YouTube media-based learning. Through YouTube media, it can provide fun learning for young children because things related to technology make children interested, children will also understand the learning material more easily, it is flexible so it can be used in various situations, has many features, as well as long-term video storage (Rangkuti & Sit, 2023). In the learning process the teacher uses the method of learning while playing. Apart from that, educators can take advantage of the YouTube application by creating independent content such as making learning videos starting from opening, core, to closing activities (Amada & Hakim, 2022)

Digital Flashcards

Digital flashcards are an effective tool for teaching English to young learners, combining the benefits of traditional flashcards with the advantages of technology. These interactive learning aids can be used to introduce and reinforce vocabulary, grammar, and phonics through engaging and visually appealing formats. Digital flashcards often include features such as audio pronunciations, images, and animations, which cater to various learning styles and make the material more memorable. Additionally, they allow for repetitive practice and immediate feedback, helping students to retain information more effectively. Accessible on multiple devices, digital flashcards provide a flexible and convenient way for young learners to practice their English skills anytime and anywhere, enhancing their overall language acquisition process. Digital flashcards are an ICT-based media that combines elements of text, images or symbols to help make learning more interesting. One of them can be used to help early childhood English learning. Using digital flashcard media for children's early reading skills can have a big influence on children, especially children aged 5-6 years. This happened due to the encouragement of more varied content on digital-based flashcard media (Maronta et al., 2023). Apart from that, there is also interactive multimedia-based flashcard media that can be used to introduce English vocabulary and is also considered suitable for use by young children. Interactive multimedia-based flashcard media can be useful in creating a more innovative learning atmosphere because it invites children to learn while playing (Susantini & Kristiantari, 2021).

Interactive Power Point

Interactive PowerPoint presentations are a powerful tool for teaching English to young learners, offering a dynamic and engaging way to present educational content. By incorporating multimedia elements such as animations, audio, videos, and interactive quizzes, teachers can create lessons that capture students' attention and make learning more enjoyable. These presentations can be designed to be highly interactive, allowing students to participate actively by clicking on answers, dragging and dropping items, or even playing embedded educational games. This interactivity not only keeps young learners engaged but also enhances their understanding and retention of the material. Overall, Interactive PowerPoint make lessons more vibrant and interactive, fostering a more effective and enjoyable language learning experience. Interactive Power Point is one of the ICT-based media that has an influence on early childhood English learning, which utilizes technology to create interesting power points in English language learning. Where are the research results of Monica, et al. (2023) stated that the use of interactive power point media is very effective in introducing English vocabulary to children. In this case, it is proven that there is a difference between children's relationship to interactive power point media which is applied in the experimental class and using animated videos on YouTube in the control class. It was found that children were more interested in interactive power point media than watching animated videos on YouTube. This is because children are seeing interactive power point media for the first time, whereas children are used to seeing animated videos on YouTube.

Digital Picture Books

Digital picture books are an excellent resource for teaching English to young learners, combining the traditional appeal of illustrated stories with interactive and multimedia enhancements. These digital books often include audio narration, sound effects, and animations that bring the stories to life, making them more engaging and accessible for children. The visual and auditory elements help reinforce language comprehension, vocabulary acquisition, and pronunciation. Interactive features, such as clickable text and images, allow students to explore the story at their own pace and deepen their understanding. By providing an immersive and enjoyable reading experience, digital picture books can significantly enhance young learners' enthusiasm for reading and learning English. Digital picture books are a practical and flexible learning medium because they support the new learning system today, namely learning from home. Digital picture books are digital books that can be used for studying at any time without requiring the learning process in class. Digital media picture books This can be used as a learning medium to develop English language skills, especially for young learners and make it easier for teachers in teaching and learning activities. However, when using digital picture books, especially for young learners, special supervision and attention is needed several things because if it is not selective it will have a bad effect on children so that learning goals cannot be achieved properly (Dwiyanti & Purnamaningsih, 2021).

Gamification

Gamification is a powerful strategy for teaching English to young learners, transforming traditional lessons into interactive and engaging learning experiences. By incorporating elements of games, such as rewards, challenges, and progress tracking, educators can motivate students to actively participate in language learning activities. Whether through digital platforms like educational apps or classroom-based games, gamification fosters a sense of excitement and competition, encouraging students to strive for improvement while having fun. This approach not only enhances students' motivation and engagement but also reinforces language skills, including vocabulary acquisition, grammar understanding, and communicative competence. By tapping into the natural inclination of children to play and explore, gamification offers a dynamic and effective method for teaching English to young learners. Gamification is a medium that utilizes game elements in it so that learning becomes more interesting. Gamification with applications can be a learning medium that can be applied during a pandemic or distance learning because it is considered suitable for the current Alpha generation who are already familiar with digital technology. Gamification media in learning can be useful for motivating children, besides that children can gain new knowledge and skills. Not only for students, gamification media can help teachers hone their skills in packaging material with interesting delivery. The Ministry of Education and Culture is expected to collaborate with

educational institution educators in overcoming existing weaknesses and collaborate in creating learning media such as educational gamification games so that they can create games that are in accordance with the Indonesian education curriculum, especially the PAUD curriculum (Hasanah et al., 2021).

Multimedia Applications

Multimedia applications are invaluable tools for teaching English to young learners, offering a diverse range of resources to enhance language acquisition. These applications incorporate various forms of media, including text, audio, video, images, and interactive elements, to create engaging and interactive learning experiences. For example, educational videos and animations can help explain complex language concepts, while audio recordings and podcasts provide opportunities for listening comprehension practice. Interactive games, quizzes, and digital exercises make learning enjoyable and encourage active participation. By catering to different learning styles and preferences, multimedia applications accommodate the diverse needs of young learners, making language learning more accessible and effective. Additionally, the visual and auditory stimuli provided by multimedia content help reinforce vocabulary, grammar, and pronunciation, leading to improved language proficiency. Overall, multimedia applications play a crucial role in enriching English language instruction for young learners, offering dynamic and immersive learning opportunities that inspire curiosity and foster linguistic development. Multimedia applications are one of the digital media that play a role in developing English language skills for young children. Irawan states that the multimedia application for learning basic English can use Macromedia Flash 8 which is integrated with animation, audio and video where users can also use several features that have been provided and there are several questions that are used to test memory skills in terms of understanding basic English since early stage. The English language learning multimedia application using Macromedia Flash 8 can be burned onto a CD (Compact Disk) to make it easier for users to convey and study basic English material using technological tools anywhere and anytime (Irawan et al., 2019). The use of multimedia technology in learning can attract children's interest in learning. Based on the results of tests carried out directly by Bella, et al. (2022) to children aged 3 - 6 years at Kindergarten IT Lan Tabur, multimedia applications can be well received according to user needs. With multimedia applications, such as interactive multimedia introducing fruit names in English for young children, it can help increase students' interest in learning at TKIT Lan Tabur and make it easier for teachers and students to learn English.

4. CONCLUSION

Based on the results of the analysis of national and international articles that have been collected by the author, it can be concluded that English language skills in early childhood can be stimulated by using ICT- based media or digital media that is adapted to the characteristics of children who keep up with the times. This can be seen from the role of using ICT (Information and Communication Technology) as an early childhood learning medium, it is very beneficial for teachers and children because digital media will train creativity and increase teachers' knowledge regarding the development of information and communication technology. Then, for young children, it can help children's development from several aspects, prevent children from getting bored when learning activities take place, and as a medium to motivate children. There are several examples of ICT -based learning media that can be used to introduce English to young children, including the use of video game series, multimedia applications , audio and videos, web-based, and other digital applications.

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