

Using ICT-based Interventions to Boost Malaysian Young Rural Learners' Interest and Motivation in Reading English Materials: A Literature Review

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Abstract

The use of technology-based interventions helps young learners maintain focus and motivation in mastering English through reading. This review examines the effectiveness of ICT-based interventions in boosting motivation and interest to read English-language materials, particularly among young learners in rural primary schools and identifies challenges faced by rural primary schools' teachers in using ICT for English Language Teaching. The past reviews that specified on related past studies with a range of 2013-2023 along with other publications considered including proceedings, books, website articles, as well as PhD thesis that resonate specifically to the study were chosen using Google Scholar, Taylor & Francis Online Journals, and Education Resources Information Centre (ERIC). A total of 81 relevant published works were selected to answer the research questions. The review concludes that ICT-based interventions indeed significantly and favourably affect young learners' motivation and interest in reading English materials, as well as enhancing their ICT knowledge. It is also found that the main challenges in implementing ICT in ESL rural primary ESL classrooms are both physical & psychological. Future research proposed in relation to this study is to focus on how young learners use ICT to develop multiple skills in language learning.

Keywords: ESL, ICT, Reading Motivation, Rural Schools, Young Learners

Introduction

Information and communication technology (ICT) has quickly emerged as one of the fundamental components of today's society. Regular usage of technology would likely lead to an increasing curiosity that sees its usefulness as a tool for improving education (Sabiri, 2020). The advantages of technology-assisted learning for learners include encouraging them to participate more actively in class by allowing discussions and exchange of opinions with teachers and peers; providing easy access to the most recent information on current events; and incorporating information in their studies to foster greater creativity while optimising

their educational experience (Ghavifekr & Rosdy, 2015). In addition, by taking on new responsibilities and making appropriate use of the technologies already in place, technology provides teachers and learners with a wealth of resources and communication possibilities to enhance language teaching and learning (Gilakjani, 2017).

Although English is widely acknowledged as being crucial, most English as a Second Language (ESL) teachers in rural primary schools in Malaysia still struggle to pique the attention of young learners to embrace English as a second language (L2), especially reading English reading materials that are considered difficult to comprehend and uninteresting. Chua & Sulaiman (2021) discovered that students' reading comprehension issues in Malaysian primary 4 ESL classes are caused by their lack of motivation to read English-language materials and their disinterest in the subjects being covered. According to Johari et al (2013), secondary school learners in Malaysia read for educational purposes, even if some would consider reading as a leisure activity as their primary motivation. This is where ICT serves as an aid to cultivate the love for reading from an early age so that learners can foster continuous interest and motivation to read English reading materials for their future benefit. Most notably in any circumstance where English language learning (ELL) is taking place, technology serves as a useful tool and learning booster (Balchin & Wild, 2020). It also allows teachers to select their own preferred multimedia and programmes that produce engaging lessons (Gilakjani, 2017), particularly in preparing and selecting English reading materials that are suitable for young learners. In order to better inspire young learners to normalise the use of English, reading more English resources can be good for their own benefit. As stated by Johari et al. (2013), a proficient reader is presumed to acquire greater self-assurance due to their ability to comprehend a broader variety of reading materials and acquire a wealth of knowledge, which enables the sharing of wider information and expertise. In short, ESL teachers can assist their learners by giving appropriate opportunities to experience ICT that serves as a lively learning environment.

In order to overcome these reading problems and increase learners' willingness to read English-based reading materials, it is vital to find potential solutions. Past studies reviewed provide a more detailed viewpoint on integrating ICT approaches in language teaching and learning (TL), particularly to increase reading English-based materials among primary rural school young learners. These reviewed past studies also address several challenges that are deemed to be the causes of ineffective implementation of ICT in rural ESL classrooms. Therefore, this review addresses two questions: (1) How successful ICT-based interventions are to boost motivation and interest in reading English materials, especially among young learners in rural primary schools?, and (2) What are the challenges experienced by the ESL teachers as they attempt to integrate ICT-based in the setting of Malaysian rural primary schools?

Methodology

The search for pertinent and precise references for this review was done employing three databases – the Education Resources Information Centre (ERIC), Taylor & Francis Online Journals, and Google Scholar. To start, a list of important and related research publications was compiled using wide query keywords. The following search keywords were used to generate a compilation of potential papers based on the review questions: "technology in education," "ICT-based intervention in learning," "motivation in reading," "rural primary school," and "reading interest of young learners." This was done to ensure that relevant publications were identified. The search was specified with a range of 2013-2023. Besides

that, there were other publications considered including proceedings, books, website articles, as well as PhD thesis that resonate specifically to the study, thus providing a chronological review on related past studies.

There have been a few new research findings on the success of using ICT-based interventions to boost motivation and interest in reading English materials, especially among young learners in rural primary schools, unlike past studies on using a variety of online tools in language learning. Additionally, since Malaysia is a developing nation that is competing with other industrialised nations, particularly in integrating technology into education, the problems experienced by ESL teachers to integrate ICT-based in the setting of Malaysian rural primary schools are yet to be discovered further. The present study, hence, broadens the focus of prior studies concerning the ways in which technology can help young learners attending underprivileged rural primary schools in Malaysia develop a more positive attitude towards reading English-language materials while also providing them with high-quality English lessons irrespective of their disadvantages. Apart from that, the review on past studies on challenges faced by rural school teachers incorporating ICT in their English lessons will help to navigate further solutions in order to deliver effective and engaging lessons using technology.

Analysis of the Literature Review

ICT-Based Intervention to Boost Young Learners' Motivation and Interest in Reading English Materials

Proficiency in English opens up opportunities for individuals to engage with technology, access digital content, and participate in the global discourse surrounding advancements in various fields. Al Zoubi (2018) revealed that exposure to the English language at various stages leads to learners being more receptive to language learning and is strongly correlated with the development of the four language skills (listening, speaking, reading, and writing). Technology makes the classroom more engaging and draws learners in, and it may excite learners and make them more engaged in their studies (Pazilah et al., 2019). Elements such as the ability to listen to words and questions, highlighting moving words for young learners, and reading aloud electronic texts to them (the "talking voice"), would pique young learners' attention (Ciampa, 2015). This would explain why preschoolers were considerably more physically involved in digital story reading as compared to traditional story reading (Zhou & Yadav, 2017). As noted by Nurhasanah et al (2020), using the internet to study English facilitates language acquisition since it is engaging, entertaining, and dynamic.

Teachers who give their younger learners access to technology with multimodal characteristics are likely to motivate the latter to learn in visual, auditory, and kinaesthetic formats that gives the opportunity to view materials in a variety of ways and customise it as according to their style of learning (Sankey et al., 2010). For instance, ICT cultivates reading fluency which gives an advantage to those who enjoy reading when they are exposed to a variety of texts and become accustomed to the structure of the English language. That being said, multimodal children e-books help struggling readers because they give young learners a variety of ways to interpret the material, increasing their chances of understanding it and employing these also facilitates reading (Morgan, 2013). They may also build conversational focus more easily and obtain comprehensive knowledge and expertise for more effective discussions (Alam, 2021). Digital platforms that provide instant feedback might encourage readers to make and meet reading objectives, which can boost interest and create a sense of achievement.

Another opportunity that ICT has offered in terms of giving the learners the authority in making choices based on the targeted academic and literature contents is through interactive fiction. It has great potential for usage in educational settings, offering stimulating learning experience and giving the opportunity for reading and learning (Kozdras et al., 2006). According to Nagai and York (2020), interactive fiction offers learners the opportunity to comprehend vocabulary meanings more readily as they find the experience to be entertaining, in addition to seeing the word in context. Utilising ICT resources (e.g. interactive fiction) contributes to learning experiences to be more personalised and will encourage them more to use ICT as a reading medium. With the recent trends using AI, there is an opportunity to assist learners' reading proficiency. Oluwafemi Ayotunde et al., (2023) noted that, AI technology enhances English learning through learning management systems, improving speaking, writing, reading, and listening processes while providing a simple, engaging, and customized learning environment. Significantly, young learners from rural schools may gradually improve their fluency and accuracy in word pronunciation and receive prompt feedback on how to improve it through reading in a more engaging way with ICT.

Next, ICT materials (e.g. e-books) can enhance the language learning experience. E-books function as a simple approach to draw on young learners' attention and encourage reading motivation because of its encouraging attributes, such as its use of multimedia and colourful presentation style (Maynard & McKnight, 2001). Chou (2015) reiterated this, saying that the use of e-books in language classrooms can inspire reluctant readers because it offers an enjoyable reading experience that allows these readers to identify with the characters in the stories that causes a personal connection with what they are reading. Just like Shyamlee and Phil (2012) noted how technology is used to elevate contemporary trends and that it fulfils learners' aural and visual senses because it provides a better setting for language learning than the conventional classroom teaching method while also offering an excellent forum for teacher-student interaction. Children connect with ebooks because of their sense of authority, multimodal behaviours, and ability to communicate which also piques their fascination and helps them become better readers (Roskos et al., 2012). Additionally, Savva et al (2022) claimed that e-books are useful for acquiring both expressive and receptive vocabulary when compared to traditional print book reading and with adult help, the combination of digital elements and human support generated substantial advantageous impacts. Apart from that, technological tools give ESL learners the independence, inspiration, and support they require to succeed in their studies (Roy, 2019). Certainly, interest in ICT offers the intrinsic motivation that might affect ICT self-efficacy since it is one of the most significant motivational factors that contribute to people's ICT literacy and academic accomplishment (Chen & Hu, 2020). However, young learners should not be distracted from reading by the captivating features of e-books, and it is important to recognise that these elements have the power to encourage readers to read more (Richter & Courage, 2017).

Incorporating ICT can help to further enhance young learners' motivation to read more English materials while developing their language skills particularly for ESL learners. The findings of a research study by Yunus et al (2013) showed that the most significant benefits of utilising ICT in ESL reading and writing instruction were found to be drawing learners' focus, streamlining the way they learn, assisting in the improvement of their vocabulary, and encouraging valuable learning. Likewise, Ross et al (2016) noted that children's positive emotional involvement was elevated with extremely engaging touch screen storybooks. Therefore, teachers can encourage meaningful exchange, increase learners' curiosity and inspiration, and guarantee greater involvement and commitment in the classroom by

incorporating more authentic material like blogs, podcasts, and digital videos into the curriculum (Azmi, 2017). The previous claim is supported by Hao et al (2021) emphasizing that technology-assisted L2 vocabulary acquisition corresponds better to conventional training. Therefore, learners must be sufficiently motivated to read English reading materials in class for them to concentrate on the crucial elements that will eventually contribute to their overall proficiency, especially literacy.

The new generation has the advantage of being exposed to technology earlier than the past generations even in some parts in rural areas. Therefore, due to its adaptability for Z and Alpha Generation learners, regardless of their preferred learning style—visual, auditory, or kinesthetic—ICT use in ELT can assist instructors in improving their English proficiency (Adzhari & Din, 2021). Since the benefits of media are limitless, there will not any division between native speakers and non-native speakers while teaching and practising English thanks to digital technology because it gives learners lots of chances to practise their English language skills again while developing and advancing in a digital setting that complements curricular objectives and educational objectives (Susanty et al., 2021).

The right intervention will assist the motivation of young learners to read more English reading materials while consistently upgrading their academic achievements. For instance, increased reading success, persistence in difficult reading tasks, and increased cognitive abilities are all strongly correlated with motivation (Parsons et al., 2015; Ritchie et al., 2015). In general, it is easier to grasp English when the learning activity adopts an engaging approach, according to research by (Purnama et al., 2019). Hence, choosing literary materials carefully will ensure that the texts are appropriate for the learners and will increase their interest in studying English literature (Affendi & Aziz, 2020). According to the results of a research by Zulkefly and Razali (2019), learners believed that if their English teachers changed the way they taught the language, they would be far more engaged and excited about learning it. They can complete reading assignments in the target language, use dictionaries, study grammar and pronunciation pertaining to the reading material, take reading comprehension tests, and get instant feedback—all within the same programme (Azmi, 2017). The use of ICT would also enable teachers to systematically monitor their learners' achievement with the goal to consolidate a holistic perspective of current educational methods or approaches along with suitable ESL materials that are advantageous to learners in order to achieve the desired results (Avelino & Ismail, 2021).

The Internet has made it feasible to modify conventional oral and print stories by integrating graphics, music, animation, and video to produce interactive texts, electronic texts such as these offer chances for learners to get familiar with stories in a fresh way (Castek, 2006). Due to this, learning environments have become more globalised, bringing together learners from all over the world and backgrounds to exchange ideas and viewpoints (Onu et al., 2023). As they are expressing their real-life experiences in English, learners may practise their English in a genuine style and communicate in the language in an inviting way while utilising a digital narrative as a means of expression while working together critically and artistically (Lestariyana & Widodo, 2018). With this, educational institutions may foster excellence in management education and provide learners with the necessary skills and knowledge to thrive in the digital era by adopting and skilfully incorporating IT innovations (Abendan et al., 2023).

Due to the fact that the ability to possess a good grasp of English comes with effort and the right reading strategies can assist them get past communication barriers, increase their awareness of language understanding and acquisition methods, and boost their confidence

with regard to reading (Al Raqqad et al., 2019). This is reiterated by Jaikrishnan and Ismail (2021), declaring that learners might advance considerably more quickly and effectively up the path towards achievement in language acquisition with the right direction, practise, and most importantly the instructors' thorough grasp of those strategies. Thanks to ICT, teachers may access a variety of material in many formats, which makes teaching reading skills more successful and enjoyable for learners that includes software, computers, video cameras, and other ICT devices (Yunus et al., 2013). Obviously, ICT do not occupy up classroom space and more crucially, are very flexible for usage in the learning environment, teachers may incorporate these advantages into their ELL classrooms using a variety of websites in manners that printed ones cannot as noted by Forster and Poulshock (2013). Subsequently, effective classroom instruction can help learners grow their capacity for reading in addition to increasing their intrinsic motivation to read by teaching them specific reading strategies and involving them in individual and group reading activities that foster autonomy and accountability (Ho & Lau, 2018).

ICT learning intervention is advantageous for both parties since it increases teacher productivity and effectiveness while providing learners with a more customised and extended educational experience (Chen et al., 2020) while significantly increasing the interest and enthusiasm of learners in reading a wider variety of English-language texts also, contribute to classroom and young learners' academic success. Evidently, despite the current limitations brought forth by a lack of relevant school facilities, ESL primary learners find digital reading to be engaging and advantageous for their language acquisition (Baharuddin & Hashim, 2020). To add, digital learning can offer engaging online learning opportunities for learners by establishing and maintaining positive educational settings, growing educational networks, delivering timely, consistent input, and utilising the best technologies to create the right material (Ying et al., 2021). Providing and organically integrating real resources into the class, the use of ICT indeed boosted learners' motivation for ELL (Dolidze & Doghonadze, 2020). With that being said, children were given the chance to have a voice, articulate themselves via their experiences, and interact with everything around them in an engaging and entertaining way, according to research by (Pavlou, 2020). Hence, offering young learners from rural primary schools an engaging online learning opportunity by establishing and maintaining positive educational settings, growing educational networks, delivering timely, consistent input, and utilising the best technologies to create the right material as mentioned by Ying et al (2021) will help to boost the quality of self-sufficient learners and create an effective learning community. In short, using technology in education to get young learners from rural schools helps to cultivate the love for reading English materials and to provide them with a variety of learning resources.

Challenges in Using ICT for English Language Teaching in Rural School Settings

Since rural learners are far more likely to be disadvantaged, integrating ICT into ESL classrooms however, provides a distinctive array of challenges. This is due to rural areas being often isolated geographically, culturally, socially, mentally, and professionally (Hajar Halili & Sulaiman, 2019). Despite change and social unrest, these schools continue to serve sizable minority and economically impoverished communities; the general population of this specific region is distinct from that of other regions of the country since it is located outside of the major cities (Khulel, 2021).

Based on earlier research, the seven most evident challenges to using ICT for English language teaching in rural school settings were identified to serve the current study. To begin

with, the integration of ICT into rural schools faces challenges due to the absence of necessary facilities like computers, tablets, or smartphones for effective ELL intervention. Shan and Abdul Aziz (2022) indicated that the lacklustre of educational structures and amenities are undoubtedly a barrier for successful learning because they create an atmosphere that makes it challenging for teachers to impart knowledge while also making it tricky for learners to absorb that knowledge. Since several schools lack sufficient ICT infrastructure, the majority of teachers did not employ technological devices in their lesson plans (Chisango et al., 2020). Nhu et al. (2019) discussed similar issues experienced in integrating ICT in ESL classrooms in Vietnam, such as lacking ICT infrastructure, a limitation of technical help, and a lack of aid from pertinent authorities. As for the teachers, the majority of extrinsic barriers prevent ICT from being integrated into teaching and learning (Ghavifekr et al., 2016).

Similarly, the availability of internet connection is counted as one of the challenges under the lack of facilities that support the success of ICT-based intervention in ELL in ESL classrooms. This is pointed out by Cheok et al. (2017) claiming that the teachers' struggles were exacerbated by the school's spotty internet access and poor connectivity to the internet. Likewise, power outages frequently cause the internet to go down and prevent communications in rural schools (Mihai, 2017). The earlier statements are supported by Ng and Yunus (2021) mentioning that, lack of facilities for instructors and learners to utilise in classrooms, as well as costly upkeep costs, are additional obstacles that prevent teachers from using ICT into their teaching. As a result, the generalisation of rural primary schools in Malaysia still has not acquired the much needed facilities in terms of ICT and the good Internet coverage is indeed true in most parts of the country.

Another evident fact of challenges in using ICT for English Language Teaching in Rural Schools is financial limitations. During the Covid-19 pandemic in 2020, the Home Teaching and Learning at Home (PdPR) approach was conducted virtually, posing the greatest challenge in terms of internet access and gadget availability (Ni, 2022). According to Bozkurt et al. (2022), high-income individuals can access emergency distance learning via mobile phones and laptops, while those with lower incomes rely on television and radio, resulting in an uneven knowledge distribution. The reality that most rural school teachers and the rural schools as a unit face is the limited sources and the inability to possess or use technology. Many rural educational facilities are underfunded and lack the tools they need (McNeff, 2014; Sundeen & Sundeen, 2013). According to Kormos and Wisdom (2021), cost was the primary challenge because most rural schools with financial struggle might not be able to equip teachers with subscription-based technology, such as the use of educational management platforms (e.g. Google Classroom). Albeit the best of intentions, introducing ICT tools can be hindered by the high cost of devices and connectivity to the internet, which can be a challenge for both learners and schools because the resources available to schools are extremely limited compared to the number of learners they can accommodate, and schools are unable to purchase costly ICT assets (Gull et al., 2020). Therefore, from the teachers' perspective, this matter can be very demotivating.

Despite the importance of ICT in maximising the effectiveness of the lessons, Rural EFL teachers often lack the necessary pedagogical and technological skills to effectively use ICT in teaching young learners, largely due to lack of training sessions (Taghizadeh & Hasani Yourdshahi, 2020). According to Ahmad et al (2022) there was a notable hindrance to online instruction during the pandemic of Covid-19 due to inadequate technological proficiency, which is also associated with underlying anxiety in educators. This hesitation stems from a lack of confidence in using ICT (Singhavi & Basargeka, 2019). Because their backgrounds are

not adequately equipped to embrace ICTs in teaching and learning, some instructors find it challenging to use technology and ICT and must study more to enhance their knowledge and abilities (Muslem et al., 2018; Katemba, 2020; Chisango et al., 2020). The analysis by Raman and Yamat (2014) also showed that, despite the school's abundant supply of ICT equipment, teachers' reluctance to use it in the classroom, their heavy workloads, their age, their lack of ICT expertise, and other factors were preventing them from doing so. Conversely, Blanchard et al. (2016) found that teachers' views about teaching and student attitude were changed by a technology-enhanced professional development (TPD) programme that also leads to a favourable impact on student accomplishment. As pointed out by Marwan et al (2012), Effective educators are not just education professionals but also those who can effectively cater to diverse learning styles and student needs.

Another challenge is the ability of learners from rural schools to grasp ICT's terminology. Numerous pupils were only using ICT at rudimentary levels when studying English, according to (Poudel, 2022). The absence of an English language requirement in rural areas presents a major barrier to learners' ability to become comfortable and proficient in usage. (Dean et al., 2021). The language gap in rural and underdeveloped educational environments, particularly in elementary and primary schools, is causing learners to struggle to understand instructions in ICT appliance language (Gull et al., 2020). It might be difficult for rural school teachers to make sure that ICT materials are provided in a variety of languages in rural locations where pupils may speak numerous languages or dialects.

Furthermore, the success of using ICT in ESL classrooms comes from the behaviour of rural learners' when exposed to ICT-related items can be included as the challenges in implementing successful ICT-based intervention in ESL classrooms. This is related to Nikolopoulou's research in 2020 which revealed that other challenges discussed were learners' displays of aggression and struggling in controlling them, noise disturbance in the classroom, and distracted behaviour by learners. It could be due to the fact there was a disparity in parental support amongst pupils from various regions (Bacher-Hicks et al., 2021). This condition is very much related to the learners' educational and financial family background which hinders them to get the access of the ICT-tools that are needed for the purpose of learning. In regards to that, Zhao et al (2022) also noted that, in comparison to their urban counterparts, rural learners had lower levels of parental support, e-learning self-efficacy, and self-motivation, which contributed to the disparity in behavioural participation in e-learning. In support of that statement, an excellent e-learning system acceptance is likely to be greatly impacted by having adequate accessibility to e-learning resources minus technical problems or delays (Almaiah et al., 2020). Significantly, introducing ICT and encouraging the learners to become comfortable with it is an extra challenge for ESL teachers in Malaysia's rural schools, who already struggle to ensure that ELT is successful.

The vast amount of information presented in EL across the Internet can be disadvantageous to rural schools due to the gap in socio-cultural differences making it difficult for the learners to comprehend and relate to the content since they might not be culturally or contextually compatible. Olanrewaju et al (2021) draw attention to this in their study, stating that learners from rural or immigrant schools are more handicapped in their Internet usage position than those living in cities. Proper use of resources and materials is important when pedagogical and content considerations are made in connection to various educational situations (Rahim & Begum, 2014; Bui, 2022). Contextualised, localised, and indigenous educational resources that reflect the local way of life ought to be incorporated into any suitable setting as they helped learners connect the subject to their own cultural identities,

which kept them interested (Que, 2021). In Malaysian context, ESL teachers could broaden their learners' worldview by introducing them to a range of events, histories, peoples, and civilizations through culturally diverse literature which will also give them the opportunity to gain new perspectives on their own culture and enable them to reflect on it (Ukat & Ismail, 2022). Hence, ICT's effectiveness in terms of digital content for language acquisition may be diminished if it is not in line with the pupils' linguistic and cultural background.

Conclusion

The present study concludes that ICT-based interventions in rural primary schools indeed sparks interest in learning ESL among young learners by encouraging them to read more English materials. From this study, it is clear that ICT-based interventions can be advantageous because it makes the learners become more interactive and fosters a positive teaching-learning environment, which in turn helps students develop positive attitudes as they participate more in reading English materials.

The review also traced past discussions on challenges experienced by ESL teachers in their attempt to integrate ICT-based in Malaysian rural primary schools where the physical setting of the school plays an important role in determining the success of ICT interventions in learning. Moreover, the lacklustre of educational structures and amenities due to funding constraints, teachers lacked the pedagogical and technological skills necessary to successfully utilise technology in teaching, learners' unfamiliarity with the language of ICT appliances, digital information are not culturally or contextually compatible with learners in rural areas, gap in socio-cultural differences making it difficult for the learners to comprehend and relate to the digital content apart from readiness of young learners for e-learning are noted as the challenges.

This study contributes to the understanding that technology-based interventions enhance teacher productivity and efficacy in rural primary schools by providing individualized, engaging, and technology-rich educational experiences for young learners. Notably, the efficacy of educational technology to enhance the learning process of the English language will be made certain by increasing opportunities for practice following the implementation of technology-based intervention in rural primary ESL classrooms. The outcomes are consistent with what White and Downey (2021) stated, according to which every effective rural education innovation must have a certain set of resources—people, geography, and authority—that affect students' academic performance and instructors' motivation. Insights gained from this study may help policymakers, educators, and school administrators join forces to enhance English instruction in rural schools so that all learners, regardless of where they live, can take advantage of ICT for their educational pursuits.

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