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(IJEPC)**www.ijepr.com**ENHANCING ESL RURAL STUDENTS' SPEAKING SKILLS
THROUGH MULTIMEDIA TECHNOLOGY-ASSISTED
PROJECT-BASED LEARNING: CONCEPTUAL PAPER**Kennedy Yamil¹, Noraini Said^{2*}, Suyansah Swanto³, Wardatul Akmam Din⁴¹ Faculty of Psychology and Education., Universiti Malaysia Sabah, Malaysia
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The recent Covid-19 pandemic has changed and impacted the country's education landscape, a paradigm shift from face-to-face teaching and learning style into home-based learning and teaching (PdPR). During the period, teachers had come out with various teaching strategies to assess pupils' and some of these strategies are still relevant in this current post pandemic education. Speaking skills in the Malaysian Primary ESL classroom are five elements assessed in the Classroom-Based Assessment (CBA). The CBA achievement of a class in a rural school in Kudat, Sabah, showed that most students performed poorly in speaking skills. Based on the teacher's perspective as a researcher, the problem occurred due to the English Language's lack of exposure and usage. It is only spoken during an English class and not practised outside schooling hours. In this paper, the researcher aims to provide a literature review and past studies on enhancing primary ESL students' speaking skills through multimedia technology-assisted project-based learning. After investigating how multimedia technology-assisted project-based learning could improve the students' speaking skills from the literature review, the researcher proposes this study be carried out at a rural government school in Kudat, Sabah. This research aims to investigate students' speaking performance after the implementation of multimedia technology-assisted project-based learning.

**Keywords:**

Multimedia Technology-Assisted, Project-Based Learning, Speaking Skills, ESL Rural Students

Introduction

Integrating Information and Communication Technology (ICT) in teaching and learning is becoming more prominent in Malaysian schools. The recent Covid-19 pandemic has changed and impacted the country's education landscape, a paradigm shift from face-to-face teaching and learning style into remote learning via online (Ating, 2020). It is well known as the home-based learning and teaching (PdPR) among teachers in Malaysia (Nasir & Mansor, 2021). The use of digital technology and e-content is no longer a likely alternative as remote teaching has assimilated to become a new norm (Nasir & Mansor, 2021). We are in the era of digitisation of education (Embracing online teaching during the pandemic: New Straits Times, 2020). For that reason, teachers must strive to learn to use and adapt technology in their teaching to enhance teaching and learning especially in this 21st century classroom.

The Malaysia Education Blueprint 2013-2025 highlighted that student in schools learn how to use ICT and leverage it effectively to enhance their learning. As we are currently in Wave 3 (2021-2025) of implementing the blueprint, ICT should be fully embedded throughout the pedagogy and curriculum of the education system.

Technology integration is defined as how teachers perceive and use technology to perform teaching and learning activities more effectively and how technology can support the activity (Gilakjani, 2017). In this 21st century teaching and learning, teachers need to be flexible in improvising their teaching. They need to explore traditional and typical classroom methods and familiarise themselves with new methodologies in keeping with the present era. The use of technology will enhance classroom teaching and learning by "creating opportunities for learners to complete assignments on the computer rather than the normal pencil and paper" (Ahmadi, 2018, p. 117). It will help trigger and encourage students' critical and creative learning, thus attaining meaningful and holistic learning.

In this 21st century teaching and learning, the integration of Information and Communication Technology (ICT) in teaching and learning is no longer an option. However, it is a must regardless of the demography of the schools, be it urban, rural or remote rural. Moreover, student use of ICT is believed to have a positive impact on their learning as "it helps students in enhancing their collaborative learning skills as well as developing transversal skills that stimulate social skills, problem-solving, self-reliance, responsibility and the capacity for reflection and initiative" (Ghavifekr & Rosdy, 2014, p. 5).

Background of The Study

Rural primary schools have less exposure to the language because of their live setting where the English Language usage is not prominent. Due to that, English Language may even fall into a third language within the rural community. English is not considered a second language and is not used communicatively due to the frequent use of their native ancestral language in the rural community in Sabah (Ameirul, Suyansah & Sheikh Badrul, 2019). The only exposure

these rural students have are only 300 minutes a week of English class at school (Ameirul & Suyansah, 2017); thus, this will indirectly demotivate the students to learn the language (Zein, 2017).

In a rural school in Kudat, Sabah, through observation and interview, the researcher found out that his students are not interested in speaking in the language because there is no one to speak with other than the teacher. The media of instruction in the village are only their mother tongue and the Malay Language. Therefore, English is only seen as a subject taught in school that they need to pass in the written examination (Kashinathan & Aziz, 2021). These students cannot see the usage of the target language outside their classroom hours, which indirectly leads them not to be well-versed with the usage of the target language in real-life situations or tasks (Kashinathan & Aziz, 2021) and affects the student's achievement in the CBA. The achievement in the CBA of a class in that school also showed that most students performed poorly in speaking, reading and writing. English is demanding to master because students do not have many opportunities to practice what they have learned outside the classroom (Megawati, 2016)

Furthermore, challenges in education in rural areas may involve internet and communication access (Soe, 2018). This is the exact case scenario of the researcher's school. The lack of network coverage limits students in this community from assessing English media due to lack of network coverage. The economic status is also a factor where most families do not own a laptop or an advanced smartphone. Technological advances have not been as significant in this area as in the city.

One of the pedagogical approaches to engage students in a rural area in utilising ICT tools in language learning is multimedia technology-assisted project-based learning. Multimedia technology-assisted project-based learning will not only expose these students to ICT as visioned in the Malaysian Education Blueprint 2013-2025, but it would also provide them with a chance to conduct and work on a hands-on project that is real-life related which will encourage them to practice the target language outside their school hours. Furthermore, multimedia technology-assisted project-based learning could be utilised as one of the assessment tools for speaking for the CBA regardless of the teaching mode, whether in-class or remote teaching.

Literature Review

Project-Based Learning

The roots of project-based learning are reflected through Dewey (1986) philosophy, where students learn through discovery and experience through hands-on approaches (Williams, 2017). Project-based learning is a constructivist pedagogy that intends to bring about deep learning by allowing students to use an inquiry-based approach to engage with issues and questions that are rich, real and relevant to the topic being studied (Markham, 2012). Learning is based on several theoretical ideas: active construction, situated learning, social interactions, and cognitive tools, as cited in Miller & Krajcik (2019).

In short, project-based learning integrates knowing and doing in learning (Bhagi, 2017). Students apply their knowledge to produce a meaningful project instead of just answering test

papers and evaluating their studies based on their marks and grades from the written tests. Furthermore, it does not only support students in gaining deeper insights into their learning, but project-based learning is also acknowledged to have the capability of promoting social and emotional learning. Indirectly, project-based learning subsequently "contributes to developing students' creativity, internal motivation and interest, responsibility, communication skills with others, social skills, cooperation, and problem-solving ability" (Shin, 2018, p. 97).

Project-Based Learning is often described as an alternative to the traditional classroom-based learning of inactive learning and rotary memorisation (Dogara et al., 2020) as it provokes "the needed level of thinking to apply new knowledge in a problem-solving context" (Bhagi, 2017). The comparison between traditional classroom-based learning and project-based learning approach is summarised in Figure 1 and Figure 2.

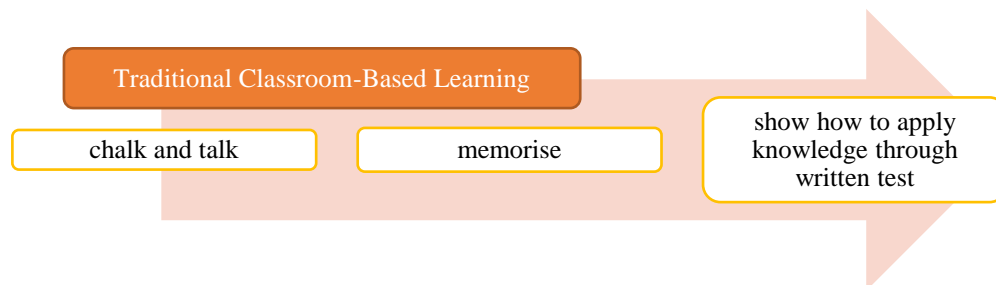


Figure 1: The Traditional Classroom-Based Learning Approach

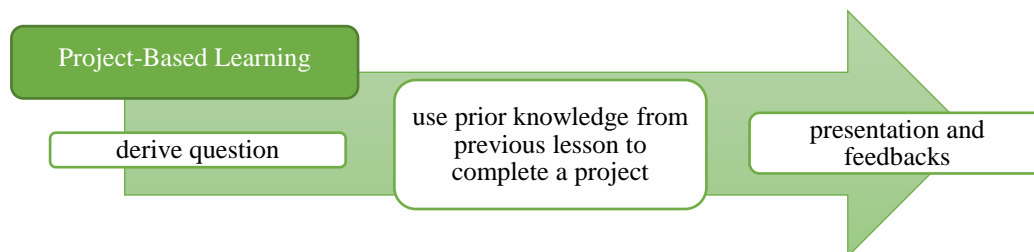


Figure 2: The Project-Based Learning Approach

In project-based learning, students are the centre of learning who learn actively to improve their competencies (Koparan & Guven, 2014). It is a method that places students at the pivot of the learning process (Nepal & Jenkins, 2011). Project-based learning focuses on training students for a successful life in a knowledge-based environment, in particular in the fields of problem-solving abilities, teamwork skills, communication skills, resource management skills and personal skills where the teacher usually present challenges in a project-based learning strategy which students need to address the issues together collaboratively in teams (Aldabbus, 2018). Students undertake a problem-solving venture via in-depth projects collaboratively with their peers.

The Integration Of Technology In Project-Based Learning

The integration of technology in project-based learning can be categorised into two: technology-supported or multimedia technology-assisted (Indrawan et al., 2018). In technology-supported project-based learning, the technologies are often used as communication tools, research tools, scaffolding tools, project management tools, and telecollaboration tools whereby in multimedia technology-assisted project-based learning, however, such technologies are often used as production tools that enable students to organise and present their research work through multimedia (Indrawan et al., 2018). The current research aimed to implement multimedia technology-assisted project-based learning. Students use multimedia devices and software such as computer tablets and video editor apps to create a multimedia project. By integrating technology in the Malaysian Education Curriculum through project-based learning, student communication, collaboration, creation, and critical thinking can be enhanced (Hoe et al., 2019).

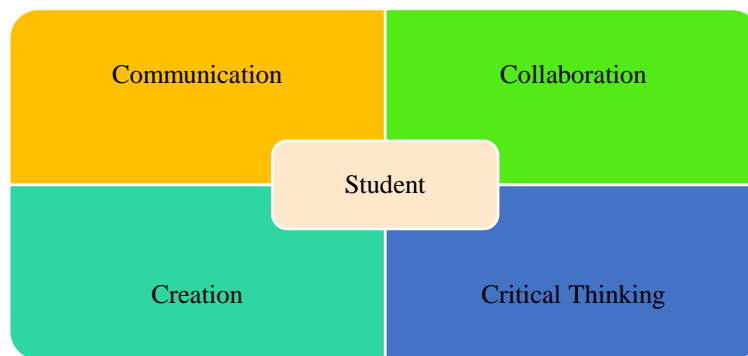


Figure 3: Technology In Project-Based Learning Will Enhance Students' Competencies In Four Aspects (Hoe et al., 2019).

Multimedia can be described as combining various digital media types, such as text, images, sound, and video, into an integrated multi-sensory interactive application or presentation to convey messages or information to the audience (Somjai & Soontornwipast, 2020). For example, users can combine text, audio, music, videos and pictures to create a multimedia project.

Teachers can assign students to develop a multimedia project which can be done individually or in small groups. This will improve students' knowledge and academic skills (Alismail, 2015) as they would do research on the topic given and search for materials to complete any multimedia project assigned.

The implementation of multimedia technology-assisted project-based learning can be put into action based on the syntaxes in the project-based learning model developed by Hosnan (2016) in Figure 4.

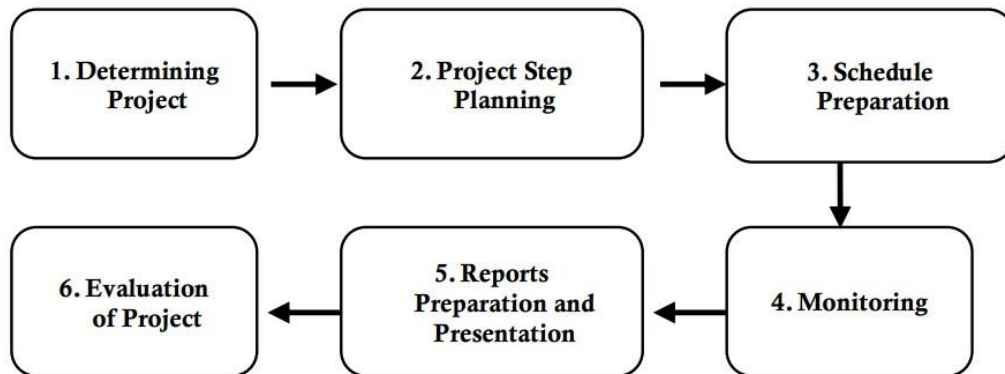


Figure 4: Syntaxes of Project-Based Learning by Hosnan (2016)

Determining Project

In this step, the students determine the topic of their video project based on the tasks instructed and derived by the teacher. To produce the multimedia project, the teacher will first provide the essential knowledge, such as the students' vocabulary.

Project Steps Planning

The teacher provides a video recording and editing course to the students, teaching them how to use multimedia tools and software.

Schedule Preparation

Teacher briefs students on the timeline of task completion. For example, the task could be done outside their classroom time.

Monitoring

The teacher will monitor and facilitate each group progress. The teacher will only act as a facilitator and guide students' whichever area needs to be guided.

Reports Preparation and Presentation

Presentation of their video in the class or to the web.

Evaluation of Project

The teacher evaluates each group's video. During this stage, students are allowed to talk about their experiences and reflections after completing the project.

Past Studies On Utilising Multimedia Technology-Assisted Project-Based Learning In The Classroom

Students plan, implement, reflect, and evaluate their project-based learning by working on authentic tasks, such as solving problems or tasks constructed based on real-world issues (Westwood, 2008). It will also elevate students' willingness in learning. Successful implementation of multimedia technology-assisted project-based learning can raise students' motivation in learning English by being fully involved (Childers, 2020; Hava, 2019; Shin, 2018; Clark, 2017).

Successful participation in project-based learning using multimedia has motivated them to learn and incorporate English vocabulary and the actual language when performing a team project (Shin, 2008). A study by Hava (2019) found out that there were significant improvements in students' self-confidence and personal use after the digital storytelling activity in her class. She also found out that digital storytelling could be beneficial for facilitating speaking skills in the target language. Childers (2020), in his research, found out that pronunciation would find great benefit in the implementation of the multimedia project. He also added that teachers could benefit from listening to students' pronunciation outside of class pressures and noting the difference between in-class and out-of-class pronunciation skills.

Another research integrating video projects could have rural schools by Santhi et al. (2019) found that students improve their English skills upon project completion. It can be noted that such a project could enhance students in language learning. Their research, however, also exposed the limitations of conducting the project. One of the limitations was the difficulties in creating and editing the video as it was their first time doing an ICT project. Nevertheless, the students were able to finish their videos on time. Besides that, some students also found difficulties composing the video in the target language; therefore, the researcher had to instruct L1 but a small portion. Despite the limitations, students were able to practice communicating in the target language. It gave students, particularly students in remote rural areas, a chance to utilise the English Language outside their classroom. Implementing multimedia projects such as videos would create fun and practical tasks and help students improve their speaking skills with less stress (Childers, 2020).

Research Procedure & Methodology

The research is expected to be conducted in three sequential phases: the pre-production phase, production phase and post production phase. The researcher is the teacher himself.

Pre-production phase (Week 1 – Week 2)

Before working on their project, students will be shown few samples of video blogging videos produced by the researcher and several videos from the YouTube or other video sharing websites. Besides that, they will also be exposed to the current lesson's vocabulary as a build-up for the project.

The researcher then conducts a video recording and editing course for students. The students are taught how to use the computer tablet provided to each group and manage and utilise the *Google Playstore* video editing apps such as *InShot*, *Kinemaster*, *Filmora Go*, *CapCut*, *Film Make Pro*, and *Splice*. Students will then plan and brainstorm their ideas through group discussion.

Production phase (Week 3 – 6)

The production stage will consist of two parts: video filming and editing. In this phase, students, in their own respective groups, conducts the recording and editing of their video at their own time, place and pace. The duration of their video will be 5-7 minutes. The researcher will only act as a facilitator.

Post production phase (Week 7 & 8)

The videos made by each group will be shown to the whole class upon completion. Data for the research will be collected in the phase. The researcher will be conducting qualitative research and the data will be collected through as the following:

- a. Survey questionnaires
A survey will be conducted to collect feedbacks from all students in the class to assess their opinions and attitudes toward the video project. The data from the questionnaire will be analysed using frequency counts.
- b. Group Interviews
The interviews will be conducted to understand students' views on the video project.
- c. Observation and Researcher's Journal
The researcher will observe and record students' behaviours while conducting the project in his journal. The video and student's speaking performance will be evaluated using the Performance Standards Guide for Year 4 Speaking Skills that is provided by Primary School (SK) Standard Curriculum for English Language Year 4, Curriculum Development Division of the Ministry of Education of Malaysia.

The Implementation of Multimedia Technology-Assisted Project-Based Learning in A Rural School

Since classroom time is limited, out-of-class practice that focuses explicitly on speaking is critical to provide more time for the practice (Childers, 2020). Therefore, giving tasks such as project-based learning would allow them to practice the language even after school. The project would be done collaboratively based on students' preferred time during the completion period.

Table 1 summarise the lesson plan for the multimedia technology-assisted project-based learning for Year 4 students. The theme and topic are adapted from their English textbook that the Ministry of Education of Malaysia provides, Get Smart Plus 4 (Mitchell & Malkogianni, 2019), while the module and skills are adapted from the Primary School (SK) Standard Curriculum for English Language Year 4 produced by the Curriculum Development Division of the Ministry of Education of Malaysia.

For this multimedia project, students create and craft a video on a food recipe of their choice. Students can choose whether to record a video or take photos and arrange them accordingly to make a reel. However, they must include their voice narration inside the video in order for the researcher to evaluate students' speaking ability. The focus of video evaluation would be on the student's pronunciation, the suitability of words, appropriateness of the language and the execution of the video editing. The students' speaking performance would be evaluated using the speaking skills' performance guide for Year 4 adapted from the Primary School (SK) Standard Curriculum for English Language Year 4 produced by the Curriculum Development Division of the Ministry of Education of Malaysia.

Table 1
Lesson Plan For The Multimedia Technology-Assisted Project-Based Learning

ENGLISH YEAR 4 LESSON PLAN (SAMPLE)	
YEAR	Year 4 (20 students)
SUBJECT	English Language
THEME	World of self, family and friends
TOPIC	Module 5: Eating right
MODULE	Speaking
SKILLS	<p>Content Standard:</p> <p>2.1 Communicate simple information intelligibly</p> <p>Learning Standard:</p> <p>2.1.3 Give a more extended sequence of basic instructions or directions</p>
OBJECTIVES	At the end of the lesson, students will orally give basic instructions for a food recipe.
TEACHING MATERIALS	(10) Computer tablets equipped with video and voice recorder and Google Playstore video editing apps (<i>InShot</i> , <i>Kinemaster</i> , <i>Filmora Go</i> , <i>CapCut</i> , <i>Film Make Pro</i> , and <i>Splice</i>), Get Smart Plus 4 Student's Book
PEDAGOGY (STRATEGY/TEACHING ACTIVITIES)	<p>Project-Based Learning Title: Food Recipe</p> <p>Week 1: The teacher introduces Module 5: Eating Right, where students are exposed to the lesson's vocabulary and the project.</p> <p>Week 2: The teacher divides students into nine groups and asks each group to prepare a digital story video on a food recipe of their choice based on their creativity.</p> <p>The teacher conducts a video recording and editing course for students. The students are taught how to use the computer tablet provided to each group and manage and utilise the <i>Google Playstore</i> video editing apps such as <i>InShot</i>, <i>Kinemaster</i>, <i>Filmora Go</i>, <i>CapCut</i>, <i>Film Make Pro</i>, and <i>Splice</i>.</p> <p>Week 3-6: In their respective group, students plan, record, edit and prepare their videos. The activity is to be done after school during their free time to not interfere with their other subjects. As these students live near each other and some stay in the school hostel, it is an advantage for them to gather and discuss. The researcher, who lives in the teacher's quarters, also has a</p>

	<p>flexible time monitoring and facilitating the students if they need any assistance.</p> <p>Week 7-8: Submission and presentation of each group's videos to the class. The videos would also be uploaded to a video sharing platform on the web.</p> <p>After the presentation, the teacher conducts a discussion and feedback session with the students. The discussion topics are their experience crafting the digital story video, the problems and challenges they encountered while completing the project, future improvement, and perhaps suggestions on future video topics.</p>
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Table 2
Performance Standards Guide for Year 4 Speaking Skills

PERFORMANCE LEVEL	DESCRIPTORS FOR SPEAKING SKILLS
1	<ul style="list-style-type: none"> • Can communicate simple information using fixed phrases with a lot of support. • Can manage interaction and classroom task by providing short and simple responses with a lot of support. • Can describe people and objects using fixed phrases with a lot of support. • Can narrate short basic stories with difficulty even with a lot of support.
2	<ul style="list-style-type: none"> • Can communicate simple information with a lot of support. • Can manage interaction and classroom task appropriately with a lot of support. • Can describe people and objects using basic statements with a lot of support. • Can narrate short basic stories with a lot of support
3	<ul style="list-style-type: none"> • Can communicate simple information clearly. • Can manage interaction and classroom task appropriately. • Can describe people and things using suitable statements adequately. • Can narrate short basic stories adequately.

4	<ul style="list-style-type: none"> • Can communicate simple information clearly by providing some relevant details. • Can manage interaction and classroom task appropriately by sustaining communication at times. • Can describe people and things clearly using suitable statements with very few relevant details. • Can narrate short basic stories clearly at an appropriate pace
5	<ul style="list-style-type: none"> • Can communicate simple information clearly by providing a lot of relevant details. • Can manage interaction and classroom task appropriately by sustaining communication most of the time. • Can describe people and things clearly using suitable statements with some relevant details. • Can narrate short basic stories with clear diction and articulation.
6	<ul style="list-style-type: none"> • Can communicate simple information with a lot of relevant details clearly and confidently. • Can manage interaction and classroom task appropriately by sustaining communication naturally. • Can describe people and things creatively using suitable statements. • Can narrate short basic stories creatively with clear diction and articulation. • Can display exemplary model of language use and guide others

Source: Primary School (SK) Standard Curriculum for English Language Year 4, Curriculum Development Division of the Ministry of Education of Malaysia

Conclusion

This strategy is expected to motivate rural students to speak in the target language, thus enhancing and improving their speaking skills. It is expected to provide adequate information and knowledge that could enhance the teaching and learning process and suggest the best teaching activity in encouraging and providing a platform for these rural students to practice speaking and communicating using the target language. They need to master the language as English is deemed one of the required skills in today's workforce. The findings and outcomes can contribute to the study.

In addition, one of the strategic and operational shifts stated in the Malaysian Education Blueprint 2013-2025 is to bridge the urban-rural digital divide in the country's schools. As this strategy promotes 21st-century learning skills and inculcates soft skills in using multimedia tools and software, this strategy could be one of the ways to promote the shifts mentioned. These skills should be mastered by rural students as their urban counterparts are more advanced with technologies.

Consequently, the use of technology is beneficial and advisable in language learning and teaching. Suppose utilising multimedia technology-assisted projects as project-based learning could improve rural students' speaking and communication skills. In that case, the strategy

should be promoted to enhance Malaysian Primary English as a Second Language classroom and an assessment tool for the CBA.

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