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Acceptance Factors Towards Mobile Technologies in Learning English among Rural Students

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***Abstract*—The rapid development in telecommunication leads to technology integration in many sectors, including education. The use of mobile technologies for mobile learning has been prevalent. Smartphones, laptops, and tablets are examples of mobile technologies that offer an extensive range of activities that can support teaching and learning English and reduce the need of users to remain close to wired communication technology. However, there is a need to study students' acceptance level towards such technologies in learning English mainly in rural areas. This study investigates acceptance factors that influence the integration of mobile technology in learning English for lower secondary students from a rural region in Malaysia. The survey aimed to gain students' perspectives towards the Technology Acceptance Model (TAM) constructs that are perceived usefulness, behaviour intention, perceived ease of use, perceived enjoyment and mobile technology usability. The participants of the study consisted of 61 lower secondary students in one of the rural schools in Johor, Malaysia. The findings show that students are aware of the use and benefits of mobile technologies for enhancing their learning experience and their confidence level. The integration of mobile technologies could serve as an essential pedagogical tool to implement mobile learning for the secondary students that will promote student-centred learning and instil 21st century skills that are communication, collaboration, creative thinking, and creativity known as 4Cs. Thus, teachers can develop and plan appropriate strategies to support the outstanding adoption of mobile technologies in an educational setting.**

***Keywords*—Acceptance factors, English subject, mobile technology, learning English, 21st century skills**

I. INTRODUCTION

In this 21st century, mobile technology plays an essential role as it becomes necessary and affects many sectors, including education, medication, communication, business and transportation [1]. Education has changed and revolutionised from teacher-based instruction to modern technology-based learning. It changed from a traditional textbook to interactive and captivating apps, from boring classrooms to smart classrooms and from silent learners to active learners [2]. The latest evolution of mobile technology leads to a challenging environment for educators, technology developers and learners to perceive and adopt this technology to access learning materials, learning content and establish communication between educators and learners [3].

Mobile technology can be an essential tool for educators and learners to create an attractive teaching and learning environment [4]. The adoption of various mobile technologies in teaching and learning English creates a new environment for educators and learners to access learning content and learning materials, as well as establish communication for both educators and learners [5]. The fascinating features of mobile technologies such as mobility, touch screen display, built-in camera, face to face interaction, video conferencing and transferring files with the Internet connection slowly change from teacher-based instruction to interactive and technology-based learning [6]. Conclusively, it creates a new atmosphere for teaching and learning English as a second language by adopting mobile technologies.

In addition, the nature of education has now transformed as most learners from primary to tertiary levels are from Generation Z who were born after 2000 and prefer to communicate through [7]. The most impressive characteristic of these learners is that they have been exposed to various technologies since born. In general, they need alternative methods in learning to ensure they are actively engaged in the learning process and maximise their learning satisfaction and

success in the 21st century learning environment [8]. Consequently, teachers or educators who use technologies in teaching and learning will indirectly motivate them and produce effective learning outcomes as technology plays a significant role in their learning process.

In Malaysia, the government has given a high priority to education development since its independence in 1957. Thus, in October 2011, the Malaysian government launched the 2013-2025 Malaysia Education Blueprint [9] and outlined several measures to be taken in this education transformation effort. One of the measurements has pertained to use the English language in the teaching and learning process by introducing a Common European Framework of Reference for Languages (CEFR) [10]. Different approaches and tools can be applied to raise students' motivation, attitude, and critical thinking during the learning process in line with the seventh shift in Malaysia Education Blueprint: Leverage ICT to scale up quality learning across Malaysia [11].

One potential alternative to achieve the 2013-2025 Malaysia Education Blueprint [9] is by applying mobile technologies in education. The learning process should be a meaningful experience for learners with the technology integration [12]. Learning the English language using mobile technologies keep the students engaged in the learning process, improve their proficiency and critical thinking. Besides, the findings of the study reveal a significant improvement in learners' behaviour and their performance with the adoption of technology [13]. Moreover, mobile technology could have a significant role to improve learning English [14, 15]. It can serve as a learning tool that helps engage learners' commitment to work independently with peer collaboration in reading activities, develop empathy and enhance their social ethics.

Integrating mobile technologies in learning English as a foreign language gives advantages to the learners to access the abundance of multimedia content in line with the implementation of extensive language learning strategies [16]. Integration of mobile technology in the learning process showed a better impact on speaking skills and improved their learning achievement to overcome students' anxiety [17]. Additionally, teaching and learning English with iPad mini and mobile applications for instance Popplet and Keynote able to foster creativity and critical thinking among rural students [18].

Rapid technological development in mobile technology has increased and significantly impacts society, mainly when the world faces an unprecedented challenge affected by the COVID-19 pandemic. The Digital 2022 Global Overview report shows that the number of unique mobile users worldwide is increasing to 5.31 billion in January 2022, up to 95 million users increase over last year [19]. The report also reveals that 92.6% of global Internet users access mobile devices. Over the past year, Internet users have surged 4%, which is 4.95 billion in January 2022. Apart from that, the ownership of mobile technologies such as smartphones and tablets has been increasing every year. This number reveals the tremendous increment of digital and internet users that shows the importance of these new technologies in society as they adapt to the challenges of the COVID-19 pandemic. Hence, students, teachers and school management will gain many advantages when adopting mobile technology in teaching and learning especially when the world facing the impact of the COVID-19 pandemic since early 2020.

The COVID-19 pandemic has changed the world's digital behaviours and impacted almost all aspects of lives. Mobile communication could assist the education sector by providing a teaching and learning environment and platform in encouraging interaction between educators and learners. During the COVID-19 pandemic, students' perception is highly optimistic in mobile learning using mobile communication and social media to pursue their study [20]. Various teaching strategies can be implemented by integrating mobile communication to develop significant learning activities during the COVID-19 pandemic.

Accordingly, this paper aims to investigate acceptance factors (perceived usefulness, behavioural intention, perceived ease of use, perceived enjoyment, and mobile technology usability) in using mobile technology at one of the rural secondary schools in Malaysia with the focus on learning English. The findings could reveal whether the five acceptance factors influence the mobile technology integration among the students and promote the 21st century skills (communication, collaboration, creative thinking, and creativity or 4Cs) to deliver different insights into learning English. This paper contains five sections. Section II presents the literature review and related works. Section III describes the survey and Section IV reports the analysis and findings from the conducted survey. Lastly, Section V concludes the study and recommends its future work.

II. Background And Literature Review

A. Education 4.0

Global connectivity, intelligent machine and new media are some drivers in Industry 4.0. Society adapted to be more social, more knowledgeable and the world became smaller than before because of the pervasive nature of the internet in the fourth industrial revolution [21]. Hence, Education 4.0 is a reaction to the urgency of Industry 4.0, where it creates new potential in the education landscape with the symbiosis of humans and machines [22]. Learning skills in Education 4.0 need to combine life skills and innovative skills with 21st-century skills; leadership, collaboration, creativity, digital literacy, effective communication, emotional intelligence, entrepreneurship, global citizen, problem-solving and teamwork [23].

Adopting these skills is the key element to encouraging learners to use intelligent agents, mobile technologies and cloud computing. Mobile technology can be an effective tool in Education 4.0 to shift teaching strategies to create a different atmosphere in learning English. The technology facilitates the learners to explore practical lessons through multimedia, social media, and educational applications [24]. Educators could apply various mobile learning theories that emphasize their roles with mobile technology [25, 26]. In addition, 4Cs which consists of communication, collaboration, critical thinking, and creativity are the 21st century learning skills that students should master and be competent for their future life [27].

B. Technology Acceptance Model

The success of the technology adoption in society is based on user acceptance. Technology Acceptance Model (TAM) [28] has been widely applied as a model to investigate user acceptance and usage of the technology in different contexts such as education [29, 30] and evaluation [31]. TAM proposes that when a new technology is introduced to users, several factors could influence their decision concerning when and how they will use it. In this study, TAM is used to identify acceptance factors concerning learning English using mobile technologies among the secondary students.

Two factors in TAM are Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PU is explained as the degree to which a person thinks that using a particular technology will improve their performance in completing specific tasks. PEOU is defined as a degree to which a person thinks that using a particular technology will be free of effort. The acceptance of students to use and adopt mobile technology for their learning is based on some different factors which are social influence, attitude, and behavioural intention [32]. Quality of learning could be enhanced by understanding these factors to motivate the adoption of mobile technology in the learning process. Besides, students' perceptions positively adapt to the use of mobile technology to support language learning [33].

A recent study shows that perceived ease of use is crucial in determining a person's attitude towards the technology [34]. Besides, perceived ease of use is reported significant with attitude [35] of students' behaviour when using Libyan higher education e-learning. This finding is in line with the study by [36], which found that perceived ease of use significantly influences the attitude of using the learning management system. In recent research, perceived ease of use is defined as students' perception of the effort needed in using media technologies for learning activities. Current researchers have found perceived ease of use positively affects behavioural intention of learners in using mobile technology [37, 38, 39].

C. M-Learning and Mobile Technology

Based on the existing studies, mobile technology integration in teaching and learning is also known as m-learning. According to [40], m-learning is a teaching and learning technique uses mobile and wireless technologies that take advantage of the learning opportunities and facilities offered by mobile technologies such as mobile phones, hand-held and tablets to improve the learning process. M-learning allows authenticated users to access different learning resources (audio, video, text, picture) anytime and anywhere. A study by [41] revealed that the application of m-learning will be vital for the coming years. The integration of mobile technology and mobile applications received positive responses from the students due to different learning experiences in learning engineering courses as well as increased their motivation [42]. This study takes an opportunity to investigate the use of mobile technology that will shape the future of the learning process by using mobile technology inside and outside the classroom, with and without internet access.

Mobile technologies are portable and handheld devices generally used in everyday life to support various tasks. Mobile technology can be classified into four dimensions; personal, shared, portable and static [43]. These technologies are used by people in different fields of life for different purposes and situations. With the advancement of technologies, the education field has integrated these technologies as an educational tool that can be used within and beyond the classroom. Hence, mobile technologies create an interactive learning environment by making learning content using videos and multimedia formats available through mobile devices such as tablets, handheld devices or smartphones [44].

The use of mobile technology in the learning environment can help learners increase their motivation and engagement, encourage the learners' creativity, support self-learning and collaborative learning, strengthen a sense of accountability and as a reference tool to facilitate the learning process [45]. Using this technology helps to create a better environment for the teaching and learning process. The critical success of the inclusion of mobile technology in the teaching and learning process depends on mobile learning readiness by the teachers as they must be well-planned and keep updating with the technology [46] and their essential role during the process. Teachers must be provided with professional development and supportive training to ensure the effectiveness of mobile technology integration during the learning process [47].

A combination of technology and collaborative learning is significant for developing social experiences. Collaborative learning is a teaching method where learners achieve the learning objectives by learning together as a group and helping each other during the learning process [48]. The adoption of mobile technology encourages learners to participate actively, build interaction with the educator and increase performance and engagement during the learning process [49]. Besides, the acceptable use of technology for both learners and educators will lead to increase the learning process. Framework for the Rational Analysis of Mobile Education (FRAME) model was proposed to acquire learners, social and the mobile technology aspect as a study focus [50].

Technology integration in education using tablet devices makes a difference in the way students learn as the technology in tablet devices is equipped with audio, video and interactive games that can create an exciting new environment. Thus, mobile devices' physical characteristics create satisfaction for users as they can interact with the device quickly, comfortably and portability. Previous studies highlighted acceptance factors in mobile learning and mobile technology integration for English subject [51, 52] where learners were fully assisted face to face by the teachers during the learning process. As the situation changed because of the COVID-19 pandemic, this study helps to understand the acceptance factors of mobile technology integration in learning English among rural secondary students.

D. Mobile-Assisted Language Learning

According to [53], Mobile Assisted Language Learning (MALL) refers to language learning conducted for formal or informal settings mediated with mobile technologies such as mobile phones or tablets. MALL can provide learners with a rich learning environment inside and outside the classroom and

potentially supports collaborative task-based learning. Early generations of MALL tend to focus on text messaging for vocabulary enrichment and grammar quizzes that lead to the learners as receivers of the knowledge instead of the explorer. With the advancement of mobile technology, MALL changed the role of learners to become the centre of attention and independence, also swift the role of teachers to the facilitator [54].

Recent studies show MALL is being used in teaching English to enrich the vocabulary [55], improve listening skills [56], reading skills [57], listening and speaking skills [58] and writing skill [59]. Nowadays, learners live in a rich environment of digital methods that changed communication deliverables. Therefore, to encourage and improve teaching and learning English for reading skills, learners must be given an opportunity to experience mobile technology as an educational tool with various features and possibilities for information retrieval and sharing.

E. Mobile Learning Theories for Learning English

Along with the development of mobile learning or m-learning, researchers raised many learning theories to create a basis to understand how learners use the information during the learning process, how knowledge develops and how learning occurs. Different learning theories impact the learning environment differently and provide different instructional practices and methods. Mobile learning theories are studied to identify the fundamental cognitive process in teaching and learning English, focusing on reading skills through multimedia in mobile technology that can be conducted with or without internet access. Six mobile learning theories found from the literature give a brief explanation of the use of mobile technology in each theory [60].

In the behaviourists learning paradigm, learning focuses on changing learners' behaviour by associating stimuli and responses [61]. Teachers use mobile technology to stimulate students using knowledge illustration, students respond to the learning materials and the mobile application equips suitable response and feedback to the students as reinforcement [62]. Using mobile technology integrated with mobile applications could enhance the behaviourist learning process.

Constructivist learning on language refers to a paradigm where students create and be responsible for their knowledge in a social context that leads to behavioural transformation and the final result to individual language development [63]. Applying this theory, learners actively construct new ideas, knowledge, or concepts based on combining their current and prior knowledge. In the real world, mobile technologies are used as supporting tools to motivate and encourage students to create their new knowledge and transform from inactive students to active constructors of knowledge in the learning process [64].

Situated learning concerns with the task and activities that support learning within an authentic context and culture [65]. In an education context, social interaction, participation and collaboration are the essential components that present knowledge in authentic circumstances and learners participate in a community of practice. Mobile devices could be used with a context-aware application such as using a tablet with Augmented Reality (AR) as a scaffolding strategy to learn English idioms [66].

Mobile devices feature allows learners to share files and messages, audio recording, create videos and online discussions that lead to higher satisfaction in mobile groups [67]. Collaborative learning concerns learning activities that promote social interaction in groups to solve the problem or complete the task to achieve the learning target [68]. Collaborative learning is combined with five elements: interdependence by the group members, individual responsibility, peer interaction, small group skills and group management [69]. Thus, teachers play an important role in ensuring that all elements are implemented during the teaching and learning process.

Informal and lifelong learning promotes that learning can happen anywhere, anytime and not depending on a formal curriculum. Mobile technology features like portability create learning on the go that produces advantages for lifelong adult learners. For instance, English language learning using mobile apps significantly influences Chinese adult learners. Now, informal and lifelong learning seems acceptable as it allows learners to control what, where and when they want to learn [70].

F. Theoretical Framework

The framework used for this study is adopted from TAM [28] and FRAME (Framework for the Rational Analysis of Mobile Education) model [50] as it used to analyse computer usage behaviour and acceptance that lead to explain the user's behaviour of end-user computing technology. According to [28], perceived usefulness represents a person's thought on using technology that would benefit the learners in developing their learning performance. When learners find that the technology is helpful for them, they will consider implementing the technology appropriately. [71] state that perceived usefulness has been regularly noticed as crucial in using a particular technology.

TAM explains that user acceptance of information technology and usage in a social context. TAM was proposed that when new technology is introduced to users, several factors influence their decision concerning when and how they will use it. In its original model, some constructs are perceived usefulness (PU), perceived ease of use (PEOU), attitude towards using, behavioural intention and actual use. Fig. 1 shows a FRAME model [50] that highlights mobile learning as an active component that comprise a device, learner and social aspect while Fig. 2 shows the TAM model that measures users' acceptance of the adoption of the mobile technology. Hence, this study focuses on identifying students' acceptance of mobile technology in teaching and learning English by referring to FRAME model [50] and TAM [28] as the basis.

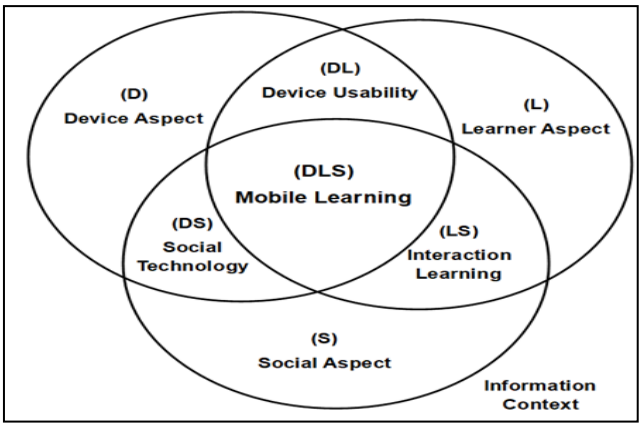

Fig. 1. FRAME model [50]

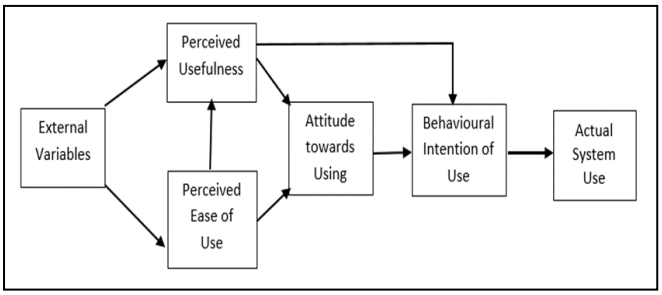

Fig. 2. Technology Acceptance Model [28]

III. The Survey

The survey has applied a questionnaire method to collect students' acceptance when using mobile technologies in learning English. The findings can help teachers motivate students to accomplish their learning activity anytime and anywhere by incorporating 4Cs elements. The development of the question structure includes six steps: (i) determine the information to be sought, (ii) specify individual question content for each section, (iii) select the response format for each question, (iv) specify the number of questions and the sequence, (v) re-test the steps and revise if needed and the last step is to test the questionnaire and revise it if needed [72].

The self-administered Google form questionnaire consists of 32 questions targeted at lower secondary students who have experienced learning English using mobile technologies. The preparation of the questionnaire was based on procedures from the previous study and the CEFR guideline. The study was conducted in one of secondary schools in Johor, Malaysia where 61 students were selected from the 243 lower secondary students.

The information was collected during the Movement Control Order (MCO) in Malaysia due to the COVID-19 pandemic between September until October 2020. During the MCO, all educational institutions were closed and students faced the challenging situation as teaching and learning could not be conducted in the classroom. The way to deliver teaching and learning English has changed through online educational programs on their own mobile devices at home. Thus, the survey managed to investigate the acceptance factors of using mobile technologies as one of the ways to implement teaching and learning besides face-to-face delivery in the classroom even after the MCO period.

The questionnaire comprises six sections that applies the Likert scale to assess the respondents' attitudes towards the questions. The 5-point Likert scale was from strongly disagree to strongly agree (strongly disagree = 1, disagree = 2, neutral = 3, agree = 4 and strongly agree = 5). The questionnaire was distributed to the students using the Google form and the students were asked to read the questions carefully and provide their responses for all statements in the questionnaire. The data is based on their experience using mobile technology in learning English.

The analysis for this study uses a set of statistical techniques for data preparation, data description and scale analysis. Then, descriptive statistics in terms of frequency, percent, mean, and standard deviation were performed using SPSS Version 26. The main objective of the survey was to assess students' acceptance and compliance with mobile learning using mobile devices. Table I shows the questionnaire structure that consists of six sections. Section 2 until Section 6 are related to TAM constructs and each section encloses the detailed question for each construct. Table II shows the questionnaire details with the code listing represented by Q-Code for each question.

TABLE I. Questionnaire Structure

Section	Description	No. of Questions
1	Demographic Data	5
2	Perceived Usefulness (PU)	10
3	Behaviour Intention (BI)	3
4	Perceived Ease of Use (PEOU)	5
5	Perceived Enjoyment (PE)	5
6	Mobile Technology Usability (MTU)	4

TABLE II. Questionnaire Details

Q-Code	Question
Section 1: Demographic Data	
1-Q1	Gender
1-Q2	Age
1-Q3	Class
1-Q4	Type of mobile device used.
Section 2: Perceived Usefulness (PU)	
2-Q1	Using mobile technology (smartphone, iPad, tablet or laptop) in learning the English language can improve my learning performance.
2-Q2	Using mobile technology in learning the English language motivates me to complete my task.
2-Q3	Using mobile technology can help me enrich my vocabulary.

Section 2:	**Perceived Usefulness (PU)**
2-Q4	Using mobile technology can help me understand better in learning the English language.
2-Q5	Mobile technology is an effective tool for listening activity.
2-Q6	Mobile technology is an effective tool for reading activity.
2-Q7	Mobile technology is an effective tool for a writing activity.
2-Q8	Mobile technology is an effective tool for grammar activity.
2-Q9	Mobile technology is an effective tool for a speaking activity.
2-Q10	Mobile technology helps me acquire more learning materials in learning English.
Section 3: Behavioural Intention (BI)	
3-Q1	I plan to use mobile technology in learning English.
3-Q2	I would like to recommend others to use mobile technology in learning English.
3-Q3	I will enjoy using mobile technology in learning English.
Section 4:	**Perceived Usefulness (PU)**
4-Q1	I think mobile technology is easy to use.
4-Q2	Using mobile technology is easy to find what I want.
4-Q3	It is easier to understand the topic using educational applications through mobile technology.
4-Q4	It is easy for me to develop my skill in using mobile technology.
4-Q5	Overall, using mobile technology is easy to use.
Section 5:	**Perceived Enjoyment (PE)**
5-Q1	I can be a creative person while using mobile technology in learning English.
5-Q2	Using mobile technology is fun.
5-Q3	Learning the English language using mobile technology is interesting.
5-Q4	I like learning the English language using multimedia resources through mobile technology.
5-Q5	Doing English exercise using mobile technology is great.
Section 6:	**Mobile Technology Usability (MTU)**
6-Q1	Mobile technology has all the functions and capabilities I expect to make learning easier.
6-Q2	I can complete my homework or project using mobile technology.
6-Q3	I can complete my work quickly by using mobile applications on mobile technology.
6-Q4	The educational application in mobile technology effectively helps me complete the task.

IV ANALYSIS AND FINDINGS

The responses were analysed using the question codes specified in Table II, declared in Q-Code = {1-Qn, 2-Qn, 3-Qn, 4-Qn, 5-Qn and 6-Qn}. Descriptive data in terms of frequencies, percentages, means, and standard deviations were performed to analyse the responses. The analysis of respondents' demographic is presented in Table III.

The respondents were 61 lower secondary students from different classes who experienced online learning using their mobile technologies. The male respondents made up 37 participants (61%), while 24 (39%) are female. Besides, 35 (57%) respondents are 14 years old, and 26 (43%) respondents are 15 years old. The respondents comprise three classes which are Form 2A, Form 2B and Form 3A. Most of the respondents are from 3A which comprise 26 participants (43%), 21 (34%) respondents are from 2A and 14 respondents (23%) from 2B. Based on the result on types of devices used, 36 respondents (59%) used smartphones for their online learning.

Purposive sampling was used for data collection from the selected Form 2 and Form 3 students who were from one of the rural secondary schools in the Southeast Johor region. While the sample size for the evaluation phase was too small to generalize the findings, the sample size decisions were made based on time-constraints [73]. The findings can provide valuable insight into the body of research on the integration of mobile technology in teaching and learning English for secondary students and also might have same impact on the upper secondary students.

TABLE III. DEMOGRAPHIC OF RESPONDENTS

Characteristics		**Frequency**	**Percent**
Gender	Male	37	61%
	Female	24	39%
	Total	61	100%
Age	14 years	35	57%
	15 years	26	43%
	Total	61	100%
Form and class code	2B	14	23%
	2A	21	34%
	3A	26	43%
	Total	61	100%
Types of mobile device used	Smartphone	36	59%
	Tablet	9	15%
	iPad	5	8%
	Laptop	11	18%
	Total	61	100%

For the questions in Section 2 until Section 6, the responses are in 5-point Likert scale, and the rating is presented by percentage, mean and standard deviation. The value using mean and standard deviation (STDEV) is presented to show the pattern of data distribution. The analysis for Section 2 of the questionnaire indicates students' perceived usefulness as shown in Table IV.

TABLE IV. STUDENTS' PERCEIVED USEFULNESS

Code	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	STDEV
2-Q1	0	0	3	84	13	4.10	0.40
2-Q2	0	2	0	84	15	4.11	0.45
2-Q3	0	0	2	77	21	4.20	0.44
2-Q4	0	0	3	72	25	4.21	0.49
2-Q5	0	0	0	39	61	4.61	0.49
2-Q6	0	0	0	23	77	4.77	0.42
2-Q7	0	0	0	25	75	4.75	0.43
2-Q8	0	0	0	25	75	4.75	0.43
2-Q9	0	0	5	75	20	4.15	0.48
2-Q10	0	0	3	62	34	4.31	0.53

Note: SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

The analysis shows that 84% of the respondents agree with the statements 2-Q1 and 2-Q2 that using a mobile technology to learn English can improve their learning performance in the English language and motivate them to complete their school projects or homework. Statements 2-Q3 shows that 77% of the respondents agree that using mobile technology can enrich their vocabulary, while 72% of the respondents agree for statement 2-Q4 that they can understand English better by using mobile technology in learning English. The response for statement 2-Q5 reveals that 61% of the respondents strongly agree that mobile technology is an effective tool for listening activity while 77% of the respondents also strongly agree with statement 2-Q6 that reading activity can be effective by using mobile technology.

In addition, statements 2-Q7 and 2-Q8 share the same finding shows that 75% of the respondents strongly agree that mobile technology is an effective tool for writing and grammar activity. For statement 2-Q9, only 20% of the respondents strongly agree that mobile technology is an effective tool for speaking activity and in statement 2-Q10, 62% of the respondents agree that mobile technology helps them acquire more learning materials in learning English.

Behavioural intention (BI) is the extent to which an individual or a user has planned to complete specific behaviour in the future [74]. Table V shows that most of the students strongly agree that their intention to use mobile technology to learn English is high. The analysis shows that 52% of the students strongly agree with statement 3-Q1 that they plan to use mobile technology in learning English. Besides, for statement 3-Q2, 56% of the respondents also strongly agree that they recommend mobile technology to others. Finally, for statement 3-Q3, 57% of the respondents will enjoy using mobile technology in learning English.

TABLE V. STUDENTS' BEHAVIOUR INTENTION

Code	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	STDEV
3-Q1	0	0	0	48	52	4.52	0.50
3-Q2	0	0	0	44	56	4.56	0.50
3-Q3	0	0	0	43	57	4.57	0.50

Note: SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Table VI presents students' perceived ease of use towards mobile technology in learning English. Statement 4-Q1 presents that 87% of the respondents agree that mobile technology is easy to use. The analysis shows that 4-Q2 and 4-Q3 have shared the same rating that 77% of the respondents feel that it is easy to find what they want using mobile technology and make them better understand the topic. Statement 4-Q4 reveals that 67% of the respondents agree that it is easy for them to develop their skills in using mobile technology. Statement 4-Q5 shows that 90% of the respondents strongly agree that mobile technology is easy to use.

TABLE VI. STUDENTS' PERCEIVED EASE OF USE

Code	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	STDEV
4-Q1	0	0	0	87	13	4.13	0.34
4-Q2	0	0	7	77	16	4.10	0.47
4-Q3	0	0	7	77	16	4.10	0.47
4-Q4	0	0	0	67	33	4.33	0.47
4-Q5	0	0	0	10	90	4.90	0.30

Note: SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Table VII presents the analysis of students' perceived enjoyment of using mobile technology in learning English. Statement 5-Q1 shows that 85% of the respondents agree that they can be creative while using mobile technology. This finding supports 4C elements in terms of creativity that allow students to embrace their inner strength in the learning process. Statement 5-Q2 presents that 70% agree that using mobile technology is fun, while 52% of the respondents agree for statement 5-Q3 that learning English using mobile technology is fascinating. 51% of the respondents strongly agree for statement 5-Q4 that they like to learn English using multimedia resources through mobile technology and for statement 5-Q5, 70% of the respondents strongly agree that doing English exercise using mobile technology is a great activity.

TABLE VII. STUDENTS' PERCEIVED ENJOYMENT

Code	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	STDEV
5-Q1	0	2	3	85	10	4.03	0.45
5-Q2	0	0	0	70	30	4.30	0.46
5-Q3	0	0	0	52	48	4.48	0.50
5-Q4	0	0	0	49	51	4.51	0.50
5-Q5	0	0	0	30	70	4.70	0.46

Note: SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Table VIII implies students' perception of mobile technology usability towards their learning process. Usability is used to measure the utility of an application or technology and become critical issue in mobile apps [75]. 61% of the respondents (mean of 4.26) agree with statement 6-Q1 that mobile technology has all functions need to make their learning more accessible. 69% respondents agree with statement 6-Q2 that they can complete their homework using mobile technology and 56% of respondents strongly agree they can complete it quickly. Statement 6-Q4 shows that 57% of them agree that educational application installed in mobile technology effectively helps them complete the homework.

TABLE VIII. MOBILE TECHNOLOGY USABILITY

Code	SD (%)	D (%)	N (%)	A (%)	SA (%)	$\bar{x}$	STDEV
6-Q1	0	0	7	61	33	4.26	0.57
6-Q2	0	0	7	69	25	4.18	0.53
6-Q3	0	0	7	38	56	4.49	0.62
6-Q4	0	0	10	57	33	4.23	0.62

Note: SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Hence, the study implies that mobile technology could be a useful learning tool for students at the secondary level specifically among these learners from a rural region in Johor, Malaysia as it enhances engagement and learnability mainly during the MCO that they had to study online from their home. The analysis and findings have investigated how far the identified acceptance factors from previous studies could influence the students to accept the integration of mobile technology in learning English. Fig. 3 presents the mean values of the five acceptance factors: PU (mean=4.44), BI (mean=4.55), PEUO (mean=4.44), PE (mean=4.44) and MTU (mean=4.29) that reflect all factors achieve the rating between "agree" to "strongly agree". BI shows the highest mean value (4.55).

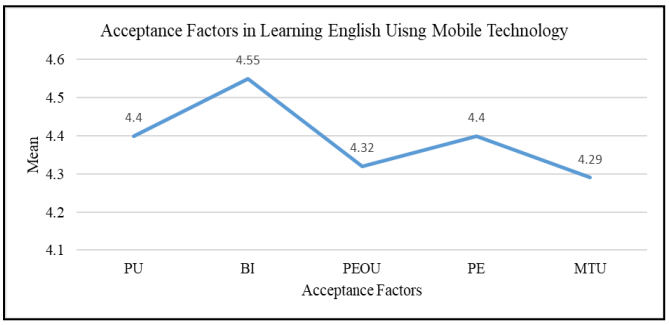

Fig. 3. Mean value of the acceptance factors

Based on the analysis for students' perceived usefulness or PU, the students believe that using mobile technology can help and enhance them to perform and complete their tasks during the learning process. For behaviour attention or BI, it acts as an indicator to predict the students' intention to use mobile technology to help them increase their learnability in English subject. The analysis implies that students' perceived ease of use or PEOU is an essential determinant in making mobile technology to be perceived as a useful learning tool and would be effortless. Besides, it can be deduced that students' perceived enjoyment or PE is essential to predict mobile technology acceptance in the learning process. In general, those factors are crucial to promote the implementation of the 4Cs elements in 21st century teaching and learning skills, as stated in the Malaysia Educational Blueprint 2013-2025 guidelines [9].

IV. CONCLUSION AND FUTURE WORK

Mobile technology captures unprecedented opportunities and challenges for teaching and learning environments. The use of mobile technology in teaching and learning has been increasing due to COVID-19 pandemic. The idea was to make sure students can pursue their lessons even they have to stay at home. In general, students' acceptance in the selected rural region in Johor, Malaysia were optimistic about the way teaching and learning were conducted by integrating mobile technology when learning at home during the MCO.

The study aims to evaluate the acceptance factors of mobile technology adoption in learning English by the selected lower secondary students. It measured and evaluated the mobile technology usage in teaching and learning English. The significant finding of this study is that behaviour intention towards the use of mobile technology strongly influenced the students to use the mobile technology for learning English during the MCO. Simultaneously, the survey provides suggestion and evaluation based on the students' preferences to improve their learning performance.

In summary, understanding the driving factors that influence the use of mobile technology could give insights mainly to teachers on how to enhance the quality of teaching and learning English subject. It also allows students to explore their potential in improving their communication, analytical skills, creativity, and leadership. Therefore, students can gain benefits from technology-based pedagogical and enrichment teaching aids.

The study contributes to the body of knowledge by providing additional information on the area of understanding the acceptance of mobile technology inclusion in teaching and learning English for secondary students. The positive findings among rural students are helpful in later stage of the related studies. In brief, mobile technology and its associated technologies are the essential components to implement and sustain mobile learning. Both learners and educators need to get themselves aware and acquainted with educational technology rapid changes. For future work, this study will explore more related works regarding acceptance factors that lead to the implementation of 4C skills to support 21st century learning and not limited to learning at home as surveyed during the MCO period.

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