

Enhancing E-Learning Readiness among Aboriginal Learners in the Digital Age

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DOI Link: <http://dx.doi.org/10.6007/IJARPED/v14-i4/26206>

Published Online: 14 October 2025

Abstract

In the evolving digital education landscape, understanding the readiness of Aboriginal learners for e-learning is vital for fostering inclusive and effective learning environments. This study explores key factors influencing e-learning readiness among Aboriginal learners through semi-structured interviews with seven educators experienced in teaching Aboriginal learners. Using the Unified Theory of Acceptance and Use of Technology (UTAUT) as a guiding framework, the educators identified five key dimensions essential for enhancing Aboriginal students' e-learning readiness: course design, course communication, time management, technical competence, and institutional readiness. They further underscored the need for culturally relevant content, adaptable learning schedules, inclusive communication strategies, and robust institutional support to effectively address the socio-cultural and technological challenges faced by Aboriginal learners. The findings underscore the need for a holistic and culturally sensitive approach to e-learning, involving community engagement, professional development for educators, and improved digital infrastructure. Recommendations include increasing funding for technology access, enhancing educators training in cultural responsiveness, and integrating Indigenous perspectives into curriculum design. This study contributes to advancing educational equity by identifying key factors and offering practical strategies to enhance e-learning readiness among Aboriginal learners in the digital age.

Keywords: Aboriginal Education, E-Learning, Digital Literacy, Indigenous Perspectives, UTAUT

Introduction

The advent of technology has had a profound impact on individuals' personal and professional endeavours, leading to a globalised society where geographical limitations no longer hinder interpersonal and inter-organisational communication (Tan et al., 2019). Likewise, the field of Information and Communication Technology (ICT) has brought about substantial reforms that have yielded positive effects and introduced a novel trend within the education system (Roztocki et al., 2016). In recent years, the integration of technology into education has

transformed the learning landscape, offering new opportunities for students and educators alike.

A study by Singleton et al. (2009) indicated that Aboriginal elders perceived digital technology as a means for young people to maintain cultural traditions while integrating contemporary innovations into the community, thereby enhancing the amplification of Indigenous voices across time and distance. Digital technology has been positively embraced by numerous Aboriginal communities.

Additionally, some students require assistance in engaging with digital learning, a disparity evident both internationally and across different income levels within nations (Basar et al., 2021). These students require improved access to the internet and technology. A prevalent and regrettable misconception exists regarding Aboriginal learners' access to the internet upon returning home. Aboriginal learners encounter numerous obstacles in accessing online education, including slow internet connections, lack of coverage in rural areas, and the inability to afford personal devices such as smartphones and laptops (Noor & Razak, 2022). Consequently, they may become disinterested in attending school and engaging in learning due to insufficient motivation. A significant number of individuals favour engaging in leisure activities at home. Some secondary boys engage in manual labour (Hussin, 2021).

Although Aboriginal learners' ICT proficiency is comparatively low, a previous study by Yusoff et al., (2021) showed that Aboriginal teachers are very knowledgeable about digital media and how to use it. Digital media usage by school instructors is relatively high. It was discovered that the students demonstrated a keen interest in various enjoyable activities (Yusoff et al., 2021). Aboriginal's parents also understood the value of education. Due to their low educational attainment, most parents of Aboriginal students cannot assist their children with their schoolwork. The circumstances encourage them to send their children to city schools and abdicate all parental responsibility for their education (Harun et al., 2020). Therefore, this study aims to examine the e-learning readiness of Aboriginal learners by drawing on insights from semi-structured interviews with educators who have direct experience teaching them. Specifically, the study seeks to (i) identify the key factors influencing Aboriginal students' readiness for e-learning, (ii) explore the challenges and opportunities educators face in fostering readiness, and (iii) propose strategies for creating culturally responsive and sustainable e-learning environments. Drawing on the experiences of seven teachers who work closely with Aboriginal students in Malaysia, the study provides insights that are both focused and experience-based insights. To guide this investigation, the Unified Theory of Acceptance and Use of Technology (UTAUT) is adopted as the conceptual framework. UTAUT provides a lens to examine how factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions shape Aboriginal learners' engagement with digital technologies. By applying this theoretical foundation, the study aligns its exploration with a well-established model of technology adoption while contextualising it within the unique cultural and educational realities of Aboriginal communities.

Literature Review

Aboriginal Education

Malaysia is a multicultural nation consisting of diverse ethnic groups, including Malays, Indians, Chinese, and the indigenous peoples of Peninsular Malaysia, Sabah, and Sarawak.

The Aboriginals represent the Indigenous population of Peninsular Malaysia, with an estimated count of 215,215 as of 31 December 2023 (Jabatan Kemajuan Orang Asli [JAKOA], 2023). The phrase "Orang Asli" in Malay translates to "Original People," referring to the earliest inhabitants of the Malay peninsula. The majority established their residence in the dense, isolated rainforest (Wahab & Mustapha, 2015). Aboriginals are generally recognised as part of the Asian community. The Aboriginal population can be categorised into three primary groups: Senoi, Proto-Malay, and Negrito, along with eighteen sub-groups (JAKOA, 2023).

Since the establishment of its formal primary school in 1952, Aboriginal education has experienced significant progress. Studies indicate that Aboriginal educational achievement has not aligned with national progress (Nor et al., 2011; Rabahi et al., 2016). Despite substantial governmental support, concerns persist regarding the dropout rates and underperformance of Aboriginal students in primary education (Rabahi, 2018). Among the factors mentioned are the accessibility of schools and the challenges faced by Aboriginal learners as they adapt to the official educational system. Non-attendance, although decreasing, continues to be a primary concern, while dropout rates remain elevated during the transition from primary to secondary education (Smith et al., 1998).

A significant factor contributing to low academic achievement among Aboriginal students is the effectiveness of teaching and learning strategies employed in classrooms (Othman et al., 2011). The diversity of Aboriginal students regarding cognitive abilities and cultural backgrounds contributes to this gap. Consequently, the approaches to learning and teaching Aboriginal students require modification (Wahab & Mustapha, 2015).

Therefore, attaining better levels of education within the Aboriginal community is also a sign of the country's Aboriginal community's educational change and progress. Education will foster a knowledgeable community, empowering the Aboriginal population to engage confidently with other nations. To achieve this goal, it is crucial to enhance awareness of education for learners and the parents or guardians within the Aboriginal community to foster more meaningful engagement (Rabahi, 2018).

Online Learning (e-learning)

Online learning, or e-learning, refers to educational methods facilitated through digital technology. These methods integrate visual graphics, text, animations, videos, and audio. Moreover, online pedagogy can enhance group learning and provide support from educators in particular subjects (Amir et al., 2023). This study defines online learning as a pedagogical process involving interaction between educators and students through various digital platforms, including 'WhatsApp', 'Zoom', and 'Google Classroom' (Basar et al., 2021). Additionally, online learning encompasses more than just direct instruction. Assignments or activities assigned by the educator through online platforms are regarded as components of online learning. Ma'Mun et al. (2021) assert that in the digital age, the utilisation of ICT enables students to acquire and implement essential 21st-century skills. Furthermore, online learning serves as the most effective medium for maintaining the continuity of students' educational processes during the COVID-19 pandemic (Adnan et al., 2018; Ariffin & Letchumanan, 2020; Basar et al., 2021; Mansor et al., 2014; Rudin & Kamaruddin, 2023). According to Sari (2015) online learning serves as an alternative pedagogical approach in the

context of technological advancement and communication, necessitating adaptation by students.

Teacher's Perspectives on E-Learning

Online teaching is increasingly recognised as a necessary method of education (Kim & Bonk, 2006). Traditional discipline-based teaching is transitioning from the classroom to online platforms (Luo et al., 2017). The perception of online teaching among teachers across various subjects significantly influences the quality of both teaching and learning (Nambiar, 2020). E-learning has gained significant traction in Malaysia, highlighting the necessity for Aboriginal students to have equitable access to quality education.

Numerous criteria were used in empirical research to evaluate technical preparedness for online instruction. Johnson & Brown (2017) assert that acceptance can be influenced by demographic variables, personality traits, and overarching attitudes and perceptions regarding technology. Eslaminejad et al. (2010) utilised pedagogical knowledge, attitudes, skills, and readiness of habits. The study analysed system quality, information quality, service quality, system use, user satisfaction, and net benefit (Eslaminejad et al., 2010). Research has identified that the main factors influencing educator readiness for e-learning include attitude, technology competency, pedagogy, training, and time constraints (Phan & Dang, 2017). Ventayen et al. (2018) identified several significant factors, including technical skills, experience with online teaching and learning, attitudes towards online learning, and time management and commitment. Mishra et al. (2021) identified skills, motivations, resources, time, and politics as factors influencing readiness. Alea et al. (2020) identified several factors: knowledge and skills, technology, communication, media usage, time management, and pedagogical content and methods. This study diverges from the prior research conducted by Basilaia and Kvavadze (2020), which examined educators' preparedness for online teaching through pedagogical and technical dimensions. Instead, it employs the Technology Acceptance Model (TAM) to assess teachers' readiness for online instruction.

The understanding the teacher's perspective is essential in developing effective e-learning strategies for Aboriginal students in Malaysia. Thus, this research considering course design, course communication, time management, technical competency, and institutional readiness, educational institutions can create inclusive and culturally responsive e-learning environments. This teacher-focused approach acknowledges the challenges faced by educators and highlights the importance of providing the necessary resources, training, and support to ensure equitable access to quality education for Aboriginal students. Through collaborative efforts between teachers, administrators, and policymakers, e-learning can become a powerful tool in empowering and enriching the educational experiences of Aboriginal learners in Malaysia.

Methodology

Research Design

In this study, a qualitative research design is employed as the primary methodological approach. Qualitative research is chosen for its ability to delve deeply into the intricate aspects of the research topic (Lim, 2024). This methodology aims to provide a rich and nuanced understanding of the factors that impact the adoption of e-learning among Aboriginal students.

The decision to use a qualitative approach is grounded in the complexity and multifaceted nature of the research subject (Lim, 2024). The adoption of e-learning in Aboriginal communities is influenced by a multitude of cultural, social, and educational factors. A qualitative methodology is well-suited to explore these factors in depth, allowing for a comprehensive examination of the unique challenges and opportunities faced by Aboriginal learners in the digital age.

To structure and guide the semi-structured interviews, the Unified Theory of Acceptance and Use of Technology (UTAUT) model is employed. This theoretical framework is well-regarded for its ability to explore the dynamics of technology adoption by considering various factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions (Marikyan & Papagiannidis, 2023). By aligning interview questions with the UTAUT model, this research intends to uncover the specific elements within this framework that is significant in the context of Aboriginal e-learning readiness.

Sampling

The sample consists of teachers from diverse backgrounds and experiences, ensuring a comprehensive understanding of the topic. The choice of teachers as key informants is deliberate, as they are at the forefront of the educational process and possess valuable insights into the challenges and opportunities faced by Aboriginal students in the realm of e-learning. A total of 7 key informants were chosen based on their roles as teachers for Aboriginal students. The selection aimed to include a variety of perspectives and experiences. Potential interview candidates were contacted via both email and phone to arrange for interview meetings.

Data Collection

Face-to-face and semi-structured interviews were chosen as the most effective approaches for obtaining comprehensive insights into the factors affecting e-learning adoption among Aboriginal students. These methods facilitated flexible questioning and promoted open expression of participants' views (Ruslin et al., 2022). The interviews were conducted in a neutral setting, devoid of external stimuli. Questions were not distributed beforehand; however, a general outline of topics was provided two weeks prior to the official interview.

Interview Process

The recommended number of interview participants ranges from 8 to 15, with fewer participants required when multiple interviews are conducted per individual or when the group is notably homogenous (Hill et al., 2005). In this study, seven key informants were selected based on their roles as teachers for Aboriginal students. Potential interview candidates were contacted through email and phone to schedule interview meetings. The interviews had a duration ranging from 45 to 110 minutes. An open-ended questioning technique was utilised to examine the factors influencing e-learning adoption among Aboriginal students, guided by the UTAUT Model.

All interviews were audio recorded, and informed consent for both the interview and the recording was obtained prior to their initiation. Recording the interview enables the researcher to focus on participants' responses and allows the interviewer to ask additional questions. The interviews were transcribed verbatim within 48 hours of their occurrence.

Table 1 summarises the key informants interviewed during the data collection phase, detailing their gender, delivery method, years of teaching, and prior online teaching experience.

Table 1
Summary of Key Informant interview

Key Informant	Gender	Delivery Method	Years of teaching
Key Informant 1	Male	Hybrid	More than 10 years
Key Informant 2	Female	Synchronous	More than 10 years
Key Informant 3	Male	Synchronous	More than 10 years
Key Informant 4	Male	Asynchronous & Synchronous	3-5 years
Key Informant 5	Female	Asynchronous & Synchronous	More than 10 years
Key Informant 6	Female	Asynchronous & Synchronous	More than 10 years
Key Informant 7	Female	Asynchronous	More than 10 years

Data Analysis

Data analysis consisted of two main phases: preliminary data analysis and thematic analysis (Lim, 2024). Preliminary data analysis was conducted after each interview to identify emerging issues, potential themes, gaps in the data, and directions for future research. This iterative process improved data quality and guided question revisions.

Thematic analysis, the second phase, was conducted after all interviews were completed. According to Lim, (2024), it involved reading and reviewing all interview transcripts to identify and underline sections where teachers described the significance of various factors, such as course design, course communication, time management, technical competency, and institutional readiness in improving Aboriginal e-learning.

The methodology employed in this study allowed for a comprehensive exploration of the research topic, drawing from the rich insights of educators working with Aboriginal students.

Discussion

The interview-based approach provided valuable insights into the factors influencing the readiness of Aboriginal students for e-learning. Key informant 1- 7 were asked for their view on the subthemes and the findings. The discussions with teachers working with the Aboriginal students shed light on the significance of course design, course communication, time management, technical competency, and institutional readiness in improving Aboriginal e-learning readiness.

Course Design

Effective course design is essential for engaging Aboriginal learners in the e-learning environment (Tessaro & Restoule, 2022). It goes beyond just structuring a curriculum; it encompasses the careful consideration of how the course content is delivered and the inclusivity of the design. Teachers and instructional designers should prioritise culturally relevant content, allowing them to integrate Aboriginal perspectives, histories, and traditions into the curriculum (Tessaro & Restoule, 2022).

Furthermore, designing interactive and multimodal learning experiences can cater to the diverse learning styles often found among Aboriginal students, ensuring inclusivity and engagement (Tessaro & Restoule, 2022). Interactive elements like discussion forums, collaborative projects, and multimedia resources can make the learning experience more dynamic and appealing.

Key Informant 2 emphasized the need for e-learning method to incorporate a variety of learning activities and assessments to cater to diverse learning styles. Similarly, Key Informant 5 and Key Informant 6 highlighted the importance of course design in attracting and engaging Aboriginal learners in online education, emphasising that a one-size-fits-all approach does not work and that courses should respect their culture and interests (Key Informant 5, Key Informant 6).

“E-learning method should incorporate a variety of learning activities and assessments to cater to diverse learning styles.” (Key Informant 2)

“Course design is absolutely vital when it comes to attracting and engaging Aboriginal learners in online education. Aboriginal students often come from diverse cultural backgrounds and face unique challenges and learning preferences. Therefore, a one-size-fits-all approach doesn't work.” (Key Informant 5)

“To attract Aboriginal learners to online education, we need to make sure our courses respect their culture, engage their interests, and are flexible enough to fit their unique circumstances.” (Key Informant 6)

Furthermore, it is essential to acknowledge that Aboriginal communities frequently encounter difficulties associated with geographical isolation and restricted access to technology (Tan et al., 2019). Consequently, course design must emphasise flexibility to address these challenges. Providing synchronous and asynchronous learning options, enabling offline access to materials, and ensuring a user-friendly platform, particularly on mobile devices, are essential for success (Tessaro & Restoule, 2022).

In conclusion, effective course design is not merely about modifying existing courses but reimagining education delivery to be culturally sensitive, inclusive, and responsive to the unique circumstances and aspirations of Aboriginal communities (Tessaro & Restoule, 2022). The goal is to create a learning environment that respects diversity, celebrates culture, and empowers Aboriginal learners to thrive in the digital age.

Course Communication

Clear and effective communication is a linchpin in facilitating Aboriginal e-learning readiness (Wahab & Mustapha, 2015). It is not limited to the exchange of information but encompasses creating an environment where learners feel connected, supported, and valued. Establishing regular channels of communication is crucial, encouraging open dialogue among learners and instructors, and creating a sense of community (Wahab & Mustapha, 2015). Additionally, incorporating Indigenous ways of communication, such as storytelling or oral traditions, can go a long way in enhancing the connection between learners and course materials, fostering a deeper understanding of the subject matter (Tippeconnic, 2000).

Key Informant 7 supported this view by emphasising that effective course communication enhances the educational experience and ensures that the unique needs and perspectives of Aboriginal learners are acknowledged and respected (Key Informant 7). Effective communication method in e-learning should be inclusive, catering to diverse learning styles and communication preferences, including oral and visual traditions (Wahab & Mustapha, 2015).

“Course communication is a vital component of online learning, particularly when working with Aboriginal students. Effective communication not only enhances the educational experience but also ensures that the unique needs and perspectives of Aboriginal learners are acknowledged and respected.” (Key Informant 7)

However, it is important to acknowledge that Key Informant 3 highlighted that course communication is not just about enhancing the educational experience but also about addressing the distinctive challenges that Aboriginal students may encounter in online learning (Key Informant 3). Aboriginal students may face unique challenges, such as limited access to technology or remote learning environments. Effective course communication can be used to identify and address these needs (Key Informant 3).

“Course communication is instrumental in addressing the distinctive challenges that Aboriginal students may encounter in the realm of online learning. It allows us to not only recognise these challenges but to actively work towards solutions that accommodate their needs.” (Key Informant 3)

In summary, effective course communication is vital for accommodating the needs of Aboriginal learners and ensuring their success in the e-learning environment (Wahab & Mustapha, 2015). It serves as a bridge that connects learners with instructors and their peers, fostering a supportive and inclusive learning atmosphere.

Time Management

Time management is essential for Aboriginal learners who may face unique time constraints due to remote locations or limited access to resources (Tan et al., 2019). Teachers should provide flexible scheduling options, clear guidelines on task deadlines, and personalised support for time management (Othman & Hashim, 2024). This ensures that Aboriginal students can balance their educational pursuits with other responsibilities (Othman & Hashim, 2024).

Key Informant 1 stressed the importance of flexibility in course scheduling and assignment deadlines to accommodate Aboriginal students' cultural obligations and responsibilities (Key Informant 1). Key Informant 3 also emphasised the role of effective time management in optimizing the use of available resources and navigating potential technological barriers (Key Informant 3).

“Aboriginal students may face time constraints due to cultural obligations and responsibilities. Flexibility in course scheduling and assignment deadlines should be provided to accommodate the Aboriginal students. This will help them effectively manage their time and balance their educational pursuits with other responsibilities.”

"In remote Aboriginal communities, access to technology and the internet can be limited. Effective time management ensures that students optimise the use of available resources and navigate potential technological barriers efficiently, making the most of their learning time." Time management is of paramount importance when teaching online learning to Aboriginal students. Effective time management allows students to adapt to diverse learning styles, respects their cultural perspectives on time, and helps them overcome procrastination (Othman & Hashim, 2024).

Technical Competency

Technical competency plays a crucial role in ensuring a seamless e-learning experience for Aboriginal students. Teachers should receive appropriate training and support to effectively navigate digital platforms and troubleshoot technical issues. Providing accessible and user-friendly resources, along with step-by-step instructions can empower Aboriginal learners and reduce technological barriers (Othman & Hashim, 2024).

Technical competency for teachers working with Aboriginal learners extends beyond conventional digital skills. It requires the ability to adapt technology to the cultural context, facilitate digital literacy among students, and create e-learning experiences that honour Indigenous knowledge. As the digital landscape continues to evolve, the role of technical competency in enhancing e-learning for Aboriginal students becomes increasingly critical (Basar et al., 2021).

The digital divide may hinder Aboriginal students' access to e-learning resources. Limited access to technology, internet connectivity, and digital literacy skills can create barriers for Aboriginal students. Efforts should be made to bridge this divide by providing necessary infrastructure, devices, and digital skills training (Othman & Hashim, 2024).

Key Informant 2 and 4 agree on:

"School should offer training and support, that can ensure teachers are well-equipped to navigate digital platforms and address technological challenges"

While Key Informant 5 and 7 agree on:

"School should provide accessible resources, and step-by-step instructions are vital for reducing barriers and facilitating a seamless e-learning experience"

Key Informants 2 and 4 emphasised the critical role of comprehensive training and support provided by schools. They believe that equipping teachers with the necessary skills to effectively navigate digital platforms and address technological challenges is essential. This perspective highlights the importance of ongoing professional development to maintain and enhance technical competency among educators.

Similarly, Key Informants 5 and 7 underscored the importance of providing accessible resources and step-by-step instructions. They noted that these elements are crucial for reducing technological barriers and ensuring a seamless e-learning experience for Aboriginal students. Accessible and user-friendly materials can empower both teachers and students, fostering a more inclusive and effective educational environment.

Collectively, the respondents stressed the need for continuous professional development programs tailored to enhance technical competency. By offering robust training and support, educational institutions can ensure that teachers are proficient in using digital tools and can efficiently troubleshoot technical issues. Additionally, providing accessible resources and clear instructions is vital for minimising barriers and facilitating an engaging and uninterrupted e-learning experience for Aboriginal students.

It can be concluded that availability of infrastructures, including reliable internet connectivity and access to devices remains a significant challenge, particularly in remote Aboriginal communities (Noor & Razak, 2022). Efforts to bridge the digital divide and ensure equitable access to technology are essential to support Aboriginal students' participation in e-learning.

Institutional Readiness

In the realm of e-learning, institutional readiness encompasses a multifaceted approach that goes beyond the mere availability of technology. It entails a comprehensive commitment by educational institutions to cultivate an inclusive and culturally sensitive environment that is conducive to successful e-learning implementation, particularly for Aboriginal learners (Wahab & Mustapha, 2015).

Central to institutional readiness is the provision of support systems tailored to the unique needs of teachers working with Aboriginal students (Wahab & Mustapha, 2015). These support systems are anchored in the belief that e-learning initiatives should not only be accessible but also culturally relevant and responsive. As quoted below to elucidate this perspective, Key Informant 2 highlighted the expectation of adequate infrastructure, resources, and administrative support in creating an inclusive and supportive e-learning milieu.

Key Informant 2 stated that, *"Educational institutions need to demonstrate readiness and commitment to e-learning in Aboriginal education. We expect adequate infrastructure, resources, and administrative support to create an inclusive and supportive e-learning environment."*

Key Informant 2 also stated that infrastructure underscores the importance of having the necessary technological infrastructure in place. This includes not only hardware such as computers and internet access but also software and platforms that support e-learning. Without a solid technical foundation, e-learning initiatives can face significant hurdles.

Resources, according to Key Informant 2, refer to the materials, tools, and content required for effective e-learning. This includes culturally relevant learning materials and content that align with the needs and preferences of Aboriginal learners. It also encompasses resources for teachers' training and professional development.

Key Informant 2 also highlighted the importance of administrative support for the successful implementation of e-learning. It involves policies, guidelines, and leadership that actively promote and facilitate e-learning initiatives. Administrative support can set the tone for the institution's commitment to creating an inclusive and supportive e-learning environment.

Key Informant 4, however, have a different point of view, where it stated that: *"In order to enhance institutional readiness for e-learning implementation, we recommend increasing*

funding allocations for technology infrastructure, expanding professional development opportunities for teachers." (Key Informant 4)

The call to increase funding allocations underscores the financial requirements of e-learning initiatives (Hu & Raman, 2024). This includes investments in technology, content development, and ongoing maintenance. Adequate funding is crucial for ensuring that institutions can meet the diverse needs of Aboriginal learners and provide them with a high-quality e-learning experience.

Expanding professional development for teachers is also pivotal in equipping educators with the skills and knowledge needed to effectively teach in an e-learning environment. This includes training on e-learning platforms, culturally responsive teaching strategies, and the way to address the unique challenges that may arise when working with Aboriginal students in a digital context (Wahab & Mustapha, 2015).

Conclusion and Implications

The research aims to understand the factors influencing Aboriginal students e-learning readiness, focusing on course design, course communication, time management, technical competency, and institutional readiness. Interviews with teachers provide insights into developing culturally relevant e-learning environments. Key findings emphasise the importance of culturally relevant course content, effective communication methods, flexible scheduling to accommodate cultural obligations, culturally sensitive technical support, and institutional commitment to inclusivity. The study underscores the need for a holistic approach involving educators, institutions, and the integration of Aboriginal perspectives to create an inclusive e-learning environment.

From the interview findings, there are some recommendations proposed. First, educational institutions should provide comprehensive training programs that focus on cultural competency and sensitivity in e-learning. Teachers need to be equipped with the knowledge and skills to incorporate Aboriginal perspectives and traditions into their teaching practices.

Secondly, collaboration between educational institutions and Aboriginal communities is essential for effective e-learning initiatives. Involving community members in the design and development of e-learning programs ensures cultural relevance, community input, and support.

Thirdly, institutional support systems should be established to provide ongoing assistance to Aboriginal students in the e-learning environment. This includes academic support, technical support, counselling services, and mentorship programs tailored to address the specific challenges faced by Aboriginal learners.

Lastly, a collaboration effort among educators, administrators, and Aboriginal communities is crucial for creating a supportive and empowering e-learning environment. Partnerships with Aboriginal organisations such as JAKOA, community leaders, and stakeholders can contribute to the development and implementation of culturally responsive e-learning initiatives.

By implementing these recommendations, educational stakeholders can enhance e-learning readiness among Aboriginal students and foster an inclusive and empowering e-learning environment that respects their cultural identities and supports their educational aspirations.

Acknowledgement

This work was supported by the Ministry of Higher Education, Malaysia, through the Fundamental Research Grant Scheme (FRGS), under the project code of FRGS/1/2022/SS0/UNITEN/03/1

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