

Exploring the Role of ICT in Promoting and Preserving Kadazan-Dusun Culture

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ABSTRACT

ICT has transformed daily life, but many cultures risk being forgotten as technology advances and values shift. While ICT use in cultural heritage is growing, communities need to take the lead in using it for preservation. For ICT to support cultural preservation, it must be accessible and provide platforms for documentation and sharing. Although the government has invested heavily in ICT in Malaysia, indigenous communities in Sabah, like the Kadazan-Dusun, have not benefited equally, raising concerns about their ability to preserve their culture using ICT. This paper investigates (1) the determinants of ICT adoption in cultural preservation and (2) how it impacts Kadazan-Dusun culture. A mixed-method approach with a sequential explanatory design was employed, beginning with quantitative data collection from 400 respondents, followed by qualitative data from in-depth interviews with 12 key informants. Descriptive and regression analyses were used to examine the ICT adoption determinants, while thematic analysis explored its impacts. Findings indicate that social influence (SI) has the strongest significant influence on cultural preservation within the Kadazan-Dusun community, highlighting the community's reliance on social networks to drive technological engagement for preserving cultural heritage. The interviews reveal that ICT adoption positively supports cultural preservation efforts by facilitating easier documentation, sharing, and promotion of cultural practices through various digital platforms despite the challenges posed by modernization and limited resources. The study underscores the importance of integrating cultural factors into technology adoption models, such as UTAUT. It highlights the role of social influence

and facilitating conditions, such as enhancing ICT accessibility and affordability and providing skills training, to enable successful ICT adoption for cultural preservation among the Kadazan-Dusun community.

ARTICLE INFO

Article history:

Received: 08 March 2024

Accepted: 19 November 2024

Published: 27 February 2025

DOI: <https://doi.org/10.47836/pjssh.33.S1.03>

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Keywords: Culture, Information and Communication Technology (ICT), Kadazan-Dusun, preservation, UTAUT

INTRODUCTION

The rapid advancement of ICT over the past decade has significantly impacted cultures and indigenous communities worldwide, many of whom still face severe poverty and lack basic necessities (United Nations, 2003). Native communities grapple with land rights, language, and cultural preservation issues while experiencing discrimination in accessing technological tools within a globalized context (Ashraf et al., 2015). In Malaysia, there has been significant government investment in ICT infrastructure. However, the Kadazan-Dusun community has not fully benefited from these advancements in terms of cultural preservation. The Kadazan-Dusun community struggles with cultural preservation due to modernization (Chong, 2015), language shift (Lasimbang & Kinajil, 2000), external influences, and intergenerational disconnection (Adam et al., 2021; Cosmas et al., 2019). It could be due to several barriers, including limited access to technology, lack of digital skills, and minimal community engagement in ICT adoption for cultural purposes (Affendi, 2024). As a result, the community risks losing its cultural heritage in the face of rapid technological change.

This study addresses key gaps in the literature by focusing on ICT adoption for cultural preservation in the context of an indigenous community in a developing country, Malaysia. Specifically, it explores the determinants of ICT adoption among the Kadazan-Dusun community in Sabah, Malaysia, and examines how ICT usage

impacts the preservation of their cultural heritage. By integrating cultural factors into the widely used Unified Theory of Acceptance and Use of Technology (UTAUT) model, this study provides new insights into how social influence, facilitating conditions, and access barriers shape ICT adoption in culturally rich but technologically underserved communities. Furthermore, it addresses the lack of empirical data on how indigenous groups utilize ICT for cultural preservation. It offers a novel contribution to developing countries' technology adoption literature and cultural studies.

Cultural Preservation

Cultural preservation is crucial for maintaining a community's identity and heritage by safeguarding traditions, values, and practices passed down through generations. Without these efforts, cultural elements risk disappearing and eroding community identity (Hutson et al., 2024). As societies modernize, their cultural norms and practices often change. King (1993) noted that traditional culture is dynamic, adapting and evolving with modernization to meet contemporary needs. While older generations may uphold traditional practices, younger generations, particularly millennials, may not adhere as closely. Technological advancements have influenced cultural evolution, shifting how traditions are practiced and taught. Historically, cultural education was passed down orally from elders, but now, people of all ages can learn about their culture and

others through the Internet. Communities actively promote their heritage online, often with pride (Jati, 2023).

ICT is critical in safeguarding and enhancing cultural heritage but also a double-edged sword. Numerous studies have found that ICT has a positive impact on cultural preservation, particularly in terms of facilitating access to cultural resources, improving cultural education, and fostering cultural exchange and collaboration (Banfi et al., 2019; Fang et al., 2021; Gizzi et al., 2019; Khong et al., 2021; Manikowska, 2022).

Sabah, a Malaysian state known for its abundant natural and human resources and culturally diverse population, faces the threat of language loss due to migration, changing attitudes, education, social dynamics, and economic pressure (Ali, 2010). The Kadazan-Dusun community, Sabah's largest ethnic group, continues to face development challenges, political hegemony, and ongoing marginalization (Puyok & Bagang, 2011). Amid these challenges, the Kadazan-Dusun community has struggled to preserve its cultural heritage.

Chong (2015) found that Kadazan-Dusun traditional musical instruments are gradually disappearing due to the rise of modern instruments. Cosmas et al. (2019) emphasized that while efforts to preserve these traditions remain, more community and organizational involvement is needed to raise awareness, especially among the younger generation. Similarly, Adam et al. (2021) discovered that Dusun and Bajau youths, influenced by foreign cultures through mass media, are becoming detached

from their Indigenous heritage, which discourages them from learning their own culture (Tang & Gavin, 2016).

Alpeus and Hussain (2018) found that social media significantly impacts cultural heritage, particularly folklore, among youth engaged with entertainment platforms. Aslom (2019) found that while some traditional Kadazan wedding practices, such as sogit pitas and nopung payment, are still practiced in Kampung Maang, others have been modified or discontinued to fit modern contexts.

Unified Theory of Acceptance and Use of Technology (UTAUT)

This research integrates the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003), commonly used in Information Technology adoption studies. A limitation of UTAUT is its focus on individual-level factors, overlooking broader social, cultural, and institutional influences on technology adoption (Bozan et al., 2016; Joa & Magsamen-Conrad, 2021; Magsamen-Conrad et al., 2020). Olushola and Abiola (2017) emphasize the importance of community participation and addressing cultural issues for successful technology diffusion

The UTAUT model identifies four key factors in determining user acceptance and use of technology to fit the context of cultural preservation: performance expectancy, effort expectancy, social influence, and facilitating conditions.

Performance Expectancy refers to the degree to which individuals believe using

ICT will help them achieve better outcomes. This study captures how the Kadazan-Dusun community perceives ICT as a tool for enhancing cultural preservation efforts, including documentation, dissemination, and promotion of their cultural heritage.

Effort Expectancy reflects the perceived ease of using ICT. For the Kadazan-Dusun community, where digital literacy levels may vary, this variable examines how the complexity or simplicity of ICT tools affects adoption for cultural purposes.

Social Influence refers to how others influence individuals' decision to adopt technology. This variable is particularly significant in the Kadazan-Dusun context, where community norms, peer influence, and the guidance of family members or elders play a strong role in decision-making processes.

Facilitating Conditions assesses the availability of resources and support required to use ICT. In the context of the Kadazan-Dusun community, this variable captures the practical factors, such as access to the Internet, hardware, software, and skills training, that either enable or constrain the community's ability to use ICT for cultural preservation.

The UTAUT model is particularly well-suited for studying ICT adoption in cultural preservation because it accounts for technical factors, such as performance and effort expectancy, and social dynamics, like social influence and facilitating conditions. In a close-knit community like the Kadazan-Dusun (Grace, 2021), social influence plays a crucial role in shaping collective

decisions on technology adoption, making the model ideal for capturing how peers, family, and community leaders drive ICT usage. Additionally, the model's emphasis on facilitating conditions, such as access to resources and digital skills, helps address the practical barriers faced by resource-constrained communities. It makes UTAUT a comprehensive framework for examining the factors influencing ICT adoption for cultural preservation.

METHODS

This study employed a mixed-method approach using sequential explanation. In the initial stage, the researchers collected and analyzed quantitative data on the factors influencing ICT adoption. Subsequently, qualitative data were collected to delve deeper into the participants' perspectives, providing nuanced explanations and interpretations of the quantitative results. This design was selected because it allows for a comprehensive understanding of ICT adoption, particularly in a community-driven context like the Kadazan-Dusun, where quantitative data can highlight key factors, and qualitative interviews can explore the cultural nuances behind those findings.

This study was conducted in Penampang and Ranau, Sabah. The first data collection phase occurred in Penampang from 14 December 2021 to 25 December 2021, while the second phase occurred in Ranau from 8 August 2022 to 14 August 2022. Penampang was chosen because it has a significant Kadazan-Dusun population, while Ranau

was selected for its large number of Dusunic speakers (John, 1996; Jolius, 2023).

Due to logistical challenges in accessing a dispersed population, 400 participants were selected using convenience sampling from Penampang and Ranau based on their familiarity or proficiency with technology. Convenience sampling was chosen due to the practical constraints of accessing specific populations within the Kadazan-Dusun community, especially given the logistical challenges of conducting research in rural and geographically dispersed areas. However, the use of convenience sampling introduces potential biases, as the sample may not fully represent the broader Kadazan-Dusun population. Efforts were made to include diverse respondents from different geographical areas and age groups.

The primary data collection instrument for the quantitative phase of this study was a structured questionnaire developed based on validated scales from previous research on ICT adoption, particularly those adapted from Sarjit et al. (2019). The questionnaire was divided into two sections: the first focused on factors influencing ICT adoption, while the second examined the impacts of ICT adoption on cultural preservation. The items in the questionnaire were specifically tailored to the cultural context of the Kadazan-Dusun community and were designed to measure key variables derived from the UTAUT model. A forward and backward translation process was employed to ensure the validity of the translated questionnaire. First, a bilingual expert translated the

questionnaire from English to Malay, followed by a back-translation by a different expert to identify any discrepancies. Subject matter experts reviewed the translation for cultural appropriateness, and a pilot test was conducted with a small sample from the Kadazan-Dusun community. Based on the feedback, minor adjustments were made to ensure the clarity and cultural relevance of the translated items, thereby enhancing the validity of the instrument.

A reliability test was conducted on 78 questionnaire items, revealing a Cronbach's Alpha of 0.916 for 21 items in Section A (Factors Influencing ICT Adoption) and 0.974 for 57 items in Section B (Impacts of ICT Adoption on Cultural Preservation). According to George and Mallery (2003), Cronbach's Alpha value above 0.7 is acceptable, indicating satisfactory internal consistency.

Descriptive analysis was used to summarize demographic data and quantify the mean of ICT adoption factors and their impacts on cultural preservation. Multiple regression analysis identified factors influencing ICT adoption for cultural preservation in the Kadazan-Dusun community

Data collection included in-depth interviews, which continued until information saturation was achieved or at the informants' request. The qualitative phase involved twelve key informants with expertise in cultural preservation, ensuring valuable insights were gained to mitigate potential biases. Their identities were anonymized using pseudonyms. Key

themes were noted, and interviews were transcribed for analysis. NVivo software was used to organize data into categories or “nodes.” Relevant quotes were categorized and assigned to corresponding nodes, followed by thematic analysis to identify patterns and themes in the data, aiding in the interpretation of qualitative data. The findings from both data sets were integrated by comparing the quantitative results with qualitative insights, allowing the thematic analysis to explain and contextualize the statistical findings, offering a comprehensive understanding of ICT adoption in the Kadazan-Dusun community.

RESULTS

Respondent’s Background

The respondents’ profile indicates that both genders constitute a significant segment of the total sample, with males representing 53.75% and females 46.25%. About 51.5% of respondents completed their primary to secondary level education, while only 29.8% pursued tertiary education for diploma, bachelor’s degree, and Master/PhD. However, 10.8% of respondents stated that they had no formal education. A significant proportion, 41.75%, earn less than RM1,000 per month, while 22% earn less than RM4,000 per month. Nonetheless, 33.25% of respondents did not want to reveal their earnings.

Performance Expectancy

From the four statements mentioned in Table 1, the respondents showed the highest

mean score, 4.27, in using ICT to promote their culture. However, the mean scores did not show a significant difference in finding information, learning the uniqueness of the culture, enhancing knowledge of the culture and preserving the culture.

Effort Expectancy

From the four statements mentioned in Table 2, the respondents showed the highest mean score, 4.14, in which ICT facilitates them in sharing their cultural knowledge, followed by promoting their culture, 4.11. However, the mean scores did not show a significant difference in facilitating learning about their culture and increasing their skills in preserving it.

Social Influence

From the six statements mentioned in Table 3, the respondents showed the highest mean score, 3.80, where the community influences them to use ICT to promote their culture. However, the difference in the mean scores did not show a significant difference in terms of family, relatives, friends, government and religious influences.

Facilitating Conditions

From the six statements mentioned in Table 4, the respondents scored the highest mean score, 3.75, in terms of having the opportunity to use the Internet with the available facilities in their area. The respondents think financial resources are not a barrier to using ICT to preserve their culture, with a mean score of 3.51. In terms

of access to ICT tools and allocating time to use ICT to preserve their culture, the respondents scored a mean score of 3.42. Among all the statements, ICT skills and internet connectivity became the main concern, with the lowest scores of 2.95

Table 1
Mean score of performance expectancy

	Statement	Mean
1.	ICT facilitates me in finding information about my culture easily.	4.10
2.	ICT saves time in learning about the uniqueness of my culture.	4.03
3.	Using ICT can enhance my knowledge of my culture.	4.08
4.	ICT is useful in preserving my culture.	3.98
5.	ICT is useful in promoting my culture.	4.27

Table 2
Mean score of effort expectancy

	Statement	Mean
1.	ICT facilitates me learning about my culture.	4.03
2.	ICT helps me promote my culture.	4.11
3.	ICT increases my skills in preserving my culture.	3.95
4.	ICT facilitates the sharing of my cultural knowledge.	4.14

Table 3
Mean score of social influence

	Statement	Mean
1.	Family influences me to use ICT to maintain my culture.	3.58
2.	Relatives have influenced me to use ICT to preserve my culture.	3.49
3.	Friends have influenced me to use ICT to improve my cultural knowledge.	3.72
4.	Community influences me in using ICT to promote my culture.	3.80
5.	The government encourages me to use ICT to preserve my culture.	3.56
6.	Religion influences ICT usage in personal development for the purpose of preserving my culture.	3.21

Table 4
The mean score of facilitating conditions

	Statement	Mean
1.	Financial resources are not a barrier when using ICT to preserve my culture.	3.51
2.	I have access to ICT hardware and software to preserve my culture.	3.42
3.	I am able to allocate time to use ICT to preserve my culture.	3.42
4.	I do not have sufficient ICT skills to preserve my culture.	2.95
5.	I have the opportunity to use the Internet because there are available facilities in my area.	3.75
6.	When I want to use ICT, my area's Internet connectivity is unstable.	2.48

and 2.48, respectively. This means that the respondents do not have sufficient ICT skills, and poor internet connectivity affects their adoption of ICT.

Table 5 shows the impact of ICT adoption, which has the highest mean score on ethnic festivals, followed by arts, traditional food, dress, language, traditional medicine, and beliefs and rituals. The mean score, 3.94, showed that the Kadazan-Dusun felt that the ICT has the greatest impact on preserving the ethnic festival compared to the other cultural elements. This could be possible due to the ethnic festival Pesta Kaamatan, largely celebrated annually by the community and can be easily promoted through digital platforms across the local and global community. Research by Rahman et al. (2022) highlighted that technology innovation is a marketing tool for branding a country’s destination image. As a result, it is not only about using tools to transform a festival into a smart festival; it also provides another orientation in which technology is used to transform tourist experiences, improve tourist satisfaction, and create more potential consumers (Nguyen et al., 2019).

Table 5
Impacts of ICT adoption on cultural preservation

Elements	Mean Score
Impacts on Ethnic Festival	3.94
Impacts on Arts	3.91
Impacts on Traditional Food	3.87
Impacts on Traditional Dress	3.85
Impacts on Language Preservation	3.84
Impacts on Traditional Medicine	3.76
Impacts on Beliefs and Rituals	3.71

Factors that Influence ICT Adoption on Cultural Preservation

The regression analysis (Table 6) showed that all four independent variables are significantly predictive of the dependent variable, cultural preservation, with a p-value < 0.05. In terms of strength of influence, the findings suggest that social influence (SI) has the strongest significant influence compared to all the other four factors ($\beta = 0.312$, $p = 0.000$). The second in terms of strength of influence is effort expectancy (EE) with $\beta = 0.230$ and $p = 0.001$, followed by performance expectancy (PE) with $\beta = 0.203$ and $p = 0.002$. Among the four, facilitating conditions (FC) reflected the weakest influence on cultural preservation ($\beta = 0.104$, $p = 0.018$).

Impact of ICT Adoption on Cultural Preservation

Overall, the respondents do not see any negative impact of ICT on the community’s culture. Instead, ICT becomes an important tool when used effectively to preserve culture.

“I don’t see any negative impact as ICT comes in into the livelihood and lifestyle of the cultural community, more to

Table 6
Regression analysis of factors influencing ICT adoption on cultural preservation

Variables	Beta	p
Performance Expectancy	0.203	0.002
Effort Expectancy	0.230	0.001
Social Influence	0.312	0.000
Facilitating Conditions	0.104	0.018

complement actually. It's only when you misuse it, abuse it, then have an impact, negatively la... but if you use it for the right purpose, then it should not be a problem" (Frank, male, 60 years old).

Other than that, ICT becomes an educational tool for the younger generation to learn about different cultural elements of their own community. It is very easy to access and also easily captures the attention of the children with attractive illustrations on social media.

"Nowadays, you want to know what is Sumazau maybe? So, if your parents, that one you can easily... and they have lot of information in the ICT. There is this program we went for the award; they want to us to show the Sumazau... so, I clicked Oh, I found this very nice YouTube and also a picture that labels the part of the costume... Ah, so that's ICT... So, children can get access is very, very easy" (Rina, female, 60 years old).

Besides, one of the respondents claimed that cultural preservation takes place when the community promotes its local produce on the Internet. This will also generate economic sustainability for the community, which mainly depends on the proceeds from selling the local produce.

"It would sustain your cultural preservation because let's say this kind of products... if you can put it in the market and monitor them and everything is to ICT. Yeah, you can sell and then people will continue producing

it and as a result your culture will be preserve" (Frank, male, 60 years old).

The verbatim above demonstrates the economic benefits of ICT in supporting cultural preservation. In hindsight, it also suggests that cultural practices could be commodified. While ICT offers opportunities for the community to market their traditional crafts and foods, it raises questions about the commercialization of culture and the extent to which these practices remain authentic when presented for economic gain. It reflects broader concerns about how ICT can support and reshape cultural practices in ways that may not align with traditional values.

Furthermore, ICT has helped promote community festivals in the local context and worldwide. One of the important festivals for the Kadazan-Dusun community is the Pesta Kaamatan, which has also helped foreigners understand the community's culture.

"Because I have seen how ICT has played a major role in promoting this, not just locally but internationally. And I've seen how people got attracted to Borneo because of ICT. In the Europe in the different country, they romanticize about how Borneo is has headhunting blah, blah, actually, it is not la, the way it's presented, the way is package, it attracts a lot of potential" (Adian, male, 40 years old).

Moreover, the Internet allows the community to discuss and promote its culture through an online forum.

“Actually, I have one nephew in US, his name is Richard, he owns a restaurant there. so we used to communicate through ICT, organize forum for the event of promoting culture, also this tarian and various research on food. I don’t know whether you ever come this Borneo cuisine and traditional culture and all this... online forum... worldwide... during the Kaamatan also got forum about culture” (Hannah, female, 40 years old).

Hannah uses digital tools like ICT to communicate and promote her cultural heritage, particularly through forums focused on traditional dances and culinary research. By participating in global discussions, including those about Kaamatan, she helps preserve and spread local cultural practices.

The qualitative insights from the informants have substantiated various methods by which ICT facilitates the preservation, promotion, and transmission of cultural practices. ICT is essential in preserving cultural identity through education, economic opportunities, global promotion, and cross-border communication. Despite apprehensions regarding the commodification of culture, the prevailing conclusion is that ICT, when employed purposefully, enhances the cultural community by increasing accessibility to traditions and cultivating pride in cultural heritage. The responses from participants indicate that ICT is viewed not as a threat but as an essential and beneficial element for cultural preservation.

DISCUSSIONS

The regression analysis outcomes demonstrate that cultural preservation is significantly predicted by the four independent variables: performance expectancy, effort expectancy, social influence and facilitating conditions. Based on the results obtained, it can be inferred that these variables are vital in influencing individuals’ decisions to adopt ICT tools for preserving culture.

The findings indicate that social influence is the strongest predictor of ICT adoption for cultural preservation, aligning with previous research on the role of social norms in shaping technology adoption (Venkatesh et al., 2003). The Kadazan-Dusun community is known for its close-knit and communal nature (Bagang et al., 2021; Grace, 2021), where the influence of family members, peers, and community leaders is deeply embedded in decision-making processes. The influence of the social circle on the adoption of technology is highly relevant to a communal society like the Kadazan-Dusun in Sabah, where the community holds a great sense of respect towards their leaders and maintains strong community relationships (Lajuni et al., 2022).

The strong influence of social factors, particularly family ties, community engagement, and cultural leadership, suggests that future ICT adoption strategies in similar communities should focus on leveraging these dynamics to drive technology use. Family-centered ICT programs that encourage intergenerational learning

and cultural documentation can foster collaboration, while community leaders and peers can act as ICT champions, promoting its benefits for cultural preservation. Strategies should also be culturally sensitive, ensuring that the technologies introduced align with traditional values and practices. Collaborative initiatives, such as community-based digital platforms, could enhance ICT adoption by providing spaces for cultural exchange and economic sustainability, making technology more appealing and relevant to the community.

Facilitating conditions like internet skills, connectivity, and stability are crucial for effective ICT adoption in cultural preservation. In Sabah, technology introduction is still in the early stages, with significant disparities in digital access between urban and rural areas (Fang et al., 2022). It mirrors findings from research on telemedicine acceptance in rural Pakistan, where social influence and facilitating conditions significantly impact user behavior toward new technology (Kamal et al., 2020).

According to the in-depth interviews with key informants, ICT adoption has a positive impact. Most respondents saw no negative impacts of ICT on their community's culture. If used correctly, ICT is a useful tool that supplements cultural preservation efforts. This research supports the argument that ICT can help cultural preservation by increasing access to information and promoting cultural practices. While this study found no significant negative impacts of ICT on cultural preservation, this assertion should

be considered cautiously. The positive perception of ICT among respondents may reflect early-stage adoption, where benefits like increased access to cultural information and global promotion are more immediately recognized. However, unintended consequences may still emerge over time. For instance, ICT could inadvertently lead to cultural homogenization or the dilution of traditional practices, as younger generations may adopt more modern interpretations of cultural elements. Additionally, over-reliance on digital platforms for cultural preservation could result in losing physical or intangible heritage aspects, such as oral traditions or rituals that require personal interaction.

The verbatim highlights that ICT has become a valuable educational tool for younger generations to learn about their cultural heritage. Unlike traditional oral education from parents, ICT allows easy access to information on cultural elements such as traditional dance, costumes, and local produce, aiding in the preservation of cultural practices and artifacts. ICT makes learning culture more engaging, offering appealing content like illustrations, games, and videos through social media platforms (Ibrahim, 2022; Zhou et al., 2019).

Furthermore, ICT adoption has provided a means for locals to earn a living by marketing their products to tourists. The informants discussed the benefits of promoting local produce on the Internet while supporting cultural preservation efforts. It is consistent with findings that social media has become a supporting factor

in promoting the Melukat ritual culture towards cultural tourism and protection in Bali (Rahayu et al., 2023).

The verbatim illustrates how ICT has helped the Kadazan-Dusun community promote global festival participation, particularly for Pesta Kaamatan. This festival has attracted international interest, enhancing cross-cultural understanding and appreciation. During the COVID-19 pandemic, the community used social media to livestream the Sabah Harvest Festival, allowing local and global participation (Annuar & Dawayan, 2022). This virtual approach promoted cultural diversity and unity, highlighting the role of social influence in engaging both local and foreign audiences. The shift to online platforms has increased the festival's outreach and engagement. When it comes to cultural preservation, the influence of the local community is crucial, and policy implementation can play an important role (Nam & Thanh, 2024).

The participants claimed that with the adoption of ICT, discussions about their culture can be conducted through online forums. This is especially true during a pandemic when everyone's movements are restricted. It is when ICT played an important role in facilitating collaboration and the exchange of ideas among different cultures, directly aiding in preserving Malaysia's unique cultural diversity. These findings align with Susanti and Koswara (2017), who found that technological advancements have given rise to new media like Facebook and blogs, enabling broader

dissemination of thoughts related to the Sundanese language and culture while reaching a larger target audience.

CONCLUSION

This study reinforced the UTAUT model by confirming that performance expectancy, effort expectancy, social influence, and facilitating conditions are crucial for technology adoption. Social influence emerged as the strongest factor in ICT adoption for the Kadazan-Dusun community, shaping their attitudes and behaviors. The study also highlighted the community's digital divide regarding ICT skills and access. Moreover, it demonstrated that UTAUT is applicable in cultural contexts, particularly for the Kadazan-Dusun community. The research showed that ICT can aid cultural preservation by enhancing access to information, economic sustainability, and cross-cultural understanding. Despite challenges with internet access, the Kadazan-Dusun community views ICT as essential, facilitating cultural documentation and education for younger generations. It underscores the potential of ICT to support and promote cultural diversity.

Implication for Theory and Practice

The study highlights the importance of considering cultural factors in technology adoption, as cultural beliefs, values, and practices influence how people perceive and use technology. Incorporating these factors into models like UTAUT can make them more culturally relevant. This model underscores the significance of social

influence and facilitating conditions in technology adoption, such as community support, internet connectivity, and government backing. The Kadazan-Dusun community views ICT as beneficial for preserving and promoting their culture through documentation and learning. It emphasizes the need to include domain-specific performance expectations in technology adoption studies. Effort expectancy, or the perceived ease of use, was also significant; improved internet access is needed to reduce effort and encourage adoption. While the UTAUT model focuses on early adoption, this study points to the importance of examining long-term adoption and sustainability, as the Kadazan-Dusun community's commitment to using ICT for cultural preservation underscores the need for ongoing support and research into post-adoption behavior.

Limitations and Recommendations for Future Research

There are several limitations to this study. First, the research focused solely on the Kadazan-Dusun community, limiting the generalizability of the findings to this group and not to all groups in Sabah. The study's theoretical and conceptual framework, based on the UTAUT model, covers only four variables, excluding potential factors from other ICT adoption models. The study did not consider other influences on ICT adoption for cultural preservation, such as personal values, beliefs, and attitudes toward technology. Future studies could benefit from longitudinal research that tracks

ICT adoption to better understand how the community's engagement with technology evolves and its long-term impact on cultural preservation efforts. Comparative studies involving other Indigenous or ethnic groups in Malaysia or other developing countries could provide a broader perspective on how different cultural and social contexts influence ICT adoption for cultural preservation. Furthermore, exploring the role of government policies and community-led initiatives in supporting ICT adoption could shed light on structural factors that either enable or hinder the use of technology for preserving cultural heritage.

ACKNOWLEDGEMENT

This research was supported by the University Putra Malaysia postgraduate research grant, 9686900.

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