Into the unknown:
Do people in low literacy rate areas practise digital reading?

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ABSTRACT

Various initiatives have been taken to bridge the urban-rural digital divide in Malaysia, which has impacted the change of mindset among the rural community in terms of acceptance and assimilation of digital technologies in their daily life. This includes digital literacy-related activities for self-development, especially in cultivating reading habits. The main purpose of this study is to investigate digital reading practices among rural communities in low literacy rate areas in promoting reading culture in Malaysia under the 10-year National Reading Decade (DMK) 2021-2030 programme. A quantitative design of the study which involved 400 rural community respondents from 4 selected states in Malaysia (Kedah, Kelantan, Sarawak, and Sabah) using the multi-stage and mixed sampling method in administering the survey questionnaires. This study found that rural communities in low literacy rate areas in Malaysia did practice digital reading, primarily on smartphone. The empowerment of digital literacy in terms of digital reading practices is believed to be able to narrow down the digital divide among rural communities. The findings are expected to provide useful guidance for rural development in ICT and create better understanding and awareness among policymakers to create a rural society which is learned and well-informed through a more inclusive digital reading practices.

Keywords: Digital reading; Reading habits; Reading nations; Rural communities; Digital literacy.

INTRODUCTION

Rural communities nowadays are no exception in being an informed society. Through digital literacy, either by reading or writing they could consistently be linked, informed, and notified by others including their urban counterparts. This to ensure that they are always relevant and up to date with the latest developments and trends. Recognizing that information, communication, and technology (ICT) is here to stay and is certainly the crucial enabling tool to increase the efficiency, productivity, and competitiveness of any nation, various initiatives have been taken to narrow the digital divide in Malaysia.

Towards National Reading Decade (DMK) 2021-2030 programme, more rigorous studies need to be conducted to learn more about Malaysian readers, no exception to the communities in the rural areas which is also known as the low literacy rate areas. Rural

communities are also one of the underserved communities in Malaysia with limited information sources and services. People in a low level of literacy rate area is the focus of the study based on the survey carried out by the Malaysian National Library for Malaysian Reading Profile in 2006 (NLM 2006). It is reported that the literacy rate had slightly decreased, which is in line with the United Nations Educational, Scientific and Cultural Organization (UNESCO) findings that Malaysia's literacy rate has dropped in recent years from 95.08 percent (2017) to 94.85 percent (2018) for adult literacy rate (UNESCO 2019).

According to the previous studies, the arrival of digital media may explain the differences in reading behaviour (Abdul Karim and Hasan 2007; Liu 2005; Samsuddin, Omar and Shaffril 2018). More and more people are using the web and wireless solutions to satisfy their information needs (Kamarudin et al. 2019; Khan and Khan 2020; Lange et al. 2019; Samsuddin and Yanti Idaya Aspura 2021), especially through reading practices. As such, it is to be assumed that the reading habits and attitudes towards digital content may be increasing significantly. Hultgren and Johansson (2017) define reading as a cognitive process that involves decoding symbols in meaning and is also regarded as an active process of constructing meaning. While online reading or digital reading is the process of extracting meaning from a text that is in a digital format. The definition for digital reading practices in this study refers to reading activity on digital format by using ICT or digital tools, either extensive reading or intensive reading for certain purposes. Digital reading practices have equaled meaning to digital reading behaviour, digital reading attitude, online reading behaviour, and online reading attitude.

RELATED STUDIES

Since 2010, there have been several studies on digital media use and media preferences throughout the European nations, even compared cross-nationally. A study conducted by Deszcz-Tryhubczak and Huysmans (2018) on reading and digital media in European perspectives have highlighted several main aspects to be considered in digital reading research, such as children's use of media, reading in a family context, digitally read in the public and school libraries, and methodologies to be taken in understanding the changes in reading practices. Digital reading or reading from digital devices, has affected lives and cultures in uniform ways, especially among urban communities (Boyd 2014). This is in line with current situations in which the usage of digital media and mobile devices have rapidly increased and become an indispensable part of everyday life for people all over the world.

The forms of readership has changed with the evolution of the Internet, new media applications and other digital technologies and this has created an extraordinary change in the reading culture, as well as on teaching and learning. Requirements on online competencies (practices, skills, and knowledge) among children and young adults are demanded and proven that they could become active and conducive to play, speak, listen, and read (Deszcz-Tryhubczak and Huysmans 2018). Public libraries and educational resource centres, especially in urban areas have combined e-reading with their traditional reading programmes. Nevertheless, rural libraries could also provide and acquire digital content for their users (Samsuddin et al. 2018). The various types of collections provided possibly would attract more users to visit and use the rural library services. This initiative could not only cultivate and raise awareness of the importance of reading as a major tool in imparting education to the society, but it also potentially offers new reading culture for disadvantaged groups and communities such as in rural areas (Kleijnen, Huysmans and Elbers 2015).

Public libraries and school libraries also play an important role in terms of provision of equal access to the wealth of literature and information and suitable and applicable information and communication technology (ICT) services and facilities. Araújo and Costa (2015) added that the contribution of high quality and appropriate quantity of public resources to the society can reduce the urban-rural socio-economic divide. While a study conducted by Todd (2014) supported that academic achievement and reading literacy have positive effects on the conducive environment of school libraries, especially with ICT facilities and services such as e-books sources and digital audiobooks.

A study by Zainol Abidin, Pour-Mohammadi and Jesmin (2011) on online reading habits of rural secondary school students in Malaysia has found that online reading could enhance students reading habits. This study involved 200 secondary school students and within the context of gender, preferred language, access to the internet, place of access, frequency, duration of hours spent, interests, and websites accessed. Their findings in terms of gender differences reported that the males read more hours online than their female counterparts. Meanwhile, Azmuddin et al. (2018) using iREAD in understanding online reading strategies qualitatively, have found that in the online reading environment, the participants mainly used a global reading strategy, serial, and mixed overview navigational strategies. Another qualitative study conducted by Ghalebandi and Noorhidawati (2019), is on e-reading experiences, understanding how children engage with their pleasure reading. The findings indicated that motivational constructs and behavioural engagements were enclosed, while reading aloud or reading in silence indicated children e-reading experience.

Few studies on digital reading among rural communities exist in other than education field. For example, a study by Haghdoost et al. (2019) on the level of health literacy among Iranian adults included reading in one of the research aspects. The findings indicated that age, gender, education level, job status, and specifically residence in rural areas are the factors associated with health literacy among Iranian adults. The study concluded that the Iranian adult population had an insufficient level of health literacy. Another study also on health literacy investigated smartphone uses for health information seeking among the Korean elderly (Oh, Choi, and Kim 2018). It was found that the characteristics that contributed to reading digital content on health were younger age, higher education levels, and elderly with health literacy.

Most of the previous studies on reading and digital reading are related to education and learning, within the scopes of an academic environment. Research that relates reading with societal impact mainly focuses on literacy or digital literacy skills. Albeit to that, a study by Maceviciute and Manzuch (2018) covered digital reading in a social context by compiling and reviewing several published research papers on digital reading concerning social and digital inclusion. The authors found that reading and digital reading can reduce the inequalities in terms of digital usage and social relation, and conceptualized their results into social cognitive theory. Maceviciute and Manzuch (2018) concluded that digital literacy and literacy skills can be further strengthened by the interventions of digital reading.

A study by Schubert and Becker (2010) found that reading habits and literacy are related significantly to social and economic status. Leu et al. (2015) identified that low-income communities show lower digital reading practices than those with higher income. Despite digital inequalities, other previous studies have found that social inequalities (income and education level) as a factor that affects digital exclusion (Leu et al. 2015; Nguyen and Western 2007). It means that knowing the relations between digital reading and social

inclusion/exclusion may help to design programmes that will cope with negative conditions and effects and achieve positive change. From the aforementioned research, it is clear that the focus of the current study in considering rural communities in low literacy rate areas is appropriate in understanding their practices in digital reading, and the findings could be used to plan priorities of action to enhance their digital literacy skills in general.

Underpinned by the digital divide theory by van Dijk (2005), on inequalities of motivation access, physical access, digital skills, and different digital resource usage, can be used to relate the adoption of digital reading and reducing the digital inequalities among rural communities. However, for a better understanding of the social factors of ICT adoption, social cognitive theory by Bandura (1986) may best explained this. Both theories complement each other in describing the benefits of digital reading in terms of digital and social inclusion. According to van Dijk (2005), exploitation of digital resources on usage derived benefits in terms of economics, finances, education, labor, or social networks. While Bandura (1986) considered three elements of reciprocal relations which are environment (social surroundings influenced), a person (demographic characteristics), and behaviour (action taken/ practices). Digital reading studies have extended the concept of reading with device manipulation, and digital content searching which can be related to information seeking and digital literacy issues.

PURPOSE AND OBJECTIVES

The abundance of related studies on digital reading with several demographic variables has been discussed earlier. In the context of social inclusion, this study focuses on the rural community in Malaysia, investigating their digital reading practices in cultivating and promoting a reading culture. The specific research objectives are:
   a) To identify to what extent people in rural areas practise digital reading.
   b) To investigate how rural communities in low literacy rate areas practise digital reading.
   c) To examine the relationship between selected variables with the time spent on the Internet towards digital reading practices among rural communities in low literacy rate areas.

To test the researchers' theoretical assumptions, the following research questions are developed based on the objectives of the study:
   a) Do people in rural area practise digital reading?
   b) Is there a relationship between selected demographic variables and digital reading practices among rural communities in low literacy rate areas?
   c) How are the digital reading practices based on types of ICT tools used, types of social media used, and preferred types of digital reading materials among rural communities in low literacy rate areas?
   d) Is there a relationship between reading interest and time spent on reading with time spent on the Internet towards digital reading practices among rural communities in low literacy rate areas?

To address the fourth research question, two hypotheses have been constructed:
   H1 - There is a relationship between reading interest and time spent on the Internet towards digital reading practices among rural communities in low literacy rate areas.
   H2 - There is a relationship between time spent on reading and time spent on the Internet towards digital reading practices among rural communities in low literacy rate areas.

METHOD

This is a descriptive quantitative study using survey as the research design and questionnaires as data collection technique. The survey instrument was adopted and adapted from previous studies on online reading with different population backgrounds (Azmuddin et al. 2018; Samsuddin et al. 2020). The questionnaire items were constructed in English first and translated into Malay, i.e. the samples' national language so that they can comprehend the items fully. A pilot survey was conducted to a smaller convenience sample to know if the survey questions were easily understood by respondents or if they need to be simplified. Overall, the constructs of the instrument were acceptable; a few changes on the item statements and questions settings were made from the pilot-test feedback by the respondents. The instrument was also pre-tested in clarifying its validity.

The rural community in Malaysia was identified as the population of the study. According to the Department of Statistics Malaysia (DOSM 2016), a rural area, also known as the countryside is a geographic area located outside the towns and cities with low population density (i.e. fewer than 10,000 people). Therefore, in this study, a rural community is defined as people who live in the rural area outside urban, including settlements with a population of fewer than 10,000 people, an agricultural area, forest, and water bodies, or whatever is not an urban area is considered rural. From the total rural population of Malaysian in 2019 (N=7,474,011), the sample size calculated using Yamane formula (Yamane 1967) was 399, however, to ease the computation and works operation, the study collected a total of 400 respondents. The sampling procedure used was the multi-stage and mix sampling method. Based on multi-stage sampling, selected districts among four states with low level of literacy rate (less than 90 percent) assessed by the Malaysian Population and Housing Census (DOSM, 2010) were chosen as the location of the study. It is crucial to conduct a continuous survey to sustain the reading profile of a country albeit people who live in rural areas with a low level of literacy rate. The low level of literacy rate was used as sampling criteria in intention to identify the actual practices and literacy capabilities of the specific area compared to other areas that are not considered as low literacy level. The researchers thought that the level of literacy could be increased at the par level if the factors influenced could be identified and overcome (Samsuddin et al. 2020).

The first phase of the multi-stage and mix sampling method applied was district sampling. Each district that has at least four rural libraries was listed, and randomly chosen to represent the four states categorized as with low level of literacy rate (DOSM, 2010) - the states are Kedah, Kelantan, Sarawak, and Sabah. The second phase of the sampling method was convenience and purposive sampling. Only people who visit the library and live nearby the library will be approached and considered as respondents of the study. Respondents must be at age 15 and above, in considering that people aged 15 and above who can both read and write with understanding a short simple statement about their everyday life is classified as a measurement for adult literacy rate by UNESCO.

This study also involved rural communities having rural library services within their living area due to the expectations that the communities are already provided with suitable information services and facilities in cultivating and promoting reading culture. The data collection process was handled by the research team, consisting of five well-trained enumerators and a researcher to monitor the data collection process. The active involvement of the team in each location's data collection activities ensured the 100 percent response rate and usable responses achieved, and the required data were gathered accordingly. This is very important to be applied for studies that have very limited

time to be completed with budget constraints. The Statistical Product and Service Solutions (SPSS) software package was used for data analysis. The data gathered were subjected to descriptive (frequency distribution and percentage, mean and standard deviation) and inferential statistics. For non-parametric data, Chi-square analysis (test of independence) was used to examine the relationship and the association between selected demographic variables and digital reading practices. While Spearman rho analysis was used to examine the relationship between reading interest and time spent on the Internet; and between time spent on reading and time spent on the Internet towards digital reading practices among rural communities in low literacy rate areas.

RESULTS AND DISCUSSION

Digital reading practices are gauged through the percentage of respondents practising digital reading, types of ICT tools used for digital reading, types of social media used for reading digital content, and the preferred types of digital reading materials. In this study, digital reading is measured based on the association between selected demographic variables and the relationship between time spent on reading and time spent on the Internet among rural communities in low literacy rate areas is examined.

Demographic Profiles
Out of the 400 samples involved in the study, 74 percent (296) were female and 26 percent (104) were male. The mean score for age recorded is 27 years with the age group 31 to 40 is the highest (43.5%), followed by the age group 15 to 19 (36.5%), and 20 to 30 (20%). Other demographic profiles for the study are illustrated in Figure 1. Findings on the demographic profile have shown that the rural community within low literacy rate areas involved in the study are varied in terms of socio-economic background and technology-related capabilities. It should be noted that these findings are applicable to those samples that could be conveniently reached out and expressed willingness to spend their time to cooperate and involve in the study.

Digital Reading Practice
Do people in rural areas practise digital reading? The respondents gave their feedback based on the direct question, whether or not they have read digital content using various digital tools. Digital reading practice in this study is defined as "reading digital or non-printed content/ format using digital tools in the process of extracting meaning from a text for varied purposes rapidly". This definition was explained to the respondents to ensure that everyone had the same understanding of the concept during the data collection process. A total of 360 respondents (90%) in low literacy rate areas admitted that they practise digital reading (Figure 1). As such it is safe to assume that although they live in low literacy rate areas, most of the community members have access to digital technology, digital content and digital tools. It shows that people in rural areas with limited information sources and services could still gain knowledge and steep in real life problem solving through digital content. Through the government initiatives, ICT services and facilities have been upgraded and the ease of Internet access on subscription capability to the rural areas has produced a positive effect in terms of usage. This is in line with an earlier study (Samsuddin et al. 2018) that reported ICT plays an essential role in narrowing the digital gap between urban and rural areas in Malaysia, and could reduce inequality and poverty among communities living in the rural area. Meanwhile, the remaining respondents (10%, 40) mostly females, do not practise digital reading and many of them (32 out of 40) have never had time spent on the Internet. Digital reading practices might have a relationship

with time spent on the Internet and a relationship with reading interest and time spent on reading based on the results. This assumption is analysed and discussed in the next section.
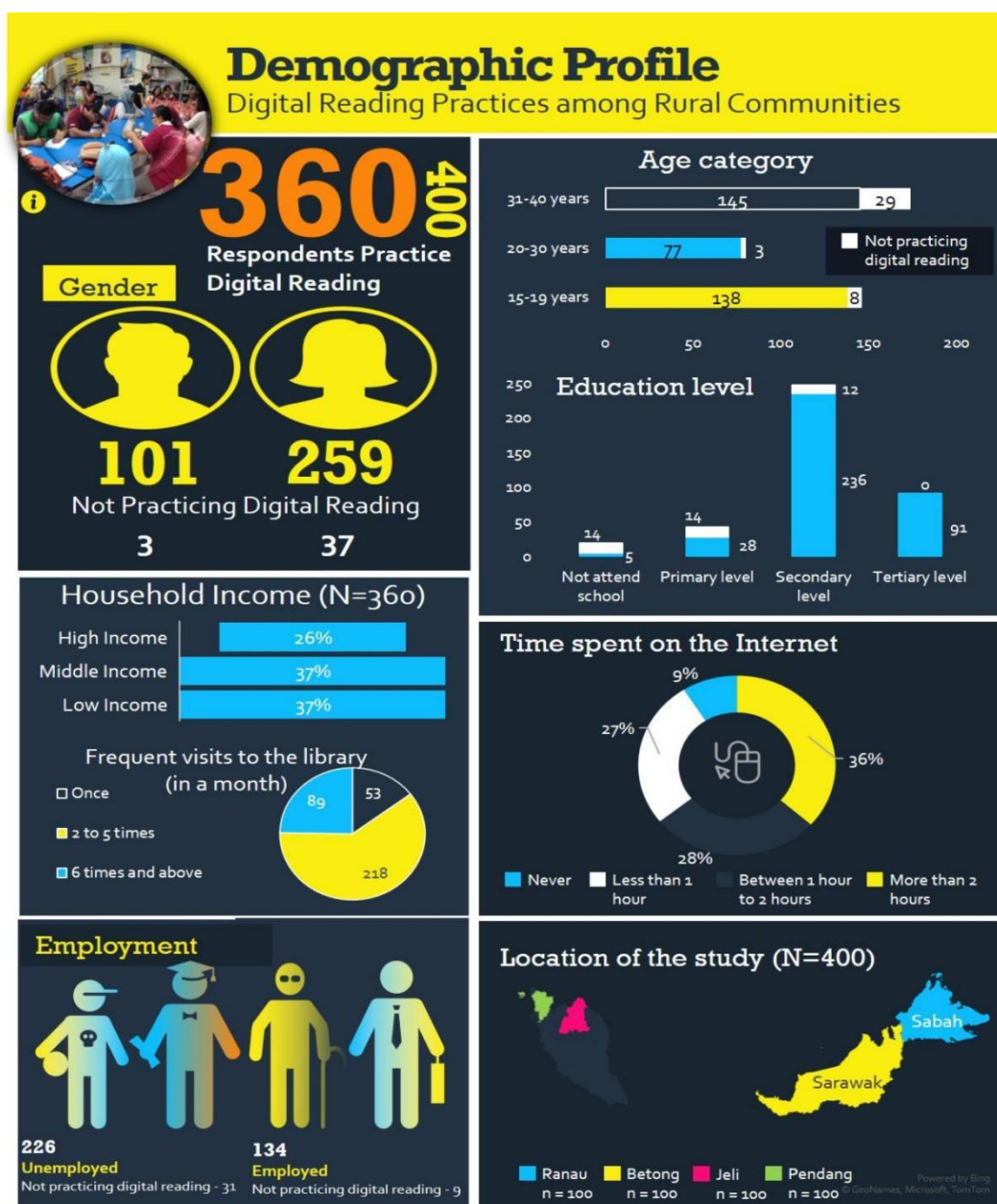

Figure 1: Demographic Profile of Digital Reading Practices Among the Rural Community within Low Literacy Rate Area

Relationship between Selected Demographic Variables and Digital Reading Practices

In enhancing the first objective of the study, the second research question was analyzed through Chi-square analysis. Is there a relationship between selected demographic variables and digital reading practices among rural communities in low literacy rate areas? Several demographic factors were identified, tested, and presented based on the result of the findings to meet the objective.

Digital reading practices of the respondents are not significantly dependent on employment status, and frequent visits to the library. However, the digital reading practices of the respondents are significantly dependent on gender (x^2 value = 7.906; Sig-x^2 = .005), age category (x^2 value = 15.380; Sig- x^2 = .000), education level (x^2 value = 128.479; Sig- x^2 = .000), household income (x^2 value = 13.783; Sig- x^2 = .001), as well as time spent on the Internet (x^2 value = 274.051; Sig- x^2 = .000). Also, the association between selected demographic variables and digital reading practices shows that there is a negligible association between gender (Phi coefficient = .141), age category (Cramer's V coefficient = .196), household income (Cramer's V coefficient = .186), and digital reading practice; a moderate association between education level (Cramer's V coefficient = .567) and digital reading practices; and lastly high association between time spent on the Internet (Cramer's V coefficient = .828) and digital reading practices.

The results also show whether a person is employed or unemployed does affect on digital reading practices, in line with findings on the relationship between reading attitude and employment status from an earlier study (Samsuddin et al. 2020). As such the current study has supported the findings that digital reading practices depend on specific purposes, not on employment status, for example students practise digital reading more than working adults. The same goes for frequency of visits to the library - it does not necessarily mean that people who frequently visit the library tend to practise digital reading more than those who do not. Whenever people are connected with an Internet network, they can easily access digital content or e-documents that are readily downloaded on mobile devices on the go. Supporting what has been established in previous research (Samsuddin et al. 2020), this study has found that is no relationship between reading attitude and frequency of visits to the library.

Findings on level of education and income echo previous studies on digital reading (Leu et al. 2015; Nguyen and Western, 2007) which identify that digital reading practices can be influenced by someone's educational background and household income. Low income or economically poor may lack ICT tools or Internet subscriptions, as such they neither use nor demand ICT for reading practices. Those who have limited Internet connectivity would prefer printed reading materials or might refuse to read at all. This limitation somehow will affect those students who have to undergo online learning, and the limited access may hinder their knowledge and ability to fully use online resources. As a precaution action, teaching and learning activities can be prepared with several options for remote learners who lack connectivity, such as print-out the digital contents with the help of their teachers or their nearby peers. In engaging further reading sometimes people do print content from the Internet (Liu 2005; Ramirez 2003) especially when it is long.

Oh, Choi and Kim's (2018) study has similar findings on level of education, where higher education level contributes the most on finding health-related digital content through smartphones. There is a moderate association between level of education among the elderly and digital reading practices. The difference in education level could affect their capabilities in terms of advanced usage in reading digital content on various platforms. For this purpose, although their daily activities do not expose or require them to be familiar with computers, or digital technology in general, still if they are willing to learn to use the different digital platforms and online resources, they can cater to the ICT-related issues and increase their digital reading practices. Their peers or relatives can be an agent to facilitate them in exploring the different platforms. Sometimes, knowing limited platforms is just enough to conduct basic digital reading.

Gender and age variables are also found to be factors in influencing digital reading practices. Males and females have different interest and purposes in the online reading environment. Liu and Huang (2008) revealed that female readers have a stronger preference for printed reading materials, whereas male readers exhibit a greater degree of satisfaction with online reading than females. It is in line with a previous study that confirmed gender has a relationship in digital reading (Zainol Abidin, Pour-Mohammadi and Jesmin 2011) - based on the platforms and digital contents there are differences between gender on digital reading practices. Meanwhile, digital reading practices is significantly dependent on age, which is in line with studies by Oh, Choi, and Kim (2018) and Liu (2005) who found out that the amount of time spent on reading varies widely among different age, and that younger people contributes significantly to reading online. Liu (2005) found that the younger population spends more reading online due to the following factors - availability of a large choice, efficiency, accessibility, low cost, and up-to-date resources. However, based on the current study, there is only a slight difference in digital reading practices between age category 15 to 20 (138, 34.5%) and 31 to 40 (145, 36.3%).

The current study found that there is a high association between time spent on the Internet and digital reading practices. These findings have been predicted based on several previous studies. According to Samsuddin et al. (2020), rural communities spend more time on Internet surfing during their leisure time. Supported by Coiro (2009), although online reading is found hard to practise, the Internet could offer more on practicality, evaluability, and attractivity. The nature of information sources on the internet varies which also could facilitate access to valuable information, encourage information sharing, and provide storing of information. However, it is important to have the knowledge and digital literacy skills while surfing the Internet and consuming its content. With digital literacy capabilities, a person could tell if a news story is reliable, real or fake. Besides, there are various forms of materials that can be found on the Internet besides texts, such as visuals, sounds, and videos and even datasets.

Types of ICT Tools, Social Media, and Reading Materials Used Towards Digital Reading Practices

How are the digital reading practices based on types of ICT tools used, types of social media used, and preferred types of digital reading materials among rural communities in low literacy rate areas? A total of 340 respondents (85%) have access to the Internet and the study found that 84.8 percent (339) used the smartphone to read (see Table 1), showing that only one respondent who had Internet access did not read on smartphone, possibly because of preference or not having one. This finding could imply that the rural communities choose the ICT tools on the aspects of easy to access and mobility function (Abdul Karim and Hasan 2007). Although there are rapid technological changes nowadays, rural communities are not left behind, showing that they are the heart of technological development. Meanwhile, in terms of types of social media used for reading digital content, the respondents choose WhatsApp (330, 82.5%) and Facebook (290, 72.5%) applications (see Table 1). Newspapers (120, 30%), recipe books/ recipes (113, 28.3), and magazines (110, 27.5%) were recorded as the top three types of reading materials preferred for digital content among respondents in the low literacy rate areas. The findings in Table 1 have shown similarity in previous studies (Mohamad Azri et al. 2013; Ismail and Elias, 2009), that these three types were the most preferred reading materials among Malaysians, regardless of whether they live in urban or rural areas, even whether the materials are in print or on digital platforms. This is also echoed in a recent study on rural dwellers' use of information sources where Yap et al. (2020) reported that the Internet, social media, and mobile

applications became the preferred sources, with the traditional sources such as the newspapers still being widely used.

It can be said that digital literacy initiatives and infrastructures provision by the government, have bridged digital divides between the urban and rural communities (Kamarudin et al. 2019; Samsuddin et al. 2015) and strengthened the capacity for technology foresight. Affordable cost of smartphones and other digital devices, as well as mobile broadband data plans allow the rural communities to own these ICT tools for their convenient lifestyle, thus making digital reading more diverse and inclusive. It is to be realized that information sharing and knowledge transfers via digital technologies could change the communities' vision albeit from their remote area.

Table 1: Types of ICT tools, Social Media Used, and Preferred Types of Reading Materials

ICT tools prefer to read e-sources/ social media	Frequency	Percentage
Desktop	48	12.0
Laptop	93	23.3
Smartphone	339	84.8
Ipad/ Tablet	43	10.8
Others	2	0.5
Types of social media (reading channel) (N=400)	**Frequency**	**Percentage**
Facebook	290	72.5
Blog	50	12.5
Whatsapp	330	82.5
Twitter	63	15.8
Instagram	187	46.8
Others	14	3.5
Types of reading materials (digital contents) (N=400)	**Frequency**	**Percentage**
Novel	110	27.5
Comic	93	23.3
Magazine	105	26.3
Academic Journal	44	11.0
Newspaper	120	30.0
Recipe Book / Recipes	113	28.3
Reference Book/ Academic Book	97	24.3
Others	10	2.5

Relationship between Reading Interest and Time Spent on Reading with Time Spent on the Internet towards Digital Reading Practices

In this section, data were analyzed to see the existence of any relationship between the time spent on the Internet towards digital reading practices with several other factors that are thought to be related using Spearman's correlation analysis. To address research question 4 - Is there a relationship between reading interest and time spent on reading with time spent on the Internet towards digital reading practices among rural communities in low literacy rate areas?, the following two hypotheses were constructed to test the relationship.

H1 - There is a relationship between reading interest and time spent on the Internet towards digital reading practices among rural communities in low literacy rate areas.

H2 - There is a relationship between time spent on reading and time spent on the Internet towards digital reading practices among rural communities in low literacy rate areas.

For H1, the analysis concludes that there is no significant relationship between reading interest and time spent on the Internet towards digital reading practices among rural communities in the low literacy rate areas (r_s = .045, sig- r_s .372 > .05). Based on the hypotheses test results, reading interest and time spent on the Internet have nothing in relation. People who spend more time on the Internet have many other purposes to do so such as watching movies, listening to music, or playing games instead of reading. However, engaging with the Internet is believed to contribute in digital reading practices when this is done with multi-tasking skills (Deszcz-Tryhubczak and Huysmans 2018). Using the ICT tools indirectly would enable people to check their e-mails or read the news feed on their social media frequently. Still, reading digital content is just an option when the printed version of the content is available and ready to be used.

Meanwhile, H2 concludes that there is a significant relationship between time spent on reading and time spent on the Internet towards digital reading practices among rural communities in the low literacy rate areas (r_s = .213, sig- r_s .000 < .05). Besides the correlation coefficient, it is found that there is a positive and low relationship between time spent on reading and time spent on the Internet towards digital reading practices, based on Guildford's rules of thumb table. Based on these findings, it is to be said that the more people spend their time on reading, the more they spend their time on the Internet. When reading through articles, advertisements, status updates, news story via social media and websites is regarded as digital reading practices, the results thus reflect the phenomenon. Nowadays people seem to enjoy reading on mobile devices and tend to use these devices to read on digital platforms as a quick action and and express solutions for their daily life routine. Digital tools and mobile devices are widely being used in teaching and learning programmes not only in higher educational institutions, but also in primary and secondary schools where most of the students in these learning institutions are part of a generation familiar with digital technology. Besides, in terms of social interactions, a lot more digital content have been read through document sharing and short text messages such as words of wisdom, sharing personal experiences, reminders, and warnings, comments, and views via mobile devices. These digital reading practices have become a culture that somehow everyone using ICT tools to communicate with their relatives, friends, acquaintances or workplace contacts are practising digital reading unconsciously on daily basis.

CONCLUSIONS

This study has dealt with digital reading practices among rural communities in Malaysia towards making Malaysia a reading nation. As has been shown in this study, that rural communities in low literacy rate areas use the smartphone to read. It is crucial to know and understand their digital reading practices in the context of their life and livelihood. The rapid changes in ICT and digital technologies demand people to stay connected and get used to digital information, which is quicker and easier in terms of production and dissemination. Despite the importance of digital reading practices, the provision of information services and continuous reading and literacy programmes by the government should be in line with the current needs and demands that would benefit the rural community at large, thus indirectly assist in strengthening the socio-economic development of the country. In addition to upgrading connectivity infrastructure, the government needs to continue to invest in digital literacy training in rural areas to increase familiarity with digital platforms. The Malaysian Communications and Multimedia Commission (MCMC), National Library of Malaysia (NLM), and Institute for Rural

Advancement (INFRA) may collaborate with the Ministry of Rural Development in collecting data on rural area capabilities in terms of Internet subscription and penetration towards digital literacy enhancement for the rural communities in low literacy rate. The empowerment of digital literacy is believed to narrow down the digital divide among rural communities as a whole, and in specific areas such as education, agriculture and business..

Practically, this study may be useful as an instructional tool or guide on ICT and its role in rural development to create better understanding and awareness among policymakers. Academically, the findings of this study could contribute to the new knowledge on rural community profiles that may benefit the nation. Empirical studies on rural communities are still lacking in Malaysia compared to the urban. More should be discovered and better understandings are needed on the specific behaviour and culture among rural communities in low literacy rate areas towards their socio-economic development. As Malaysia continues to follow the blueprint of economic development through digital opportunities, it is important that rural communities in low literacy rate areas are not marginalized in this quest for growth, but instead become active participants in this shared prosperity.

One of the possible limitations of this study is that it involved the rural community in low literacy rate areas with rural library services. Although the sample size formula represents well the total population, however, different results may occur if similar studies conducted in the future involving the rural community in different states and districts, without access to rural library services. Also, the sampling method can be improvised in terms of reducing the possibilities bias and avoiding the non-probability sample by applying the random sampling technique. It is suggested that more such studies on digital reading practices or digital literacy abilities will continue in the future with a different focus of communities and specific scope of livelihood such as education, agriculture and business, especially in this current pandemic situation. Another idea for future research is to further examine gender differences for digital reading practices, and this could be done by studying only male or only female participants instead of grouping them together as this study has done.

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