Sustainable Collaboration Between Public Libraries and School Resource Centers: Advancing Digital Information Literacy in the Digital Age

Haizatul Afni Bakhtiar[1], Roziya Abu[2]* Norshila Shaifuddin[3]

[1,2,3]*Faculty of Information Science UiTM Selangor Branch, Puncak Perdana Campus, Shah Alam, Selangor, Malaysia*

ARTICLE INFO

ABSTRACT

This study explores the essential role of digital information literacy (DIL) in Malaysian schools and its integration within the context of sustainable development and educational collaboration. As Malaysia continues to advance its sustainability agenda, underscored by the Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), this research investigates the effectiveness of DIL initiatives in enhancing educational outcomes. The study highlights the evolving landscape of library and media services, with a focus on the collaboration be-tween state public libraries and school resource centers. Data collected through qualitative methods, including interviews with librarians and key educational stakeholders, reveal that while many educators are familiar with basic digital tools like Google, there is a notable gap in advanced internet search techniques and critical information evaluation skills. The findings underscore the necessity for com-prehensive training programs that equip teachers with robust digital literacy skills before they can effectively impart these skills to students. Additionally, the research emphasizes the need for collaborative efforts among educators to diversify information search methods and enhance the overall effectiveness of DIL programs. This study aims to foster a more inclusive and effective approach to digital literacy, ultimately contributing to Malaysia's broader educational and sustainability goals.

[2]* Corresponding author. *E-mail address*: roziya307@uitm.edu.my

INTRODUCTION

School resource centers and public libraries are vital pillars in fostering information literacy within communities. These institutions often work together, leveraging their complementary strengths to enhance the educational experience and meet the di-verse needs of their users. Public libraries rely on the active participation of students, teachers, and school resource centers to deliver effective programs and services. In turn, school resource centers benefit from the resources, expertise, and advocacy provided by public libraries to enrich their collections, conduct meaningful activities, and offer comprehensive user services (Bronwyn H. et. al., 2010; Adam Zulkarnain Saleng, et. al., 2022; Eng Ling, O. and Kutty, F. M., 2022).

In the digital age, information literacy has become a critical skill, necessary for navigating an increasingly complex and interconnected world. Digital information literacy, in particular, is essential for equipping individuals with the ability to access, evaluate, and use information effectively in digital environments. In the context of the United Nations' Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 10 (Reduced Inequalities), the role of digital information literacy has never been more critical. As the digital divide continues to impact communities, the collaboration between public libraries and school resource centers becomes essential in ensuring equitable access to digital resources and educational opportunities. This study investigates how sustainable collaborations between these institutions can be formed, aiming to enhance digital information literacy and sup-port the achievement of the SDGs. By exploring these collaborative efforts, the re-search seeks to develop best practices that contribute to long-term educational sustainability and the reduction of inequalities, in alignment with SDG 17 (Partnerships for the Goals) (United Nation, 2021, United Nation, 2023).

It is important to stress that the primary intention of this study is to establish sustainable collaborative frameworks between state public libraries and school resource centers in Malaysia to enhance digital information literacy. In an era where digital skills are increasingly critical, the collaboration between these two educational pillars becomes essential. By fostering partnerships that leverage the strengths of both institutions, this study aims to create lasting digital literacy programs and activities that are adaptable, scalable, and impactful (Silvhiany, S. et al., 2021. The goal is to ensure that library and media teachers are not only proficient in digital literacy themselves but are also empowered to effectively transfer these skills to students.

Problem Statement

School resource centers in Malaysian schools face significant challenges in implementing digital information literacy initiatives, primarily due to the lack of qualified library and media teachers. Many schools rely on subject teachers without formal training in library and information science to manage these centers, which hampers the effectiveness of their programs (Siti Nurul Maryam Abdullah et. al., 2014). The COVID-19 pandemic exacerbated these challenges, highlighting the urgent need for digital access and competencies, particularly among underserved student populations. Additionally, as Malaysia embraces Education 4.0, which integrates advanced technology into teaching and learning, the demand for digital literacy skills has be-come even more pressing. Public libraries have played a supportive role, collaborating with school resource centers to develop digital literacy programs (Agir, N. & Mohd Matore, M. E., 2022; National Library of Malaysia, 2021, UPSI, 2022). However, there is a lack of research on sustainable digital collaboration projects between state libraries and school resource centers, despite their importance in bridging the digital divide and enhancing educational outcomes.

In response, public libraries in Malaysia have taken steps to support schools through various digital literacy initiatives. However, despite these efforts, collaboration between state libraries and school resource centers remains underexplored, particularly in the context of sustainable digital literacy programs. This

study aims to address this gap by investigating the potential for deeper, more effective partnerships that can enhance digital information literacy in Malaysian schools.

Purpose of Study

This study aims to address significant challenges faced by Malaysian school resource centers, particularly the critical shortage of qualified library and media teachers and the urgent need to enhance digital information literacy. Given the evolving educational landscape, it is essential to explore how public libraries can effectively support these centers in developing robust digital literacy initiatives. This research will focus on investigating collaborative efforts between state public libraries and school re-source centers to identify and implement best practices for sustainable digital information literacy programs and activities. By understanding the dynamics of these collaborations, the study seeks to develop strategies that can help overcome current obstacles and improve digital literacy outcomes.

A key objective of this study is to establish enduring collaborative frameworks be-tween state public libraries and school resource centers in Malaysia. These frame-works aim to enhance the digital literacy skills of library and media teachers, thereby equipping them with the necessary competencies to effectively teach and support students in the digital age. The research will evaluate various collaborative models to determine which approaches are most effective in creating adaptable, scalable, and impactful digital literacy programs. This focus on sustainability ensures that the initiatives can continue to evolve and address emerging digital literacy needs over time.

Ultimately, the study seeks to contribute to broader educational goals by fostering partnerships that leverage the strengths of both public libraries and school resource centers. By developing a model of collaboration that supports the ongoing development of digital literacy, the research aims to ensure that library and media teachers are not only proficient in digital skills but are also capable of transferring these skills effectively to students. This approach addresses the current challenges faced by school resource centers and supports Malaysia's educational objectives in the con-text of the digital age.

LITERATURE REVIEW

The role of digital information literacy has become increasingly vital in the context of the United Nations' Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 10 (Reduced Inequalities). These goals emphasize the need for inclusive and equitable quality education and the promotion of lifelong learning opportunities for all. As societies become more digitized, the digital divide continues to affect access to educational resources, with significant disparities observed among different communities.

Digital information literacy is crucial in addressing these challenges, as it equips individuals with the skills needed to navigate and utilize digital resources effectively. The collaboration between public libraries and school resource centers is essential in bridging this divide and ensuring equitable access to digital educational opportunities. Public libraries, with their extensive resources and community outreach capabilities, and school resource centers, which are directly involved in the educational process, can work together to provide comprehensive digital literacy programs. Such partnerships can play a significant role in supporting the SDGs by enhancing digital literacy skills and fostering greater educational equity.

Research highlights that successful collaborations between these institutions can lead to more effective digital literacy initiatives, benefiting both students and educators. By integrating the goals of SDG 4 and

SDG 10 into their programs, public libraries and school resource centers can address the digital divide and contribute to the broader educational objectives of inclusivity and equality.

Digital Information Literacy

When digital literacy becomes a fundamental skill required for all individuals, it can pose challenges to democratic engagement if a significant portion of the population struggles to keep up with the digital era (Gundersen & Rogler Jannicke, 2016). For instance, Norway has launched Digidel 2017 to reduce the number of citizens who are either weak or non-users of digital tools and the internet (Gundersen & Rogler Jannicke, 2016). The initiative advocates for public libraries to advance and disseminate education and information in a digital format, as contemporary information sources are predominantly digital rather than paper-based. In Finland, similar efforts are underway to enhance the digital skills of public library staff. The digital initiatives in Finnish public libraries aim to ensure that employees meet digital skills requirements, foster local service networks, and position libraries as key providers of digital support and collaborative spaces for businesses, the public sector, and voluntary organizations (Ojaranta & Litmanen-Peitsala, 2019).

Public libraries in Malaysia can adopt and adapt these international initiatives to improve their own digital literacy programs. Although these initiatives primarily focus on national libraries' digital development, the underlying ideas and concepts are applicable for fostering collaboration between public libraries and school resource centers. Hegarty et al. (2010) define digital information literacy as the ability to identify the need for, access, and evaluate electronic information. They describe digitally literate individuals as those who skillfully use, manage, create, reference, and share digital information. Furthermore, Hague and Payton (2010) argue that understanding digital literacy involves collaboration, e-safety, functional skills, creativity, critical thinking, and evaluation, along with an appreciation of culture and society. It also emphasizes the importance of information retrieval, selection, and effective communication

Malaysian Public Library

according to the Perlembagaan Malaysia under Jadual Kesembilan, the subject "perpustakaan" is classified in the Senarai Persekutuan under the domain of Education. However, with the enactment of the Incorporation State Legislatures Competency (Amendment) Order (PU 296, 1968), State Governments were given the authority to legislate on "perpustakaan awam" (public libraries). As a result, all state governments in Peninsular Malaysia have enacted laws to establish State Public Library Corpora-tions (CommonLii). Despite this authorization since 1968, the development of state libraries has been hampered by insufficient financial resources, a lack of professional staff, and low prioritization, leading to slow progress in library development (Abu, 2014). Originally, state public libraries aimed to serve both urban and rural residents through public libraries, branch libraries, mobile libraries, and bulk book loans. Over time, state libraries have undergone numerous changes, particularly in their content and collections.

In Malaysia, there are 14 state libraries, each with unique management structures based on state-specific enactments, with the Board of Directors serving as the highest authority in each state library (Perbadanan Perpustakaan Awam Negeri Perlis, 2020). Despite variations in management, the core functions of public libraries remain consistent: they are designed to provide infrastructure for the community to access cur-rent knowledge and information. The core functions of state public libraries encompass several essential roles. First, they are responsible for delivering up-to-date, accurate, and easily accessible information in various formats. This function supports both the economic and social development of the state and its residents, ensuring that information resources are available to meet current needs. Additionally, state public libraries provide a learning environment through a range of organized pro-

grams and exhibitions. These initiatives aim to enhance public awareness of information services and equip individuals with essential information research skills. By fostering a culture of learning, libraries contribute significantly to the educational advancement of their communities. Circulation and reference services are another critical function, with libraries offering appropriate and current reading materials across their networks. This service ensures that residents have access to a broad range of resources, supporting their informational and educational needs. State public libraries also engage in planning and coordinating consulting services related to library development for various entities, including government departments, statutory bod-ies, and the private sector (Perpustakaan Negara Malaysia, 2022). This role helps to advance library services and infrastructure development through strategic collaboration.

Malaysia School Resource Center

According to data from the Ministry of Education, Malaysia is home to 7,780 primary schools, each expected to have a resource center and a library and media teacher. Mohamed Shuhidan et al. (2021) describes the school resource center (PSS) as a hub for information collection that offers trained staff and systematically managed physical facilities to support various services and educational activities. This setup is de-signed to enhance the quality of teaching and learning. Robiah Yaakob and Noraffandy bin Yahaya (2008) define a school resource center as a facility where educational media and materials are gathered, classified, cataloged, and organized to facilitate user access. It serves as a space for school members to convene, select, plan, and utilize resources to support teaching and learning. Managed by trained staff, the center aims to provide valuable services such as information retrieval and to organize activities that promote reading interest, like the NILAM Program. The primary goal of these centers is to improve teaching quality and academic performance.

Meanwhile, Heather (1984) highlights that the teaching style and role of PSS teachers are crucial in promoting the use of school resource centers. These teachers are instrumental in encouraging their peers to view the resource center as a central component of the teaching and learning process. Rokiah (1999) emphasizes that effective teaching and learning increasingly rely on new technologies, multimedia materials, and the enhanced use of school resource centers. This includes integrating computers into classrooms and expanding the use of multimedia resources. Robiah Yaakob and Noraffandy bin Yahaya (2008) further note that previous studies have identified management weaknesses within school resource centers, which can con-tribute to lower engagement from teachers and students. Issues such as inadequate management skills and insufficient training for media teachers can undermine the effectiveness of the centers. To address these challenges, it is suggested that media teachers receive comprehensive training to better manage school resource centers, ensuring they meet established standards and fulfill their intended roles.

Malaysia School Resource Center

Malaysia's commitment to sustainable development can be traced back to the 1970s with the introduction of the New Economic Policy (NEP), aimed at addressing societal inequalities and poverty. This initiative laid the groundwork for the broader Sustainable Development Agenda 2030 (Agenda 2030), which encompasses eco-nomic, social, and environmental dimensions. On September 25, 2015, Malaysia, alongside 192 other countries, endorsed the 2030 Agenda for Sustainable Development, embracing its 17 goals designed to foster resilience and inclusivity across all societal segments (Jeffrey Sachs Center, 2024).

The Economic Planning Unit (EPU) under Malaysia's Ministry of Economy is tasked with spearheading sustainable development efforts and monitoring progress towards the SDGs. According to Chacko (2023), Malaysia ranks 78 out of 166 coun-tries in the Sustainable Development Report (SDR) 2023, reflecting notable achievements in literacy, poverty reduction, access to electricity, water in urban areas, and internet penetration. This ranking underscores Malaysia's overall progress towards the SDGs but also highlights areas needing improvement, particularly in achieving the targets set for quality education.

This study focuses on SDG 4, which is Quality Education, a critical area where Malaysia's performance shows mixed results. Figure 1, illustrates Malaysia's performance in 2024, revealing significant variability and stagnation in achieving the necessary progress. These findings indicate that there is a pressing need for actionable strategies to enhance the success rate of SDG 4. This research aims to explore sustainable digital information literacy programs at state public libraries and school re-source centers, assessing how these initiatives can contribute to more effective and inclusive educational outcomes, thereby advancing Malaysia's efforts toward meeting SDG 4 and improving overall educational quality
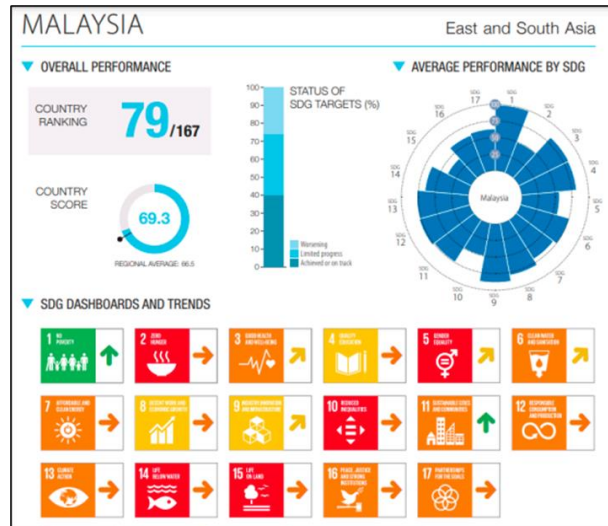

Figure 1: Malaysia's performance in 2024, (Jeffry, 2024)

This study specifically examines the sustainable collaboration between Malaysian state public libraries and school resource centers, focusing on digital information literacy programs. Effective collaboration between these institutions is crucial for ad-dressing the digital divide and ensuring equitable access to educational resources. By developing and implementing sustainable collaborative frameworks, this study aims to enhance the quality and impact of digital literacy initiatives. These partnerships are essential for creating adaptable and enduring solutions that address the challenges identified in the context of SDG 4, ultimately contributing to more inclusive and effective educational practices.

METHODOLOGY

This study utilizes a qualitative research approach to explore challenges and nuances that are not easily captured through quantitative methods alone. By focusing on participants' experiences, perceptions, and insights, the research aims to uncover deeper, more nuanced understandings of the phenomena associated with digital in-formation literacy in school resource centers. Qualitative research enriches the quantitative findings by providing detailed, context-rich descriptions and exploring complex aspects of the subject matter that cannot be quantified (Ospina, 2004). Data were collected through semi-structured interviews with a carefully selected group of respondents, including librarians and assistant librarians from each state public library, as well as Chief Sectors - SSTP from each Malaysian States Educational Resources and Teknology Division (BSTP), Ministry of Education and 14 Malaysian state public libraries, Librarian or Assistant Librarian. In total, 28 respondents contributed to the study, offering a wide range of perspectives

on the challenges and opportunities related to digital information literacy. This method allows for a comprehensive exploration of the topic and facilitates a more detailed and nuanced understanding of the issues being investigated

FINDINGS

Response Rate

The questionnaires were distributed to the employees of Universiti Teknologi Mara Perlis (UITM Perlis). The population of this study were 779 employees and the sample size were 100 respondents. A total of 120 questionnaires were distributed to the employees. Total of 100 questionnaires were collected and completed, while another 16% (20 questionnaires) were unreturned.

Frequency statistics was done to describe the main characteristics of the sample. Frequency is the number of times an event occurs. Frequency analysis is an important area of statistics that deals with the number of occurrences. The table below shows the demographic profile of the respondents. Six variables have been questioned in the questionnaires which are gender, age, ethnicity, marital status, education level, and working experience.

A total of 100 questionnaires have been collected from the respondents which consisted of 46 (46.0%) female and 54 (54.0%) male employees involved in the study. 17 (17.0%) of the respondents were 20 to 29 years old, 36 (36.0%) were 30 to 39 years old, 27 (27.0%) were 40 to 49 years and 20 (20.0%) were 50 years and above. For ethnicity, majority of the respondents were Malay with 99 (99.0%) and Chinese only 1 (1.0%). In terms of marital status, they were married 77 (77.0%) and single 23 (23.0%). All of the respondents were 100% Malaysian. As for the education, there were Degree 16 (16.0%), Diploma, STPM or Certificate 19 (22.0%), SPM 20 (20.0%), Masters 39 (39.0%) and PHD 3 (3.0%).

Finding 1: Existing Collaborative Digital Information Literacy Initiatives in Malay-sian Public Libraries and School Resource Centre

The findings of the study revealed that the activities conducted by public libraries and school resource centers in Malaysia predominantly include digital information literacy workshops (40%), U-Pustaka workshops (23.3%), digital information literacy trails (36.7%), information literacy courses (3.3%), scheduled mobile library visits to schools (3.3%), and other miscellaneous activities (26.7%). Notably, 6.6% of the respondents indicated that no digital information literacy programs had been implemented within their institutions. A significant majority of survey respondents (83.3%) concurred that these activities positively impacted library officers, teachers, and students.

When respondents were asked to identify the forms of collaboration, they believed would be most successful in enhancing digital information literacy in schools, the feedback was as follows: workshops on digital information literacy (83.3%), the development of a digital information literacy module (63.3%), the preparation of teacher planning records on digital information literacy (93.3%), and project-based learning initiatives for students (3.3%). Additionally, 10% of respondents suggested other forms of collaboration. Furthermore, 56.7% of respondents agreed that they were well-positioned to lead and coordinate these collaborative efforts in schools, thereby advancing digital information literacy.

In conclusion, the study underscores the pivotal role that public libraries and school resource centers play in advancing digital information literacy within educational settings. The data not only highlight the diverse range of activities currently undertaken but also reveal a strong consensus among respondents regarding the effectiveness of these initiatives in benefiting key stakeholders—library officers, teachers,

and students alike. Moreover, the expressed preference for structured collaboration, particularly through workshops, digital literacy modules, and teacher planning resources, points to a clear pathway for enhancing the impact of digital literacy pro-grams. As schools continue to navigate the evolving digital landscape, the insights gained from this study provide a foundation for developing more targeted and sustainable strategies that can better equip educators and students with the essential digital competencies required for the future.

Finding 2: Digital Information Literacy Awareness among Malaysian Public Li-brar-ies Staff and School Resource Centre Teacher

In further interviews conducted with 14 SSTP officers, the respondents were assessed on their understanding of Digital Information Literacy (DIL), the level of sup-port from top management, and their awareness of DIL within school environments. The analysis reveals that SSTP officers were generally open to engaging in discussions about DIL and its distinction from Information Literacy (IL). It was observed that while library and media teachers possessed a basic understanding of digital information literacy, there were notable inconsistencies in its implementation across various states.

Specifically, some media teachers demonstrated a high level of awareness and comprehension of digital information literacy. However, due to limited digital literacy skills among other library staff members, these teachers continued to rely on Information and Media Literacy (LMM) practices. This situation highlights a gap between theoretical understanding and practical application. The findings suggest that despite increasing awareness of digital information literacy, its integration into everyday practices remains uneven, primarily due to disparities in staff expertise and training. This underscores the critical need for comprehensive training and robust support systems to ensure that digital information literacy is effectively implemented across all school resource centers.

'... for managing information, it is indeed very helpful for teachers to be able to have the knowledge (in teaching and learning especially in terms of access to information). With digital information skills, teachers can access information accurately and quickly. These sources of information can be shared with their students and so students can access the information and evaluate the information received, what their teachers teach, be able to assess whether it is true or not and thus im-prove the skills of writing and communication through the skills they can, through this digital information through social media and communication. And then create digital awareness. They can know the ethics of the use of such information, respect the rights of privacy, copyright and so that comply with the law. Which in turn encourages creativity and innovation. With this, students can be more creative and innovate in developing information digitally."

"The importance of digital information literacy is to be able to utilize resources effectively, be able to relevant information, be able to communicate and collaborate in online interactions and much more."

Respondent SSTP 3

The analysis highlights a critical juncture in the implementation of Digital Information Literacy (DIL) within school resource centers. While there is a growing aware-ness and understanding of DIL among SSTP officers and media teachers, the uneven application across different states points to significant challenges in translating theoretical knowledge into practical outcomes. The reliance on traditional Information and

Media Literacy (LMM) practices, despite the recognition of DIL's importance, underscores the gaps in digital literacy skills among library staff. These findings emphasize the urgent need for targeted training and sustained support from top management to bridge these gaps. By addressing these discrepancies, school resource centers can more effectively integrate digital information literacy into their daily operations, thereby enhancing the overall digital competency of educators and students across the nation.

This response aligns with the expectations expressed by public libraries, as high-lighted by the Public Library (PL) respondents, who emphasized that the essence of digital information literacy lies in the substance of information itself and the ability to effectively obtain and utilize that information. This perspective reinforces the im-portance of equipping educators and students with the necessary skills to navigate and leverage digital information, further validating the need for comprehensive training and support within school resource centers.

> *"... digital information literacy ... is a part of information literacy, focusing specifically on using digital tools. It means being able to use computers, social media, and the internet to find and evaluate information. For example, it covers finding information from e-books in-stead of printed books, online newspapers instead of physical ones, digital libraries, websites, and various online databases like Google, u-Pustaka, or e-learning platforms."*
>
> *Respondent PL1*

> *"Digital information literacy comes under big information literacy. If you look at it in terms of information literacy, it has a definition, we al-so can access, evaluate, select, and use the information effectively. but if it is digital, it is the same thing, but using digital platforms, mass media and multimedia."*
>
> *Respondent PL 2*

> *For me, information literacy is our ability to access, search for information, select information, value information before we use the information before conveying it to the public. If DIL, he is the same as us, on-ly the latest technology tool is not physical."*
>
> *Respondent PL 7*

Respondents from public libraries noted that while users, including Library and Media Teachers, are generally familiar with online search engines, they often lack advanced internet search techniques. Their heavy reliance on these search engines, coupled with minimal use of other digital resources such as the public library's u-Pustaka database, highlights a significant gap in their digital information literacy. Additionally, there is a marked deficiency in their ability to critically evaluate the information they encounter. These observations further under-score the variability in digital information literacy proficiency among staff members at both libraries and school resource centers, reinforcing the need for target-ed training and support to elevate these essential skills across the board..

CONCLUSION

To ensure effective implementation of digital information literacy (DIL) programs, it is crucial for teachers to first acquire comprehensive digital literacy knowledge. This study has demonstrated a clear need for DIL

proficiency among educators, as high-lighted by respondents who emphasize its importance in teaching. By integrating various suggestions from this research, there is strong potential to support Library and Media Teachers (LMTs) in applying DIL effectively within the school community. A foundational element of this initiative is the development of sustainable collaborative frameworks between educators to foster a unified approach to digital literacy.

Collaboration among teachers from different subject areas is essential to diversify information search methods and achieve the objectives of digital information literacy. By working together, educators can bring diverse perspectives, teaching styles, and approaches to DIL, enriching students' learning experiences. This collaborative effort should extend beyond individual classrooms to include the creation of diverse, sustainable learning environments that integrate both printed and digital resources. Additionally, incorporating audiovisual materials, organizing educational visits, and inviting field experts can significantly enhance the learning process and provide practical, real-world applications of digital information literacy.

To further reinforce students' understanding of DIL, it is necessary to offer hands-on activities within the school resource centers. These activities should be part of a continuous, sustainable program that evolves based on feedback and past experiences, ensuring consistent and effective teaching practices. Fallon (2020) highlights the importance of teacher education programs in equipping educators with the skills needed for the digital age. Thus, continuous professional development and collaborative efforts among educators are vital to maintaining the effectiveness of DIL pro-grams. By establishing robust ICT infrastructure and garnering support from school administrators, library and media teachers can play a pivotal role in advancing digital information literacy, contributing to a more inclusive and equitable educational environment.

REFERENCES

Abu R (2014) Community development and rural public libraries in Malaysia and Australia. PhD Thesis, Victoria University, Melbourne, Australia.

Adam Zulkarnain Saleng, Ima Eryanty Abdul Manaf, Norhasliza Mohd Razali. (2022). SDG 4: Peranan Perpustakaan. https://www.academia.edu/download/95052125/SDGs_Peranan_Perpustakaan.pdf

Agir, N. and Mohd Matore, M. E. @ E. (2022) "Literasi dan Kewarganegaraan Digital: Konsep dan Strategi Implementasi dalam Pendidikan di Malaysia", Malaysian Journal of Social Sciences and Humanities (MJSSH), 7(3), p. e001367. doi: 10.47405/mjssh.v7i3.1367.

Bronwyn Hegarty and Merrolee Penman, Oriel Kelly, Manukau, Lynn Jeffrey, Dawn Coburn and Jenny McDonald, (2010). Digital information literacy: Supported development of capability in tertiary environments. https://www.educationcounts.govt.nz/publications/e-Learning/80624.

Bronwyn Hegarty and Merrolee Penman; Oriel Kelly; Lynn Jeffrey; Dawn Coburn and Jenny McDonald. (2010). Digital information literacy: supported development of capability in tertiary environments https://www.educationcounts.govt.nz/publications/e-Learning/80624.

Chacko, D. P. (2023, December 18). The Malaysian SDG progress. The Star. https://www.thestar.com.my/news/nation/2023/12/18/the-malaysian-sdg-progress

Eng Ling, O. and Kutty, F. M. (2022) "Peranan Efikasi Kendiri dan Kemahiran Teknologi Digital Guru Sekolah Rendah dalam Memotivasikan Pembelajaran Murid", Malaysian Journal of Social Sciences and Humanities (MJSSH), 7(3), p. e001374. doi: 10.47405/mjssh.v7i3.1374.

Gundersen, Arne and Røgler, Jannicke. (2016). Digital literacy – positioning public libraries through a national programme. Paper presented at: IFLA WLIC 2016 – Columbus, OH – Con-nections. Collaboration. Community in Session S14 - Public Libraries. In: 21st Century Literacies for Public Libraries, 10-11 August 2016, Philadelphia, PA, USA. http://library.ifla.org/2090/1/S14-2016-gundersen-en.pdf

Hague, C., & Payton, S. (2010). Digital literacy across the curriculum. FutureLab. Retrieved from http://www.nfer.ac.uk/publications/FUTL06/FUTL06.pdf

Jeffrey Sachs Center. (2024). Malaysia Monitoring the Performance of the SDGs at the State Level. https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/

Mohamed Shuhidan, S., Abdul Majid, M., Mohamed Shuhidan, S., Anwar, N., & Abd Hakim, A. A. (2021). School Resource Center and Students' Civilization in Digital Age. Asian Journal of University Education, 16(4), 190. https://doi.org/10.24191/ajue.v16i4.11953

National Library of Malaysia. (2021). Panduan Literasi Media Dan Maklumat. https://www.pnm.gov.my/pnm/resources/pdf%20file/LiterasiMaklumat/PANDUAN%20LITER ASI%20MEDIA%20DAN%20MAKLUMAT%20TAHAP%20PERTENGAHAN1.pdf

Ospina,S. (2004). Qualitative research. Encyclopedia of Leadership (pp. 1279-1284).

Perpustakaan Awam Negeri Perlis. (2020). Sejarah. Retrieved from http://www.perlislib.gov.my/web/ms/info-korporat/sejarah.

Perpustakaan Negara Malaysia. (2022). Laporan Tahunan 2021. Perpustakaan Negara Malaysia. https://www.pnm.gov.my/pnm/resources/pdf%20file/Laporan%20Tahunan/Laporan%20Tahuna n%202021.pdf

Robiah Yaakob, Noraffandy bin Yahaya. (2008). Penggunaan Pusat Sumber Sekolah Dan Per-pustakaan (PSS) : faktor, kesan serta masalah. https://core.ac.uk/download/pdf/11783851.pdf

Rokiah Ismail dan Kamaruddin Abu Hasan . (1999) .Bahan pelbagai media dalam pengajaran dan pembelajaran ".Dibentangkan dalam Persidangan Pusat Sumber Sekolah 1999. Pulau Pinang. https://www.scribd.com/document/214198715/pusat-sumber#

Silvhiany, S., Huzaifah, S., & Ismet, I. (2021). Critical Digital Literacy: EFL Students' Ability to Evaluate Online Sources. Indonesian Journal of EFL and Linguistics, 6(1), 249-269. https://doi.org/10.21462/ijefl.v6i1.364

Siti Nurul Maryam Abdullah, Mazlina Pati Khan, Norzuraiza Ahmad (2014). A conceptual framework on promotional activity practices in malaysian education resource centre. https://www.researchgate.net/publication/273766076_A_Conceptual_Framework_On_Promotio nal_Activity_Practices_In_Malaysian_Education_Resource_Centre.

United Nations. (2021). Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. https://sdgs.un.org/goals/goal4.

United Nations. (2023). United nations sustainable development. United Nations. https://www.un.org/sustainabledevelopment/

UPSI. (2022). Issue and challenge on national transformation of digital learning in post-Covid-19: Isu dan Cabaran Pembelajaran Digital dalam Transformasi Pendidikan Negara Pasca Covid-19. Jurnal Pendidikan Bitara UPSI, 15(2), 23–32. https://doi.org/10.37134/bitara.vol15.2.3.2022