Development of ASEAN Network Model on Information Literacy

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ABSTRACT

This study aimed at overviewing the situation of information literacy education and research in the Association of Southeast Asian Nations (ASEAN) region, and developing an ASEAN network model on information literacy. This research used documentary and qualitative research methods. Key resources consisted of twenty bibliometric studies and related documents and two groups of key persons. The first group consisted of twenty-seven purposive key persons from eight countries, and the second group consisted of seven key persons from five countries. The research instruments comprised a data collection form and focus group/ interviewing forms. Data was collected by focus group discussion and online interviews, and qualitative content analysis was used in data analysis and presented descriptively. Research findings showed that: 1) information literacy education and research in the ASEAN region varied across countries and placed importance on the educational context. Singapore was found to be the most leading and productive country in ASEAN in information literacy with the highest number of journal articles on the international scale, and was among the most contributing groups at the regional and global level; 2) the ASEAN Network on Information Literacy (ASEAN-NIL) has been developed as a model with its principles, objectives, management system, activities, and promotion strategies. Its strengths are an integrated scope, multidimensional orientation, and interdisciplinary and collaborative partnerships at the national, regional, and international level, suitable for the ASEAN context, the online environment, and the digital educational ecosystem.

Keywords: information literacy, ASEAN, networking, LIS education, LIS research

1. INTRODUCTION

Information literacy plays a significant presence in library and information science (LIS) and has been an ongoing issue of interest and widely discussed with many different approaches, views, perspectives, and a variety of definitions and concepts. This has expanded the territory of information literacy and adds to its value as a currently growing and required skill and metaliteracy. Information literacy has developed from a librarianship-focused notion to a multidisciplinary area that encompasses other disciplines wider than the social sciences. As one global prime concern, information literacy has revealed a high impact on sustainable development goals (Abdulrahman et al., 2019; Madu et al., 2020). The COVID-19 pandemic and the "new normal" have put information literacy in the spotlight with a more integrated, dynamic, and holistic view as well as as becoming a central and survival skill of the digital age. It is, therefore, critically important that the international community contribute to information literacy development.

Networking provides various opportunities for academicians, researchers, and professionals to share their knowledge and proficiencies. The ability to fulfill the common aim of increasing the productivity, quality, and impact of information literacy teaching, learning, and research is strengthened by networking. There has been a long tradition of LIS cooperation, and library networking is one model for library development and an inevitable trend in LIS, to cope with globalization and changes in the profession and education, moving more towards internationalization (Sacchanand, 2018). Since information literacy is a global issue of interest, many information literacy networks have been formed, especially in western countries and mostly in Europe, to connect educators, researchers, and information professionals in the area of information literacy and related areas. However, none have been formed in the ASEAN and ASIA region.

The Association of Southeast Asian Nations (ASEAN, 2020) consists of ten member countries in Southeast Asia with noticeable differences with regard to levels of socioeconomic development, literacy rate, population density, gross domestic product (GDP) per capita, information and communications technology (ICT) development, cultural and social environment, geography, religion, language, and education policy, system, and structure. These ten ASEAN countries have numerous commonalities, infinite prospects, and a wealth of resources, despite their disparities, diversity, and development gaps. As

stated in the ASEAN Charter, one purpose of ASEAN is "to develop human resources through closer collaboration in education and lifelong learning for the empowerment of ASEAN's people and the strengthening of the ASEAN community" (ASEAN, 2008). For this reason, ASEAN added value to human resource development and regional cooperation by strengthening deeper and wider cooperation for a more integrated and connected ASEAN, through its ASEAN vision, policies, master plans, strategies, and guidelines.

Collaborative networking is challenging ASEAN LIS educators, researchers, and information professionals to cope with changes in the profession, education, and society. With ASEAN's vision 2025 "Integrating Countries, Integrating Development" (ASEAN, 2021) as well as research findings showing that most ASEAN countries' contributions to LIS have been negligible, and research recommendations for collaboration in the region, especially in research activity to strengthening the LIS profession and professionals (Dacillo, 2018; Patra & Chand, 2009), and for collaborative networking in the ASEAN region (Sacchanand, 2017), specifically, ASEAN's network on information literacy (Sacchanand, 2016), this research is significant. This helps respond to ASEAN vision, mission, strategies, and master plans as well as the demand of LIS and the wider academic and professional community for more collaborative partnership and activities. The findings of this research study will help in reinforcing the development of information literacy, strengthening the roles of LIS educators, researchers, and professionals, and aiding the impact of LIS in the region to be more visible, moving from nationalization to regionalization and internationalization, and leading to more opportunities.

This research study aimed at overviewing the situation of information literacy education and research in the ASEAN region as well as developing an ASEAN network model on information literacy with promotion strategies.

2. RELATED LITERATURE

Since the term "information literacy" was coined and elaborated upon beyond traditional librarianship by Zurkowski (1974), president of the Information Industry Association, its connotation and denotation have been continually adjusted, revised, and expanded in response to the demand for a notion that prioritizes learning. To empower learners, information literacy is redefined as a metaliteracy (Mackey & Jacobson, 2011, 2014; Sukula, 2019) which can help expand the extent of popularly held

notions of information literacy in the digital context, where innovative collaborative technologies, social media tools, and online communities are challenging traditional definitions of information literacy.

2.1. Information Literacy Bibliometric Studies

Many bibliometric studies have been published, especially in international journals and information literacy literature. They differ to some extent, e.g., scope, specific objective, time frame, and database used to retrieve articles. Bibliometric analysis helps with mapping of the state of the art and identifying gaps and new directions in research and specific areas, as well as collaborative authorship trends.

An emphasis has been placed on literature on information literacy in ASEAN countries and the region as follows:

In the larger picture of LIS literature related to ASEAN, Patra and Chand (2009) identified LIS literature growth, core journals, and authorship pattern in The South Asian Association for Regional Cooperation (SAARC) and the ASEAN region as reflected through LISA (Library and Information Science Abstracts) during 1967-2005. It was found that Singapore was in the forefront of LIS research in ASEAN, followed by Malaysia. The results of the study called for more collaboration among SAARC and ASEAN member countries. It also identified the need for member countries of both the regional associations to formulate and implement information policies similar to that of Singapore.

Specifically, in terms of ASEAN countries' information literacy research outputs, Majid et al. (2015) discovered that from 2003 to 2012, the number of information literacy articles and conference papers published in SCOPUS increased steadily. Majid and Foo from Nanyang Technological University (NTU), Singapore were in fifth place with twelve publications and seventh place with nine publications among the top twelve authors, respectively. Malaysia was in fifteenth place in the list of information literacy publications distributed by country. This is consistent with findings by Kolle (2017) that the number of information literacy articles published on the Web of Science during the years 2005-2014 increased steadily. Magid and Foo from NTU were found to be productive authors and institutes, with equal contributions of eight articles each, and took the seventh rank, while NTU was the eighth most productive institute in total.

The bibliometric study by Karisiddappa et al. (2020) showed that global information literacy research papers published in SCOPUS from 2000 to 2019 have extended to as many as 118 nations. Social sciences was the most important subject in global information literacy research (with a 75.07% publications share). Significant keywords on global information literacy research include "Information Literacy" (4,179), followed by "Digital Literacy" (1,453), "Students" (928), "Education" (887), and "Media Literacy" (780). Among the top twenty most productive organizations, universities from western countries, especially the United States of America (USA), dominated. NTU, Singapore was in fourth place in the scientometrics profile of the top twenty most productive global organizations list and was the only university in ASEAN, and one of Asia's two universities in the list. Another is the University of Hong Kong, which was in the thirteenth place. Productive authors from ASEAN were Majid and Foo from NTU, ranking sixth and tenth, respectively. They were also found in sixth and eighth place, respectively, in Bapte's (2020) information literacy global research output published in SCOPUS during 1975-2002, while Singapore is the only Asian country in fifth place.

Bibliometric studies of individual journals have increased considerably, usually regarding the most prestigious journals in a given field. Focusing on LIS and the ASEAN region, the *Malaysian Journal of Library and Information Science* (MJLIS) has been the continuous subject of bibliometric studies by different researchers (Bakri & Willett, 2008; Brahma & Verma, 2018; Chaparwal et al., 2020; Garg et al., 2019; Kaur & Kamini, 2012; Kevin et al., 2009; Rajev & Joseph, 2016; Tiew et al., 2002; Velmurugan & Radhakrishnan, 2016; Yumnam & Singh, 2021). The findings can be summarized that the university publishing the journal under study, University of Malaya (UM), was the most prolific institute, with most papers published in the subject of bibliometrics and scientometrics (33.09%), while information literacy was ranked tenth (3.52%). Among prolific authors, UM's Kiran Kaur had the highest Citation Per Paper (CPP) value. Singapore, Thailand, and Indonesia were the third, sixth, and thirteenth ASEAN countries to contribute to MJLIS, with 5.35 percent, 4.76 percent, and 0.90 percent, respectively. The number of joint authors and multi-authored papers has grown.

Bibliometric studies on LIS single journals also showed that Singapore and Malaysia were visible in two biblometric studies of the *Journal of Information Literacy*; authors from Malaysia ranked ninth during the year 2007-2012, with one article (0.76%) (Panda et al., 2013), while during the year 2011-2015, findings of Tallolli and Mulla (2016) showed that Singapore ranked sixth (3.18%) most productive country and NTU ranked third (2.73%) most produc-

tive institution which contributed numbers of authors to the journal. Other LIS single journals that cover the information literacy area and with ASEAN contributions were included as follows: In the *Pakistan Journal of Library and Information Science* (1995-2010), Malaysia emerged as fifth place with four papers (3.10%) and Singapore as sixth place with two papers (1.55%). International Islamic University, Malaysia and NTU, Singapore were two institutional affiliations of authors with three and two papers, respectively (Warraich & Ahmad, 2011). In *Library Philosophy and Practice* (2014-2018), Malaysia ranked eighth with twenty-six papers (1.85%) and Indonesia ranked tenth with eight papers (0.71%), respectively (Kannan & Thanuskodi, 2019). Four ASEAN countries were ranked in country-wise authorship collaboration in *The Journal of Information Science* during 2005 to 2014. Singapore came in eighth place with fifteen papers (2.61%), and Malaysia was in seventeenth place with three papers (0.52%), while Thailand and Myanmar were tied for nineteenth place with one paper each (0.17%). The contributions of scholarly articles belonging to fifty-four countries and the United Kingdom, the country that publishes the journal under study, contributed the most with the highest number of papers (16.35%), followed by the USA (13.57%). The authorship trend is shifting towards multi-authorship as a result of collaborative effort (Gurikar et al., 2018). However, findings from the three LIS single journals, excepting the *Journal of Information Literacy*, can not be directly concluded as contribution to information literacy because of the wider LIS scope of the journals.

Even though it was found that international contributions from most ASEAN countries were negligible, the number of information literacy publications has constantly increased (Majid et al., 2015). Due to the increased number of co-authorship and partner countries, Asian information science research has progressed towards the international standard since 2001 (Chang, 2009; Tallolli & Mulla, 2016). The recommendations are for the Asia region as a whole to strengthen LIS research in the ASEAN region (Patra & Chand, 2009) and to encourage scholars in the region to participate in important international journals and conferences in order to increase awareness and reputation.

2.2. Information Literacy Networks

The information literacy networks all share the common goal of providing a platform or forum for educators, researchers, and professionals from across the country, region, and world to communicate, connect, discuss, and share ideas, new initiatives, knowledge, experiences, research, and practices with a wider network. Several efforts have been made to form collaborative networks of educators, researchers, and information professionals. The literature review showed that information literacy networks can be classified into national, regional, and international networks, or people networks, institutional networks, and online networks, and usually start from informal or volunteer groups on a voluntary basis. They differ from one another in initiative, affiliation, legal entity, official or unofficial role, or network management structure. Some networks are independent networks, while some are affiliated with or get support from organizations, library associations, and national professional associations or regional or international organizations.

Some key information literacy national, regional, and international networks included the Chartered Institute of Library and Information Professionals, Information Literacy Group (CILIP – ILG), formed in 2004; the European Network on Information Literacy (EnIL), in 2001; the European Conference on Information Literacy (ECIL), in 2013; and the Information Literacy Network of the Gulf Cooperation Council (ILN – GCC), in 2005. At the international level, the International Alliance for Information Literacy (IAIL), founded in 2003, and the International Federation of Library Associations and Institutions (IFLA), Information Literacy Section, are two prominent international networks that play important roles in information literacy. Even though these networks vary in some aspects, they all have the same common interests and contribute significantly to information literacy development nationally, regionally, and internationally. They organize international annual conferences that draw delegates from all over the world and from all sectors of higher and further education, as well as programs and activities for professional development, research, and practice, and education and training on various aspects of information literacy and related topics.

These collaborative efforts provide opportunities for new perspectives and new visions of information literacy as a convergence of disciplines, multiliteracies, metaliteracies, and transliteracies, moving towards a unified framework for information literacy and more collaborative networking. In the age of digital transformation and the new normal, and through the capabilities of digital technology, online networking expands opportunities for collaboration, strengthens continuing professional development and professional recognition, and increases quality, efficiency, and effectiveness.

2.3. ASEAN LIS Collaboration and Network

ASEAN was founded on a spirit of collaboration and cooperation. Great efforts have been made to develop regional networks, especially in the field of education. Some key LIS collaborative joint efforts in Asia include the International Conference on Asian Digital Libraries (ICADL) and Asian-Pacific Library and Information Education and Practice (A-LIEP), which were founded in 1998 and 2006, respectively. In specifically the ASEAN region, the Congress of Southeast Asian Librarians (CONSAL), the sole recognized regional professional association for librarians from Southeast Asian countries, was founded in 1970. It is regulated by the CONSAL constitution, which aims to foster ASEAN-wide connection building, sharing, cooperation, and collaboration. CONSAL's executive board, which is made up of three national members from each member country's national library and national library association, is in charge of achieving CONSAL's objectives. Members of CONSAL take turns hosting each conference, which occurs every three years.

Collaboration has been an issue of ASEAN's ongoing interest. In the analysis of the ASEAN LIS collaboration situation and management, Sacchanand (2016) found that most collaborative efforts began as informal collaborations, on the basis of a small group of ASEAN LIS educators' personal ties. External factors promoting cooperation included global trends, ASEAN community cooperation, and a paradigm shift in education and the LIS profession; and internal factors included profession and professionals' needs, as well as successful partnerships. External factors that hindered the management of cooperation included the development gap among member ASEAN countries, especially geographical, social, and economic development; ICT infrastructure; and LIS education development in each country. Internal factors included the readiness of countries and LIS institutions in terms of management, faculty, and students. The researcher proposed the 4S (Small-Spirit-System-Sustain) management strategies for ASEAN LIS cooperation.

3. METHODOLOGY

3.1. Research Design

Both documentary and qualitative methods were used in this study.

Twenty bibliometric studies and literature on information literacy related to the ASEAN region were used as key information sources for the analysis of ASEAN information literacy education and research situations.

This was supplemented by focus group discussion and online interviews with twenty-two participants from three countries (Thailand, Malaysia, and Australia), who joined the focus group discussion at Sukhothai Thammathirat Open University (STOU), Thailand; and five key resource persons from five countries, namely Cambodia, Brunei, Philippines, South Korea, and Japan were interviewed online by appointment, making twenty-seven participants from eight countries in total. There was purposive sampling of those engaging in national, regional, and international collaborative information literacy activities. Due to the COVID-19 pandamic, the global crisis has forced the world to engage in the ubiquitous use of online learning, and permanently change, with new perspectives and new behavior. The second batch of online interviews with seven key persons from five countries was conducted in 2021 for the revised model that best suits the new normal and the digital educational ecosystem.

3.2. Research Instruments

Research instruments comprised a data collection form, a focus group discussion guideline, and a structured interview form. Data collection forms were developed to collect data from relevant documents, while a focus group guideline and a structured interview form were developed to collect data from face-to-face focus group discussions and online interviews.

3.3. Data Collection

The researcher limited the study of the situation of information literacy research of the ASEAN region based on the bibliometric studies published in international journals. The keywords "bibliometric studies" or "bibliometric analysis" and "information literacy" were used in the title or abstract or text along with the names of each ASEAN country, ASEAN, or ASIA to access and retrieve information from the international databases, namely ScienceDirect, Emerald, and Education Source, as well as from Google Scholar. The researcher performed manual examination of all the articles' contents. Finally, twenty bibliometric studies were used for the analysis.

The researcher also searched for information about the situation of information literacy education in ASEAN based on the key identified questions. The keywords "information literacy" or "information literacy education" and the name of each ASEAN country from the same databases, as well as from the websites of the national library associations, national libraries, and LIS higher education institutes of all ASEAN member countries, were

included to find recent developments. Data was collected using the data collection form, which included four key points needed for the development of the ASEAN Network on Information Literacy (ASEAN – NIL). This was supplemented by face-to-face focus group discussions and online interviews, which were conducted to collect information about the situation of ASEAN information literacy education and research, their ideas and suggestions on the ASEAN network model on information literacy, and strategies for promoting the information literacy network. The second batch of online interviews with another group of seven key Thai and foreign resource persons was conducted in 2021 to revise and update the network model due to COVID-19, the biggest global crisis, and its impact.

Thematic content analysis was utilized to examine qualitative data from data collecting forms, focus group discussions, and interviews. On the basis of findings from bibliometric studies of information literacy, the ASEAN information literacy research situation was examined.

In addition, the database of ASEAN educators, researchers, and professionals on information literacy using the OMEKA open source program was developed as a prototype for the promotion of the network.

4. RESEARCH FINDINGS

Findings showed the following:

4.1. Situation of Information Literacy Education and Research in the ASEAN Region

It was found that information literacy has taken root in all ASEAN countries. It is one important area that has received attention in the library field, from LIS educators, researchers, and professionals. There was ambiguity in the interpretation on the meaning of the word, especially when translated into the official language of each ASEAN country, as well as in the perception and interchangeable use of the term "information literacy" with other literacy terms, especially media literacy and digital literacy which resulted in information literacy advancement. Information literacy education and research in ASEAN countries have been in progress and varied considerably from country to country. Information literacy education put importance on the educational context and there was no information literacy standard or model specifically for the ASEAN region.

The international organization UNESCO, through UNESCO Bangkok, was an active partner in the development and promotion of information literacy in ASEAN,

particularly in Laos, Cambodia, and Myanmar. Information literacy has been the subject of seminars, conferences, training, workshops, and research. Two significant programs are UNESCO's Information for ALL Programme (IFAP) and the UNESCO MIL Alliance (UNESCO, 2021). Other contributing international professional organizations included IFLA, IATUL (International Association of University Libraries), SIDA (Swedish International Development Agency), and CONSAL.

Findings from the analysis of bibliometric studies showed that Singapore, NTU and Majid and Foo were the most productive country, university, and authors on information literacy in ASEAN, ranking among the top regionally and globally. Malaysia was the second most productive country, and UM's Faculty of Computer Science and Information Technology, the institution that publishes the MJLIS, was the most productive institution with affiliated authors. Thailand and Indonesia were also on the list, with contributions to information literacy research on an international scale.

On a global scale, Singapore, Malaysia, Thailand, and the Philippines were found to be involved with various regional and international activities on information literacy. Educators, researchers, and professionals from Singapore, Malaysia, and Thailand are on standing committees and program committees of the ECIL, as well as serving as ad hoc committees, peer reviewers, guest speakers, authors, or contributors. At present, a senior manager (Engagement) from the National Library Board from Singapore also participates as a member of the IFLA IL Section standing committee, and the president of the Philippine Association for Media and Information Literacy (PAMIL) serves as regional representative for Asia Pacific in the UNESCO MIL Alliance international standing committee.

Some unique contributions to the development of information literacy education and research in three ASEAN countries were found, including national policies, national professional associations, and international journals.

1) *National Policies*: Singapore as the leading country in information literacy was found to be the only country in the region that has national policies, strategic plans, guidelines, models, or frameworks both directly for and related to information literacy. The Ministry of Education as well as the Ministry of Communications and Information played important roles at the policy level which can affect the success of information literacy development in the country, through an integrated and holistic view and

collaborative partnerships between all stakeholders, with the National Library Board as the key player. Many existing information and media literacy public education programs have been implemented, with the National Library's S.U.R.E. (Source, Understand, Research, Evaluate) the most notable program.

2) *National Professional Association*: The Philippines is the only ASEAN country that has a national professional association directly connected to MIL. The PAMIL is a member of the UNESCO MIL Alliance, which promotes MIL as a lifelong learning skill and part of a knowledge-based society. Educators, media practitioners, librarians, information specialists, and MIL advocates gather at PAMIL events to share ideas and learn from one another.

3) *International Journals*: Malaysia was discovered to be the only ASEAN country to publish the Scopus-indexed MJLIS, a peer-reviewed LIS international journal that is well accepted by the academic community globally. Information literacy is one of the topics covered by the MJLIS as well as by another peer-reviewed journal, SJLIM (*Singapore Journal of Library and Information Management*), issued by the Library Association of Singapore, another key source of information literacy in ASEAN.

4.2. ASEAN Network on Information Literacy

The proposed model "ASEAN Network on Information Literacy (ASEAN – NIL)" was developed from literature review, findings from the first objective, the focus group discussion, and online interviews. In addition, the COVID-19 pandemic crisis and its wide-ranging and unprecedented impact, as the new normal and new norm emerge and shift to online patterns, were taken into consideration.

This proposed online model, the ASEAN – NIL, has its strengths in an integrated scope of information literacy, multidimensional orientation, interdisciplinary, and collaborative partnerships at the national, regional, and international level and is suitable for ASEAN, the online environment, and the new educational ecosystem.

4.2.1. Principle

Information literacy acts as a convergence discipline, a metaliteracy and multiliteracy for the development of information-literate learners, twenty-first century citizenship, and sustainable development.

4.2.2. Objectives

Three main objectives are as follows: 1) to be a network of educators, researchers, and professionals as well as organizations involved with information literacy and related areas in the ASEAN region; 2) to raise awareness of information literacy at the national and regional level; and 3) to encourage collaborative partnerships and support across all sectors related to information literacy, especially media and digital literacies in ASEAN, Asia, and worldwide.

4.2.3. Management System

This network is divided into three levels: 1) *at the national level*, a network of educators, researchers, and professionals who have a common interest in information literacy will be first formed as a special interest group based on personal ties on a voluntary basis. The network will be affiliated with the national library association, the national library, or any institution, depending on the situation of each country and governed by a standing committee. Strong support from the related ministries/government sectors of each country is needed; 2) *at the regional level*, the network will be governed by a regional standing committee comprised by the chair of the information literacy national committee or group of each ASEAN country. The regional chair rotates every two years among the members. The regional network is proposed to be affiliated with the ASEAN community or ASEAN Socio Cultural Community of ASEAN Secretariat, or A-LIEP, which has the same mission and is mostly run by LIS educators and researchers in ASIA; and 3) *at the international level*, the network will join and work as a member and partner of the UNESCO MIL Alliance and other national, regional, and international information literacy networks.

The ASEAN – NIL is open to members, both individual and institutional members from all ASEAN countries. Membership will focus on but is not limited to educators, researchers, and professionals involved with information literacy in the academic sector. Other related stakeholders such as non-governmental organizations (NGOs), publishers, and foundations will be eligible to join in various roles.

4.2.4. Activities

ASEAN – NIL will be a vital mechanism to promote and cultivate academic and research cooperation. Its online activities will focus on learning, producing, and sharing information in participatory digital environment, and continuing professional development through joint educational/teaching and learning activities, co-authorship, joint research, and joint professional activities.

The networked technologies, web portal, database, and

virtual platforms (real time), as well as asynchronous facilitation (e-mail) and online platforms (MOOCs, online courses, and social networks such as YouTube, Twitter, and Facebook) will be developed to facilitate connections and support multi-way communication.

4.2.5. Promotion Strategies

ASEAN network promotion strategies were found to be one critical component in the development of the ASEAN – NIL. The network will launch a campaign to raise awareness of the network and work with a range of academic sectors on information literacy, media literacy, and digital literacy, with other stakeholders/related organizations, e.g., NGOs, publishers, and foundations. The awareness, commitment, and engagement of strong leaders and members, as well as strong support from the national library association, related ministries, and ASEAN community are critical for long-term viability and sustainability.

At the initial stage, the prototype database was developed to enhance communication among educators, researchers, and professionals in information literacy in ASEAN countries. The data elements in the database include Name, Surname, Degree, Academic position, Administrative position (if any), Affiliation, Bibliographical record, and Abstract of the publication. Information in the database can be accessed and retrieved by Name, Surname, Affiliation, Title, and Keyword. Reports can be displayed on the screen as well as in print formats. Data can also be saved, modified, and updated by the contributors. The web portal will be developed to be the platform for communication, collaboration, and networking among educators, researchers, and professionals to share, collaborate, and contribute their expertise and publications in information literacy and other related literacies.

5. DISCUSSION

The findings showed that alongside the growing importance and development of "information literacy" in the ASEAN region, there has been ambiguity and variation in the explanation and interpretation of the term "information literacy" in the national language of each ASEAN country. These findings agreed with the English term that has also been widely discussed and has undergone many reviews by many western scholars. This was also supported by findings from the extensive literature review on information literacy's characteristics and dimensions by Kay and Ahmadpour (2015), suggesting that the concept

as well as the continual shift in emphasis of information literacy has grown continuously with the advancement in information technology.

Several studies have been conducted from the perspectives of scholars, professionals, and researchers in LIS and related fields on the similarities, differences, and interrelationships between the closely connected and integrated extent of information, media, and digital literacy. This has established a holistic learning environment and multidimensional framework for the development of information, media, and digital literate citizens in the digital environment (Sacchanand, 2020). UNESCO used one umbrella term "Media and Information Literacy (MIL)" in 2007, "to foster media and information literate societies through collaborating and forming alliances on a global scale" (UNESCO Institute for Information Technologies in Education, 2021).

Findings showed that education and research in information literacy varied across ASEAN countries. This was confirmed by research finding that social and technological advancements have had an impact on information literacy (Gurikar et al., 2018) and that most of the information literacy articles and prevailing models come from developed countries and western countries (Bapte, 2020; Bhardwaj, 2017; Dorner & Gorman, 2006; Gurikar et al., 2018; Tallolli & Mulla, 2016; Tokarz & Bucy, 2019).

Singapore was the ASEAN's most productive country and among the world's leading countries in information literacy research publishing. This resulted from the country's social, economic, educational, and technological development as well as LIS education and library development. Singapore is Asia's top performing economy (International Institute for Management Development, 2020) and is at the forefront of world-reputed university ranking systems, ranking first in QS Asia University Rankings 2021 and thirteenth in QS Global World Rankings (UniversityRankings.ch., 2021). LIS graduate programs play a critical role in LIS research generation, especially at the Ph.D. level. The Ph.D. program offered by NTU, Singapore has gained international recognition and information literacy is one area of research. In addition, NTU professors have also pioneered LIS regional collaboration proposals and research cluster formation in the region (Foo et al., 2006; Khoo, 2013; Khoo et al., 2003; Majid et al., 2003, 2015). Moreover, library development has played an important role in promoting information literacy, through the national policies launched by the government for over twenty years, including IT 2000 and Library 2000. The National Library has been at the forefront to increase

information literacy visibility and impact.

It was found that Malaysia ranked second among ASEAN countries in its research publication output in international journals, which is in line with the development of LIS education in Malaysia. The LIS Ph.D. program has been offered by UM, which was ranked ninth in the QS Asia University Ranking and fifty-ninth in the QS World University Ranking 2021 (UniversityRankings.ch., 2021). In addition, UM has published an international journal, MJLIS, since 1996. This helps increase the number of research publications by Malaysia, the UM, and the researchers affiliated with this university. This is in line with findings from bibliometric studies of MJLIS that UM, the institution that publishes MJLIS, is the most productive university with the most publications, authors, and prolific authors as well as highly cited authors (Bakri & Willett, 2008; Brahma & Verma, 2018; Chaparwal et al., 2020; Garg et al., 2019; Kaur & Kamini, 2012; Kevin et al., 2009; Rajev & Joseph, 2016; Tiew et al., 2002; Velmurugan & Radhakrishnan, 2016; Yumnam & Singh, 2021). Academic journals convey emerging knowledge, research findings, and the latest discoveries and developments, and they enable communication between researchers and scholars. This helps increase the credibility and visibility of the LIS scholar, institution, profession, country, and region.

As English is one official language and the medium of instruction in schools in Singapore and Malaysia, as well as being one of the most common languages spoken and used widely as a medium of education, communication, and government assemblies, so this is the language privilege of both countries in international academic communication. It is also worth noting two limitations of this study's research situation analysis: first, the analysis used bibliometric studies as the source of analysis rather than primary data; and second, it looked only at English research articles, excluding each country's national languages. Due to the diversity of national languages in ASEAN, it is strongly recommended that local researchers conduct a more in-depth investigation of each ASEAN country's information literacy research situation in both national and foreign languages in order to present the true information literacy research situation in each country.

The ASEAN – NIL, which was developed from an extensive literature review, focus group/interview discussions, and the analysis of the ASEAN situation of education and research, has its strengths and is in line with the 4S (Small-Spirit-System-Sustain) basic principle and collaborative management strategies as found by Sacchanand (2016). The model's integrated scope of information literacy is in line with the ideas of other national, regional, and international networks on information literacy (e.g., CILIP – ILG; EnIL; ECIL; ILN – GCC). In addition, this model is suitable for the ASEAN region because it has applied findings of the situation of information literacy education and research in the ASEAN region and responds to ASEAN's vision, mission, policies, master plans, strategies, and guidelines to strengthen deepen and wider cooperation for integrated ASEAN and ASEAN connectivity.

The collaborative partnership model, with interdisciplinary and collaborative approaches, is in agreement with the conceptual convergence between information, media, and digital literacy and also with many bibliometric findings showing that multiple authorships and degrees of collaboration have been increasing continuously (Baji et al., 2021; Bapte, 2020; Kolle, 2017; Nazim & Ahmad, 2007; Panda et al., 2013; Park et al., 2021; Tallolli & Mulla, 2016). This is in line with recommendations based on research findings of Chen et al. (2021) and Onyancha (2020) that interdisciplinary and collaborative approaches are required for effective information literacy delivery and quality scientific work in the complex information and learning environment.

6. CONCLUSION

The ASEAN – NIL was proposed for implementation through collaborative partnerships of national, regional, and international members and partners. This study will be beneficial to policymakers, educators, and researchers as well as professionals in policy formulation and implementation for the advancement of information literacy, LIS education, and research, library development, the LIS profession, and professionals as a whole. This is to cope with the twenty-first century changes and paradigm shifts in the profession and the new normal, and to align with ASEAN vision challenges.

There are still some interesting aspects about information literacy in the ASEAN region deserving further in-depth study, especially the information literacy situation of each ASEAN country, success factors, and lessons learned from success stories on information literacy development and implementation, and in bridging gaps through collaborative partnerships and networks.

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CONFLICTS OF INTEREST

REFERENCES

Abdulrahman, A. B., Ape, R., & Egbe, N. G. E. (2019). Information literacy as a key to sustainable development in Nigeria. *Journal of Library Services and Technologies*, 1(1), 31-37. https://credencepressltd.com/journal/uploads/archive/2019155894604559658 20045.pdf.

Association of Southeast Asian Nations. (2008). *The ASEAN charter*. https://www.asean.org/wp-content/uploads/images/archive/21069.pdf.

Association of Southeast Asian Nations. (2020). *Mid-term review of master plan on ASEAN connectivity 2025: Executive summary*. http://aadcp2.org/wp-content/uploads/03-MPAC-MTR-Executive-Summary.pdf.

Association of Southeast Asian Nations. (2021). *About ASEAN*. https://asean.org/about-us.

Baji, F., Mostafavi, I., Parsaei-Mohammadi, P., & Sabaghinejad, Z. (2021). Partnership ability and co-authorship network of information literacy field. *Scientometrics*, 126(9), 8205-8216. https://doi.org/10.1007/s11192-021-04062-2.

Bakri, A., & Willett, P. (2008). The Malaysian Journal of Library and Information Science 2001-2006: A bibliometric study. *Malaysian Journal of Library & Information Science*, 13(1), 103-116. https://mjlis.um.edu.my/index.php/MJLIS/article/view/6975/4636.

Bapte, V. D. (2020). Information literacy: A scientometric assessment of global research output. *DESIDOC Journal of Library & Information Technology*, 40(1), 26-33. https://doi.org/10.14429/djlit.40.01.14686.

Bhardwaj, R. K. (2017). Information literacy literature in the social sciences and humanities: A bibliometric study. *Information and Learning Sciences*, 188(1/2), 67-89. https://doi.org/10.1108/ILS-09-2016-0068.

Brahma, K., & Verma, M. K. (2018). Bibliometric studies of Malaysian Journal of Library and Information Science during 2007-2016. *Journal of Indian Library Association*, 54(1), 55-65. https://www.researchgate.net/publication/325567904.

Chang, H. W. (2009, March 6-8). *A bibliometric analysis of Asian authorship pattern in JASIST, 1981-2005*. Paper presented at the Asia-Pacific Conference on Library & Information Education & Practice (A-LIEP 2009), Tsukuba, Japan. http://www.slis.tsukuba.ac.jp/a-liep2009/proceedings/Papers/a31.pdf

Chaparwal, N., Teli, N. K., & Rajput, P. S. (2020). Mapping of research papers in Malaysian Journal of Library and Information Science 2010-2019: A bibliometric study. *Library Philosophy and Practice*. 4343. https://digitalcommons.unl.edu/libphilprac/4343.

Chen, C.-C., Wang, N.-C., Tu, Y.-F., & Lin, H. J. (2021). Research trends from a decade (2011–2020) for information literacy in higher education: Content and bibliometric mapping analysis. *Proceedings of the Association for Information Science and Technology*, 58(1), 48-59. https://doi.org/10.1002/pra2.435.

Dacillo, M. (2018). *A Bibliometric study of research outputs by Southeast Asian LIS faculty member* (master's thesis). Ewha Womans University, Seoul, Korea. http://dcollection.ewha.ac.kr/common/orgView/00000015031

Dorner, D. G., & Gorman, G. E. (2006). Information literacy education in Asian developing countries: Cultural factors affecting curriculum development and programme delivery. *IFLA Journal*, 32(4), 281-293. https://doi.org/10.1177/0340035206074063.

Foo, S., Khoo, C. S. G., Chaudhry, A. S., & Majid, S. (2006, November 27-30). Working together in developing library and information science education in the Asia Pacific. In S. Sugimoto, J. Hunter, A. Rauber, & A. Morishima (Eds.), *Proceedings of the 9th International Conference on Asian Digital Libraries* (pp. 4-11). Springer. https://doi.org/10.1007/11931584_3

Garg, K., Kumar, N., & Geeta, G. (2019). Malaysian Journal of Library and Information Science: A bibliometric study. *Library Philosophy and Practice*. 3687. https://digitalcommons.unl.edu/libphilprac/3687.

Gurikar, R., Hadagali, G. S., & Mulimani, R. S. (2018). Journal of Information Science: A bibliometric analysis. *Library Philosophy and Practice*. 1974. http://digitalcommons.unl.edu/libphilprac/1974.

International Institute for Management Development (IMD). (2020). *IMD world competitiveness ranking 2020: Showing strength of small economies*. https://www.imd.org/news/updates/IMD-2020-World-Competitiveness-Ranking-revealed/.

Kannan, P., & Thanuskodi, S. (2019). Bibliometric analysis of library philosophy and practice: A study based on Scopus database. *Library Philosophy and Practice*, 2300. https://digitalcommons.unl.edu/libphilprac/2300.

Karisiddappa, C. R., Gupta, B. M., & Kumar, A. (2020). Biblio-

metric study of global information literacy research during 2000-2019. *International Journal of Information Dissemination and Technology*, 10(2), 103-109. https://doi.org/10.5958/2249-5576.2020.00018.7.

Kaur, R. G., & Kamini, G. (2012). Bibliometric analysis of Malaysian Journal of Library and Information Science: 2007–2011. *International Journal of Information Dissemination and Technology*, 2(4), 307-312. https://www.indianjournals.com/ijor.aspx?target=ijor:ijidt&volume=2&issue=4&article=016.

Kay, R. H., & Ahmadpour. K. (2015). Negotiating the digital maze of information literacy: A review of Literature. *Journal of Educational Informatics*, 1(1), 1-25. https://doi.org/10.51357/jei.v1i1.48.

Kevin, W. U. A., Zainab, A. N., & Anuar, N. B. (2009). Bibliometric studies on single journals: A review. *Malaysian Journal of Library and Information Science*, 14(1), 17-55. https://ejournal.um.edu.my/index.php/MJLIS/article/view/6951

Khoo, C. S. G. (2013, July 15-16). ASEAN collaboration on LIS education [Keynote presentation]. Seminar on ASEAN collaboration on LIS education, Nonthaburi, Thailand. https://hdl.handle.net/10356/101376.

Khoo, C. S. G., Majid, S., & Chaudhry, A. S. (2003). Developing an accreditation system for LIS professional education programmes in Southeast Asia: Issues and perspectives. *Malaysian Journal of Library & Information Science*, 8(2), 131-149. https://mjes.um.edu.my/index.php/MJLIS/article/view/8378/5813.

Kolle, S. R. (2017). Global research on information literacy: A bibliometric analysis from 2005 to 2014. *The Electronic Library*, 35(2), 283-298. https://doi.org/10.1108/EL-08-2015-0160.

Mackey, T. P., & Jacobson, T. E. (2011). Reframing information literacy as a metaliteracy. *College & Research Libraries*, 72(1), 62-78. https://pdfs.semanticscholar.org/6d77/5e0711644fad14b8abb22314fb19b9c79bca.pdf.

Mackey, T. P., & Jacobson, T. E. (2014). *Metaliteracy: Reinventing information literacy to empower learners*. Facet Publishing.

Madu, A. U., Abba, F., & Joel, A. P. (2020). Impacts of information literacy skill on sustainable development goals, agricultural development, poverty alleviation for economic development in Borno state. *Jewel Journal of Librarianship*, 15(2), 153-164. http://www.jeweljournals.com/admin/published/4500012755.pdf.

Majid, S., Chang, Y.-K., Hnin, N. A., Ma, M. W. K., & San, Y. W. (2015). Analyzing publishing trends in information literacy literature: A bibliometric study. *Malaysian Journal of Library & Information Science*, 20(2), 51-66. https://ejournal.um.edu.my/index.php/MJLIS/article/view/1766/2530.

Majid, S., Chaudhry, A., Foo, S., & Logan, E. (2003). Accreditation of library and information studies programmes in Southeast Asia: A proposed model. *Journal of Librarianship and Information Science*, 32, 58-69.

Nazim, M., & Ahmad, M. (2007). Research trends in information literacy: A bibliometric study. *SRELS Journal of Information Management*, 44(1), 53-62. http://eprints.rclis.org/25095/1/16%20Research%20Trends%20in%20Information%20Literacy.pdf.

Onyancha, O. B. (2020). Knowledge visualization and mapping of information literacy, 1975–2018. *IFLA Journal*, 46(2), 107-123. https://doi.org/10.1177/0340035220906536.

Panda, I., Maharana, B., & Chhatar, D. C. (2013). The Journal of Information Literacy: A bibliometric study. *International Journal of Scientific and Research Publications*, 3(3), 1-7. http://www.ijsrp.org/research-paper-0313/ijsrp-p15122.pdf.

Park, H., Kim, H. S., & Park, H. W. (2021). A scientometric study of digital literacy, ICT literacy, information literacy, and media literacy. *Journal of Data and Information Science*, 6(2), 116-138. https://doi.org/10.2478/jdis-2021-0001.

Patra, S. K., & Chand, P. (2009). Library and information science research in SAARC and ASEAN countries as reflected through LISA. *Annals of Library and Information Studies*, 56, 41-51. http://nopr.niscair.res.in/bitstream/123456789/4166/4/ALIS%2056%281%29%2041-51.pdf.

Rajev, M. K. G., & Joseph, S. (2016). A bibliometric analysis on Malaysian Journal of Library and Information Science. *International Research: Journal of Library & Information Science*, 6(1), 159-174. https://irjlis.com/a-bibliometric-analysis-on-malaysian-journal-of-library-and-information-science/.

Sacchanand, C. (2016, August 13-19). *Development of management strategies for collaboration in information science education and research in the ASEAN community*. Paper presented at the IFLA WLIC 2016, Columbus, OH, USA. http://library.ifla.org/1392/1/152-sacchanand-en.pdf.

Sacchanand, C. (2017, January 8-10). Development of internationalization of library and information science (LIS) programs in Thailand. *Proceedings of The IAFOR (International Academic Forum) Hawaii Conference Series 2017: Educating for Change* (pp. 39-47). IAFOR. http://papers.iafor.org/conference-proceedings/IICE/IICEHawaii2017_proceedings.pdf.

Sacchanand, C. (2018, August 18-19). Collaboration and networking for open library and open education. In N. Wipanwin, & T. J. Smith (Eds.), *Proceedings of the 1st International Conference on Library and Information Science:*

From Library Open to Open Society (iCOO2018) (pp. 17-25). STOU University Press.

Sacchanand, C. (2020). Information Literacy in the Digital Environment. *Journal of Social Sciences and Humanities*, 46(1), 1-17. https://so04.tci-thaijo.org/index.php/socku/article/view/241744/165244.

Sukula, S. K. (2019). Metaliteracy in academic libraries: Learning in research environment. In R. K. Bhardwaj, & P. Banks (Eds.), *Research data access and management in modern libraries* (pp. 246-264). IGI Global. https://doi.org/10.4018/978-1-5225-8437-7.ch012

Tallolli, S. B., & Mulla, K. R. (2016). A bibliometric analysis of Journal of Information Literacy (2011-2015). *ISST Journal of Advances In Librarianship*, 7(2), 44-51. https://www.academia.edu/31496672/A_Bibliometric_Analysis_of_Journal_of_Information_Literacy_2011_2015_.

Tiew, W. S., Abdullah, A., & Kaur, K. (2002). Malaysian Journal of Library and Information Science 1996-2000: A bibliometric study. *Malaysian Journal of Library & Information Science*, 6(2), 43-56. http://eprints.rclis.org/5914/1/pdf.pdf.

Tokarz, R. E., & Bucy, R. (2019). Global information literacy: A content analysis of three journals. *Global Knowledge, Memory and Communication*, 68(3), 242-254. https://doi.org/10.1108/GKMC-05-2018-0052.

UNESCO. (2021). *Media and information literacy*. https://en.unesco.org/themes/media-and-information-literacy.

UNESCO Institute for Information Technologies in Education. (2021). *Media and information literacy*. https://iite.unesco.org/mil/.

UniversityRankings.ch. (2021). *QS World university rankings*. https://www.universityrankings.ch/results?q=Singapore&o=rank&f=asc.

Velmurugan, C., & Radhakrishnan, N. (2016). Malaysian Journal of Library and Information Science: A scientometric profile. *Journal of Scientometic Research*, 5(1), 62-70. https://doi.org/10.5530/jscires.5.1.9.

Warriach, N. F., & Ahmad, S. (2011). Pakistan Journal of Library and Information Science: A bibliometric analysis. *Pakistan Journal of Information Management & Libraries*, 12, 1-7. http://journals.pu.edu.pk/journals/index.php/pjiml/article/view/821/456.

Yumnam, G., & Singh, C. I. (2021). The Malaysian Journal of Library & Information Science (2007-2020): A bibliometric study. *Library Philosophy and Practice*. 5846. https://digitalcommons.unl.edu/libphilprac/5846.

Zurkowski, P. G. (1974). *The information service environment relationships and priorities*. *Related paper no. 5*. https://eric.ed.gov/?idED10039.