Students Learning Information Skills in Communities of Practice

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Abstract: - This study examined students learning information skills from the multiple perspectives of Malaysian higher education teachers, librarians and students. Using a qualitative inquiry, the study observed student information skills programs, examined the programs' teaching and learning resources, and interviewed teachers, librarians and students who engaged in the programs. The findings suggest that participants viewed students learning information skills as students engaging in student information practice. Via the process of participation and reification, teachers, librarians and students further identified the practice with six information tasks of students identifying information goal, identifying information sources, retrieving information sources, interacting with information sources, synthesizing information, and negotiating understanding. The study found students learning information skills provide a platform for teachers, librarians and students to mutually participate and sustain the process of students learning in higher education. The findings are essential to assist higher education communities to transform higher education students into knowledge creators as required by the national education framework.

Key-Words: information skills, information practice, qualitative research, higher learning, Malaysia

1 Introduction

Information skills are defined as a series of abilities of identifying the need for information; locating, accessing and organizing information and its sources; evaluating and selecting information and its sources; analyzing and synthesizing information from different sources to create new understandings; using the understanding to accomplish a specific purpose; and accessing and using information and its sources ethically and legally [1-3]. While UNESCO [4] identified information skills as an extension of reading and arithmetic abilities necessary for individuals and their communities to function and progress, Bundy [1] attributed the skills to the 21st century university students and lifelong learning.

In Malaysia, student information skills programs were first introduced in higher education institutions during the 1990s when the government called for institutions to develop knowledge workers to run the local knowledge economy. Defined as those who are fluent in using information technology, knowledge workers are also known for their ability to access, use, synthesize and construct information [5]. Following this requirement, the institutions, via their academic libraries offered student information skills programs to assist students to acquire skills of searching, accessing, and organizing information and its sources. Later, the introduction of the Malaysian Qualification Framework [6] into the national education system further reinforces students' demonstration of information skills in higher education. In the framework, information skills are highlighted as parts of series of desirable learning outcomes for higher education students to demonstrate, necessary for the students to graduate. The framework also implies that information skills teaching and learning in higher education is moving beyond academic libraries and toward classroom learning.

2 Problem Statement

Although Malaysian universities have been conducting student information skills programs via their academic libraries since 1990s, a review of literature [e.g., 7, 8, 9] suggested these programs were focusing on students searching information and its sources. Similarly, Karelse [10] and Reid [11] also viewed that the programs were emphasizing students searching and accessing information and its sources using information and communication technology application, while overlooking students analyzing and synthesizing information. These observations suggested that student information skills programs in Malaysian

higher education did not follow standards and frameworks for information skills in higher education [e.g., 1, 2, 12], which clearly state that students' ability to analyze and synthesize information as parts of information skills.

While more studies have been conducted to understand students learning information skills in Malaysian higher education [e.g., 13, 14], these studies focused on assessing levels of information skills among Malaysian higher education students. While these findings are helpful to estimate levels of information skills perceived to be acquired by the Malaysian university students, they are insufficient to collaborate or refute the view that student information skills programs in Malaysian higher education might be different from the established information skills standards and frameworks for higher education. Previous studies such as by [15], [16], [17], [18], [19], [20], and [21] might help us to understand students learning information skills in higher education. However, these studies only examined the phenomenon using a single or dual perspective of those involved in students learning information skills programs. Following the Malaysian Qualification Framework, which implicitly shifts students learning information skills beyond the universities' library and toward the classroom learning, we will gain a better understanding of the phenomenon in the context of Malaysian higher education if we investigate the phenomenon using the multiple perspectives of teachers, librarians and students who are jointly engaged in student information skills programs.

3 Purpose of the study

This study investigated the phenomenon of students learning information skills in the context of Malaysian higher education using the multiple perspectives of teachers, librarians and students as they jointly engaged in the phenomenon.

4 Theoretical Framework

This study employed a social psychological approach to examine the phenomenon of students learning information skills in the context of Malaysian higher education which is drawn from the perspectives of communities of practice [22]. The concept of communities of practice views learning as a process of social participation and identity construction in communities which learners belong to. Following this perspective, the study further assumed the phenomenon is social, conscious and a joint effort between members of different communities in higher education institutions, that is, teachers, librarians and students. The study assumed as teachers, librarians, and students participate in the phenomenon, they continuously construct, negotiate, and reify knowledge and ways of knowing about students learning information skills.

The study also assumed teachers, librarians, and students are not merely members of different communities; each of them is also a human being with unique ways of thinking, feeling and doing. In this respect, Communities of Practices also emphasizes the interplay of personal dimensions in the construction of the phenomenon under study. Specifically the perspective highlights students learning information skills could also be explained via the process of personal identity construction and learning trajectory of those engaged in the phenomenon.

5 Research Question

How do teachers, librarians, and students experience and perceive students learning information skills?

6 Research Approach

This study employed a qualitative research approach which is defined as qualitative research strategies [23]. These strategies are characterized by real and information rich cases; flexible and emergent research design; researchers' personal engagement and experience; multiple perspectives of understanding the phenomenon; inductive and creative ways of analyzing and synthesizing data; unique findings from cases and overarching findings across cases; as well as locate the findings in social, historical and temporal context where the phenomenon is being studied [24, 25]. Although a qualitative research approach have been widely employed to investigate students learning information skills from the perspective of higher education educators and librarians [e.g., 19, 20, 26], and students [e.g. 15, 21], the approach is yet commonly employed to triangulate the multiple perspectives of higher education teachers, librarians and students as they jointly engage in student information skills programs.

7 Research Design

Following the study's research approach, this study selected one university in Malaysia as the setting of the study, which offered students information skills programs and provided an access entry for the study to collect data. Working closely with librarians in the university library, the study selected and observed five student information skills programs that were jointly engaged by teachers, librarians and students, and later examined teaching and learning resources of the programs. Both observation and examination assisted the study to develop interview guidelines, which guided the semi-structured interviews with five teachers, four librarians, and 18 students who were engaged in the programs and willing to participate in the study. The study further employed Merriam's [25] steps for analyzing the qualitative data. Guided by the research question, the study used bucket, open and analytical coding to construct a meaningful "classification system" [25] of students learning information skills, which suggests patterns and regularities for students learning information skills. The study further employed cross-case matrices to identify possible explanations across cases (participants) and sources (program observations, resource examinations, and interviews) to answer the research question. The study also used Nvivo programs in the data analysis process to electronically organize, revise, and retrieve parent and child nodes/codes/categories and their respective references for data from the interviews.

8 Research Finding and Discussion

Wenger [22] says participation is "the social experience of living in the world in terms of membership in social communities and active involvement in social enterprise" [22]. It entails a personal and social process of doing thing together and developing relationship and "a [complex] process of taking part and also to the relations with others that reflect this process", which includes "both action and connection" [22], and involves "doing, talking, thinking, feeling and belonging" and "bodies, minds, emotions, and social relation" [22]. On the other side, the process of reification involves creating "points of focus around which the negotiation of meaning becomes organized" (p. 58).

Via the recursive processes of participation and reification, this study found that research participants identified the practice with six information tasks of students identifying information goal and sources, retrieving and interacting with information sources, synthesizing information from various information sources into own understanding, and communicating and negotiating the understanding. As explained below, the findings suggested various forms of participation and reification have also made up the building blocks of student learning information skills.

The study's observation on student information skills programs suggested that students learning information skills are students identifying the needs to engage with information sources, students identifying information sources that help them to satisfy the needs, and students accessing the identified information sources via various searching tools and strategies. Likewise, examination of teaching and learning resources of the programs, such as teaching aids used by the librarians during the programs, student information skills assignments, and the programs' evaluation forms also indicated similar findings. However, interviews with teachers, librarians and students indicated that students learning information skills are about students participating in certain practices, known in this study as student information practices, which students are expected to perform when they engage with information sources, information from different information sources, collaborators of learning, and their prior understanding.

Participants further viewed that student information practices consist of six interrelated practices which begin with students articulating the needs to participate in information practices. Teachers described the needs as "skeleton" of students' inquiry, "questions" of students' classroom assignments, and topics of students' thesis. Similarly, librarians associated the needs with students' research topics or titles, which students should further refine into searchable keywords. Students also associated the needs with topics of their thesis, lectures, and classroom discussions and assignments. Participants viewed students' articulation of the needs is essential to enable students to access information sources relevant to their working topics, as well provide contexts for students to undertake their information practices, such as classroom learning, thesis examination, seminar presentation, and journal publication.

The second practice of student information practices is students identifying information sources that will satisfy their needs. While librarians viewed that the identification should be strictly driven by students' topics and keywords, teachers' and students identify electronic and online information sources, such as journal articles and internet websites, as information sources that students

should engage in their information practices due to the currentness of information available in the sources, as well as the sources provide easy, fast, and full text accessibility to students regardless of time and place. Respectively, librarians viewed that their primary task in student information skills programs is to expose students to all information sources available in and subscribed by the library, while teachers and students expected librarians to expose students to information sources that that are easy and fast to access and provide latest and comprehensive information on students' topics of inquiry.

The third practice of student information practice is students accessing information sources that they had identified earlier. Both teachers and librarians associated the practice with students using various gateways for students accessing information sources. Among the gateways identified by teachers and students are the university library, librarians, website and online cataloging system; online and electronic information databases subscribed and developed by the library; as well as open access databases. Particularly teachers associated the practices with students using specific procedures to interact with search engines of the gateways in order to access relevant information sources available in the databases. However, as the university is moving toward outcome-based and self-accessed learning, teachers perceived that interactive, self-accessed and electronic or platform would better inform students about the library collections and ways to access these collections without the need for students to join information skills programs or see librarians at the library helpdesk. Likewise students highlighted that student inaccessibility to online library collection outside the university premises is the reason that limits their access or use of the collection or sources.

The fourth practice of student information practices is students interacting with information sources. Given students have access to unlimited number of information sources, teachers, librarians and students associated the practice with students browsing, evaluating and selecting different information sources that really matter to the needs of students' information practices before printing or saving or collecting the sources. While teachers viewed these actions is a linear process, students reported that after collecting the information sources they re-engage in another cycle of students interacting with information sources in order to select information sources that they would use in their information practices.

The fifth practice of student information practices is students using information sources to develop new understandings. Teachers and students associated this practice with students "digesting" or "processing" information from different information sources which consists of students reading, analyzing and synthesizing information from the sources into a meaningful, coherent and systematic "conclusion", "idea" or "understanding". Students reported that this is the most complex practice that they need to perform in student information practices, and suggested that previous experiences or trainings in this practice would help them overcome the complexity.

Finally, the sixth practice of student information practices is students negotiating their understanding via developing and presenting the understanding to collaborators of learning via certain artifacts of the understanding. Among the collaborators of learning identified by teachers and students are students' classroom teachers and peers, thesis supervisors, and experts and practitioners in the topics of students' inquiry. Additionally, while teachers listed librarians as one of the collaborators of learning, students did not share the view. Moreover, the study found that students' artifacts of understanding are ranging from students' research writing and verbal presentation for their classroom assignments and activities, students answering their teachers' questions during classroom learning, students answering their final examination, students writing and presenting their thesis for examination, and students writing a research report for journal and conference publication and presentation. One teachers also viewed that students' sitting arrangement in their classroom learning is also constitutes students' artifacts of understanding.

9 Conclusion

Students learning information skills are central topics in transforming students into lifelong learners, knowledge creators and members of knowledge society. The discussion above is intended to clarify how information skills are conceptualized collectively by higher education teachers, librarians, and students while they engaged in student information skills programs. The study found that the teachers, librarians, and students viewed student information skills as certain practices, known in this study as students information practices, that students are expecting to perform when they are engaging with information sources, information from various sources, collaborators of learning and prior understandings.

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While the study found that student information skills programs focus to students accessing information and its sources as reviewed by previous literature [e.g. 10, 11], the study also found that the programs are only parts of students learning information skills. The rest of the phenomenon is located in the students' classroom learning as well as in students' independent and collaborative ways of engaging with information sources, information from various sources, collaborators of learning and prior understandings. The study also found that by emphasizing student information skills as student information practices, we allow students to take charge of their participation in information practices as well as tailor the practices to suit social or personal practices that they are currently engaged.

On the other hand, viewing information skills as practices also complicated the understanding of students learning information skills because the phenomenon could no longer be seen as students acquiring a set of skills or abilities, but students developing and performing certain practices that are seen by teachers, librarians and students as meaningful to students. Respectively, understanding and integrating social and personal practices of those engaged in student information skills programs are the ways to move forward to help students developing information skills in higher education.

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