Mapping the landscape of students’ learning information skills and constructing knowledge in Malaysian higher education

AIDAH ABDUL KARIM, ROSSENI DIN, NORIZAN ABDUL RAZAK, MOHD YUSOF ABDULLAH, SUPYAN HUSSIN
Faculty of Education and Faculty of Human and Social Science
Universiti Kebangsaan Malaysia
43600 UKM Bangi, Selangor
MALAYSIA
fakeh2000@yahoo.com, rosseni@yahoo.com, norjef.ukm@gmail.com, myusof@ukm.my, supyanhussin@yahoo.com

Abstract: The Malaysian Qualification Framework (MQF) identifies abilities to search, evaluate, organize, analyze, synthesize, use, and communicate information; known as information skills, as series desirable learning outcomes for Malaysian higher education students. Although the framework further implicates teachers in higher education institutions to integrate information skills across classroom teaching and learning, the phenomenon of student’s learning information skills, particularly in Malaysia, is rarely examined from the teachers’ perspectives. This study explored students’ learning information skills from the emic perspective of university teachers. Using a qualitative inquiry, this study observed five classes of information skills in one university as well as interviewed five teachers who engaged their students in the classes. The study found teachers perceived the phenomenon as students participating in multi-dimensional and multi-layer of information practices that act as a pathway for the students to systematically and transparently construct their own understanding. The teachers further viewed there were several pillars that enabled students to participate in the practices. Following the perception, the teachers further employed various instructional approaches to engage students in the pillars of the information practices. The study also found underpinning the perception was teachers’ beliefs about ways of knowing which were characterized by source of knowledge and justification for knowing. The findings are useful to assist teachers, librarians, administrators, and others members of communities in Malaysian higher education to engage in collaborative efforts, necessary to transform students into efficient information communication and technology users, and knowledge and innovation creators as required by the MQF.

Keywords: information skills, information practices; knowledge construction, symbolic interactionism, instructional approaches

1 Introduction
Information skills are sets of abilities that enable students to recognise the need for information; to search, access, evaluate, select, synthesize, and use the information to accomplish specific goals; and to communicate the processes and the attainment of the goals to relevant community members [1-5]. The skills have been further identified as pre-requisite skills for lifelong learning [1], as well as basis for individuals and their communities to function and progress. In Malaysia, information skills have been introduced to higher education institutions when government calls for the institutions to produce knowledge workers to run the knowledge economy. Via academic libraries, the institutions have been conducting various information skills programs to help students acquire the skills of using information communication and technology skills, as well as accessing, using, synthesizing and constructing knowledge, which are traits of knowledge workers [6]. Later, the introduction of the Malaysian Qualification Framework into the national education system have further reinforced information skills as a series of desirable learning outcomes for higher education students in Malaysia[7].

2 Problem Statements
Although the Malaysian Knowledge Economy and the Qualification Framework implicates university teachers as key players for students to acquire and master information skills across classroom learning, insufficient information is available to assist the teachers to do so. Among
the reasons is that most studies in students’ learning information skills are focused to students’ perception on information searching behaviours or skills [e.g., 8, 9, 10]. To add to existing literature, this study explored the landscape of students’ learning information skills in the context of Malaysian higher education using the emic perspective of university teachers who have been engaging their students in learning information skills.

3 Theoretical framework
The study employed symbolic interactionism as a stance to examine the phenomenon of students’ learning information skills. Following the stance, the study assumed that human and community behaviours could be understood by examining various indicators such as “social interaction, human thinking, definition of the situation, the present, and the active nature of the human being” [11] related to the behaviours under study. Situated within social psychology works [11], symbolic interactionism can be traced to George Herbert Mead, John Dewey and others educators and is identified as one of approaches to study behaviours of individuals and communities [11-13]. Following the stance, the study assumed university teachers’ perception on the phenomenon under study was guided by a series of the teachers’ personal perspective or assumption. Following the perception, the teachers would further employ appropriate instructional approaches across their classroom teaching and learning.

4 Methodology
This study aimed to examine the phenomenon of “students learning information skills” using the perspective of university teachers in Malaysia who have engaged their students in information skills classes. The study employed qualitative research strategies [14], which required the researcher to engage with real and information rich cases; flexible and emergent research design; personal and prolonged engagement and experience; and inductive and creative ways of analyzing and synthesizing data. The study also highlighted the uniqueness and variation within and across each case to reach collective research findings; and further located those findings in their social, historical and temporal context [15, 16]. Following these characteristics, the study attempted to use the voice of Malaysian university teachers who participated in the phenomenon to develop an indigenous knowledge about the phenomenon.

4.1 Setting and Participants
The study was conducted in one university in Malaysia, which is located at the outskirts of Kuala Lumpur. With 11 faculties, 13 research institutes, one teaching hospital and 15 research centres, the university currently offers multi-disciplinary academic programs at diploma, degree, master and PhD levels to 17,203 undergraduate and 5,322 postgraduate students, with 1,525 students come from 35 foreign countries [17]. The university was selected as the research setting because the institution provided an entry access for the study to identify, select, and engage with real participants of “students’ learning information skills”. Working with two key informants within the university library, the study identified and selected university teachers who have been consistently engaging their students in information skills classes, which were conducted by the university librarians, for more than six semesters. Table 2 illustrates profiles of five teacher participants who were able and willing to participate in the study. To protect the participants’ privacy and confidentiality; pseudo names were used.

<table>
<thead>
<tr>
<th>A perspective/ framework</th>
<th>Perception View</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A set of personal assumptions, values and ideas)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1: The study framework follows symbolic interactionism stance by Charon (2007) [11]
Table 1: Profile of teacher participants

<table>
<thead>
<tr>
<th>Teachers</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ana Malay, female, 50-55 years, pure science faculty, associate professor, teaching undergraduate academic writing course</td>
<td></td>
</tr>
<tr>
<td>Nora Malay, female, 40-45 years, social science faculty, senior lecturer, teaching ICT course</td>
<td></td>
</tr>
<tr>
<td>Onn Malay, male, 56-60 years, pure science faculty, professor, teaching undergraduate academic writing course</td>
<td></td>
</tr>
<tr>
<td>Sam Malay, male, 45-50 years, social science faculty, associate professor, teaching under- and post-graduate research methodology courses</td>
<td></td>
</tr>
<tr>
<td>Wani Malay, female, 35-40 years, pure science faculty, associate professor, teaching undergraduate academic writing course</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Data Collection

The researcher collected data by observing five information skills classes that were conducted by university librarians for the participants’ students. The observation helped the researcher to identify aspects of information skills, and teaching and learning aids and techniques used by the librarians during the classes. Based on the analysis of the classroom observation, the researcher prepared semi-structured interview protocols for the participants. The interviews aimed to access the participants’ tacit knowledge of aspects of information skills, and teaching and learning aids and techniques of information skills classes; and their inter-relationship with the participants’ courses and classroom learning.

4.3 Data Analysis

The researcher used open, axial, and pattern coding [16, 18] to analyze the qualitative data which available in the forms of classroom observation notes, and interview transcripts. The transcripts were initially transcribed, read, sorted, edited and checked for accuracy. Later the researcher read, reflected, categorized and coded each text within every note and transcript according to the meaning(s) that the text brings into to the reconstruction of the phenomenon. Accordingly, during the data analysis process, the researcher firstly developed open codes (descriptive codes), which represent general topic of each text, and parked related texts within related open code(s). Secondly, the researcher compared, contrasted, interpreted, reflected, and gave meaning to each text within each open code. Based on the meaning, the researcher developed axial codes, another coding system that provides specific meaning to each text, which required restructuring process of the open codes and better representing the meaning of each text. Using the axial codes, the study further developed pattern codes that captured exemplars of recurring patterns or regularities that cut across cases (participants) and data sources (observation notes and interview transcripts).

5 Result and Discussion

The study found teachers perceived the phenomenon of “students learning information skills” as students participating in information practices that act as a pathway for the students to construct their understanding systematically and transparently. Viewing the information practices as multi-dimensional practices, the teachers highlighted the practices consist of students identifying current understanding and its limitations; students establishing a need for new understanding; students proposing, explaining and examining inquiry process necessary to establish the understanding; students claiming and writing the inquiry process and understanding, students giving meaning to the understanding, and students communicating and providing evidences for the inquiry process, understanding and meaning. Moreover, the study found teachers conceptualized the information practices do not exist in vacuum, but accessible to students via several pillars or doors, which are applicable across the dimensions of the information practices. The pillars are made of students active interaction with information sources, higher order thinking, information communication technology (ICT), and practices of various communities co-existed in the university. For example in the case of
the pillar of student interaction with information sources, the study found teachers viewed student interaction with information a progressive process with may begin with students knowing about information sources and goals to engage with the sources; to students copying, translating, and rewriting information sources; to students searching, accessing, selecting, and reading information sources; to students digesting or analyzing, synthesizing and using information sources to achieve the students’ goals; to students developing, claiming, and presenting their own information sources. Similarly teachers found it is imperative for students to engage with ICT in order for them to participate in the practices of identifying current understanding and its limitation, as well as claiming and providing evidences for their own understanding and meaning. In this respect teachers viewed ICT has become a major delivery method for various and latest review of literature for students to search, access, read, analyze, synthesize and use in order to come out with their own understanding of the current understanding and its limitation, as well as providing evidences for their knowledge claims and process. Likewise teachers said student engagement with higher order thinking was another pillar of the information practices that enable students to their construct understanding as the students interact with various sources of knowledge as well as defending their knowledge claims systematically and transparently. Finally as students living the experience of university students, teachers stated that student engagement with practices of classroom, teacher, librarian and student communities co-existed in the university are crucial to enable students becoming knowledge creators. Teachers further identified practices of classroom community as one of pillar that students should engage with, and thus provides basic support for students to construct, claim, and defend their understanding in a scholarly way. In this respect, teachers perceived student engagement with pillars of the information practices are enablers for university students to participate in the practices of developing, claiming, communicating and providing evidences of their inquiry process, understanding and meaning in a scholarly way. The research findings further suggested that underpinning the multi-dimensionality and multi-layer practices of information are teachers’ personal beliefs about ways of knowing in higher education; which could be explained by source of knowledge and justification for knowing [19-22]. Within source of knowledge, teachers believed that a process of becoming knowers involved a progressive process ranging from students collecting facts or information to students constructing meaning or collaborating in meaning making. Similar to the construct, the study found teachers believed university students should experience an evolving process of learning that begins with students locating knowledge resided in external authority or experts such as textbooks or lecturers, to students constructing understanding and meanings individually or in a group, as the students interact with various sources of knowledge within and outside their classrooms. On the other hand, justification of knowledge concerns with “how individuals evaluate their knowledge claims” [20], which refers to how individuals evaluating and using evidences to justify their knowledge claim. The evidences can be in the forms of authority, emotions, evidence, assessment and experts. Respectively, the study found in addition to students developing understanding and meaning, teachers believes university students must participate in the practices of developing an inquiry process that enable them reach the understanding and meaning. Not only that, teachers also believed university students must also engage in the practices of claiming or acknowledging, and giving evidence to the inquiry process, understanding, and meaning. Also guiding by their personal beliefs that students’ learning process is a continuum process, teachers students must first engage with the access keys or pillars of the information practices before they can actually participate in the information practices. Lastly, following teachers’ perception on the multi-dimensionality and multi-layer of information practices, the study found teachers employed various instructional approaches to assist their students to engage actively in the pillars of the information practices. For example teachers sent students...
to information skills classes to help students to gain knowledge, familiarization and confidence in interacting with information sources and asked a lot of questions during classes to engage students with the practices of analyzing, synthesizing, and applying information that the students gathered from external sources such as textbooks and teachers’ lectures. The study also found teachers often employed active leaning in classes via group presentation, individual participation, and question and answer sessions as a means to better engage students in claiming and giving evidences to their understanding.

6 Conclusion
The study found university teachers’ personal beliefs about knowing process in higher education had influenced the way they perceived “students learning information skills”. Following the beliefs, teachers perceived “students learning information skills” as students participating in multi-dimensional information practices that act as the pathway for students in higher education to construct understanding in a systematic and transparent way. Supporting the information practices, teachers further viewed there were several pillars that provide access keys to student participation in the practices which consist of student active and prolonged engagement with information sources; higher order thinking; information communication technology (ICT); and practices of various communities such as classroom, teachers, students, and librarian communities. Perceiving that the information practices as a multi-dimensional and multi-layer, the teachers further employed various instructional approaches to help students to actively engage with the pillars of the practices which are applicable across the dimensions of the practices.

The research findings also suggested that as teachers engage in the practices of various communities co-exist in higher education institutions, particularly the government, university administration, business, school, librarian student, and teacher communities, their beliefs about source of knowledge and justification for knowing are evolving. The evolution may be explained by the concept of nexus of multi-membership [23], which implicates teachers’ peripheral membership within these communities may provide opportunities for them to re-visit, re-think, and re-create their personal beliefs about knowing as they engage in the lived experiences and real practices of the communities. Being a peripheral member to these communities, teachers are not limited to those experiences and practices, and thus have the liberty to negotiate and improve those practices based on the teachers’ need and current situation. However one question persists: will engaging students with pillars of information practices provide a smooth transition for the students to participate in the dimensions of the information?

References:


