

# Understanding the Information Literacy Experiences of EFL (English as a Foreign Language) Students

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## Abstract

**Purpose** – This paper outlines research that explores the information literacy experiences of EFL (English as a Foreign Language) students. The question explored in this research was: how do EFL students experience information literacy.

**Design/Methodology/Approach** – This study used phenomenography, a relational approach to explore the information literacy experiences of EFL students. Phenomenography studies the qualitatively different ways a phenomenon is experienced in the world around us.

**Findings** – This research revealed that EFL students experienced information literacy in four qualitatively different ways. The four categories revealed through the data were: process, quality, language and knowledge. This research found that language impacted on EFL students' experiences of information literacy and revealed that EFL students applied various techniques and strategies when they read, understood, organised and translated information.

**Research limitations/implications** – This research was conducted in a specific cultural and educational context, therefore the results might not reflect the experiences of EFL students in other cultural or educational contexts.

**Practical implications** – The findings from this research offer an important contribution to information literacy practice by providing important insights about EFL students' experiences and perceptions of information and learning that can be used to inform curriculum development in second language learning contexts.

**Originality/Value** - There is currently a lack of research using a relational approach to investigate EFL students' experiences of information literacy. There is also limited research that explores the impact language has on information literacy and learning in English as a foreign or second language contexts.

**Keywords** - Information literacy, EFL students, ESL students, Phenomenography, Language, Learning

**Paper type** – Research Paper

## **Introduction**

Information literacy is a graduate outcome for students studying in higher education institutions around the world. In addition, the number of people who speak English as an additional language (EAL) exceeds the number of people who speak it as their first language (Thornbury, 2006).

Therefore, developing information literacy curriculum for students who speak English as a foreign or second language is of critical concern for librarians and other educators such as academics and language learning support professionals. It is important for information literacy educators to understand how their students experience and perceive information so that they can use this knowledge to develop curriculum that meets the needs of their students. However, in general there is limited research about students' information literacy experiences in English speaking educational contexts where the students' native language is not English. Therefore, this research fills a gap in the research as it focuses on EFL students' experiences and perceptions of information literacy.

This research defines information literacy using a relational approach. Bruce (2008, p. 5) proposes that, "information literacy is experiencing different ways of using information to learn." This definition of information literacy was used as the basis for exploring EFL students' experiences of information literacy. Modern views of teaching and learning are more learner centred, rather than traditional teacher centred views. The relational approach to information literacy also focuses on the learner and their experiences. The key research question explored in this study was: How do EFL students experience information literacy? The aim of this research was to use phenomenography to explore and understand the information literacy experiences of EFL students with a view to using these findings to inform information literacy practice, especially in educational situations where students are using English as a foreign or second language.

## **The Context**

This research paper investigates the information literacy experiences of EFL (English as a foreign language) students with a particular focus on Arabian students who are studying in their home country, in this case the United Arab Emirates (UAE). EFL is defined as English for learners in whose community English is not the usual language of communication (Thornbury, 2006). The students in this research are studying at an institution, which uses English as a medium for teaching and learning. They are immersed in a culturally and linguistic Arab environment in their daily lives, while studying and learning in an educational setting that uses Western style curriculum. This research paper also makes reference to research conducted about ESL students as similar factors such as language impact on the information literacy experiences of both ESL and EFL students.

ESL students are defined as learners living in an English speaking environment and who need English in order to become integrated into this environment (Thornbury, 2006).

## **Information Literacy – EFL/ESL students**

This literature review explores the following areas that are prominently discussed in the literature about EFL and ESL students and information literacy: academic reading and writing, information behaviour, information literacy education and language.

### **Academic Reading and Writing**

One major area of research about EFL students is about academic reading and writing. Research in this area discusses topics such as reading comprehension and the skills needed to conduct research and write academically. There are a number of factors that impact on reading comprehension and teaching approaches in English academic writing and reading classes. Hall (2011) argues in her paper on teaching composition and rhetoric that as the Arab culture in general is historically an oral tradition based culture, Arabic speaking students often struggle with reading assignments, particularly comprehending content in literary pieces. Al Issa and Dahan (2008) argue that a lack of comprehension of English texts is due to a number of factors including the dislike of reading, the fact that EFL students are reading texts that are written for a Western audience and the lack of prior knowledge of historical and cultural issues around the world. Both authors offer suggestions to overcome challenges that Arab EFL students have with reading comprehension and academic writing. Hall (2011) suggests several strategies to improve Arabic students' writing skills including discussion activities related to reading texts that dissect the arguments to enable comprehension of the text and having hands on library instruction workshops. Al Issa and Dahan (2008) argue that it is important for teachers to find out about the students' literacy backgrounds, especially in an Arabic context where rote memorization is the main method of teaching in high schools and then use the students' strengths and weaknesses to develop appropriate curriculum. This could include using readings and texts from the students' own peers and encouraging students to present and write about topics of interest in the region to improve their writing and reading skills.

There is also some research that argues that word recognition greatly impacts on reading comprehension for EFL students. Gobert (2011) investigated reading comprehension in her study of phonological and orthographic awareness in EFL students in the Gulf. She argues that reading comprehension difficulties experienced by native speakers of Arabic may result from deficient letter

and word recognition. Fender (2003, p. 291) also came to the same conclusion while studying Arab EFL students, noting that, "Arab EFL students seem to experience considerable difficulties with word recognition processes". Yeh (2009) conducted a study about Taiwanese EFL students' perceptions of a research writing project. The author found that students encountered a number of difficulties when conducting a research writing project including a lack of English writing proficiency and a lack of research experience and knowledge. Yeh found that the students' lack of ability to select useful resources, slow reading speed, difficulty in paraphrasing texts in English and difficulty in translating Chinese resources into English were all perceived difficulties for Taiwanese EFL students conducting research projects. The author states that some of these issues may be typical of any inexperienced researcher, but some of them may be unique to EFL students such as translation. This brings up an important point as there is some evidence to suggest that English speaking students also have difficulties understanding and using academic information sources (Emmons, Martin, Botts & Amundson, 2010; Rosenblatt, 2010), therefore developing curriculum to assist students' read, understand and use information is essential in all educational environments.

## **Information Behaviour**

There have been several studies about the information seeking behaviours of EFL students. Al-Saleh (2004) in a study of 500 Saudi university students found that the electronic library resources were under-utilised and did not meet the needs of the students. Al-Saleh found that only half of the students surveyed used the electronic databases and electronic journals and that students were deterred from using the electronic resources due to experienced or perceived barriers. These included insufficient instruction for using the library's electronic resources and a lack of librarians to assist students, difficulty accessing the internet and the library's electronic resources and clarity and ease of use of these resources. Al-Suqri (2007) investigated how social scientists at a university in Oman located and used relevant information, particularly electronic resources. Findings showed that social science scholars faced three main barriers to information seeking which Al-Suqri argues may be different from their Western counterparts. These barriers were: limited availability of resources, especially full text resources, poor internet connection speeds and lack of sufficient Arabic sources. Another study in Oman about the information seeking behavior of undergraduate students using electronic resources found that only 3% of the students surveyed used the electronic databases subscribed to by the university and 57.7% of students used Google for their initial search. The study also found that the undergraduate students had a moderate level of English and that as students progressed to higher levels and their English continued to develop, they will come into contact with

more resources in English, which positively impacts on their academic writing skills (Al-Saleem, 2014).

## **Information Literacy Education**

It is often suggested in the literature about information literacy education that librarians often have a lack of knowledge of English teaching theories and methods and that librarians need to collaborate with ESL teachers in the classroom. Conteh-Morgan (2001) proposes in her paper on empowering ESL students that librarians need to collaborate with ESL teachers to match similar information literacy and ESL objectives and concepts. Her paper focuses on embedding information literacy lessons into ESL classrooms with the teaching conducted by both librarians and language instructors, with librarians developing course materials using ESL and second language acquisition theories of learning. Macdonald (2008) also outlines an information literacy program for ESL adults in a library orientation program and points out that librarians often do not have experience teaching ESL students or knowledge of ESL teaching practices. Her pilot program involved collaboration with the ESL teachers. Another group of authors advocating the collaboration between librarians and ESL teachers developed a matrix for each ESL class that incorporated Second Language Acquisition (SLA) and IL frameworks (Pracha, Stout, & Jurkowitz, 2007). The authors also took into account the backgrounds of their students and their English abilities when developing the instructional sessions. These papers clearly advocate collaboration between teachers and librarians and emphasise the need to incorporate English learning theories into IL instruction.

Many authors investigating ESL or international students have found that these students often have a lack of knowledge on academic requirements at a university level and there is a need to provide information literacy instruction to ESL students on academic issues such as plagiarism and referencing (Chen & Van Ullen, 2011; Han, 2012; Hughes, 2013; Martin, Reaume, Reeves, & Wright, 2012). Martin, Reaume, Reeves & Wright (2012) outlined how they built relationships with ESL international students through library instruction in English composition classes. This included classes on plagiarism and referencing, finding academic materials and evaluating sources. Reaume, Reeves & Wright (2012) observed several areas where ESL students had difficulties with finding and using resources due to cultural or linguistic factors that necessitated IL instruction. These included difficulty reading academic papers, with students often not reading further than abstracts and students plagiarizing due to a lack of knowledge of intellectual property rules in an academic environment. Han (2012) also found in his study on the information literacy development of higher research ESL students that ESL students' required information literacy instruction on how to search for high quality resources in databases and how to cite references. Han also argues that there is a

need for librarians to collaborate with ESL instructors in using pedagogy that encourages ESL students to master both academic studies and social context and librarians as educators need to support the development of critical thinking.

## **Language**

Another area of significant research about EFL/ESL students is exploring how language learning strategies can be utilized in libraries and how language and communication impacts on ESL students' experiences of information literacy. Several authors discuss the issues of communication and the use of language in reference interviews, information literacy classes and on students' experiences of online searching. Bordonaro's (2011) paper on incorporating language skills strategies into library instruction describes a self-reflection study that identified language learning strategies and how they were used in library instruction sessions for ESL students. The author concludes that by first recognizing and then incorporating language learning strategies, librarians can give ESL students increased opportunities to become better learners in language and library learning. Amsberry (2008) argues that language is the primary barrier for international students in library instruction classes. Her paper on teacher talk makes suggestions for librarians working with international students including being aware that input modifications are linguistic, not intellectual, avoid idioms and cultural references, limit the use of library jargon and ask open ended questions rather than yes or no questions. Curry and Copeman (2005) also found that language and communication was important when dealing with international students in reference interviews. The authors found that in the poorer reference interviews librarians used rapid English, library jargon and concluded the interview before asking if the student had received the information needed to answer the reference question.

Several authors have found that language barriers put ESL students at a disadvantage when they are conducting research or online searches. Hughes (2013) also found that language had an impact on international students' experiences of online searching. Hughes found that students faced linguistic challenges such as unfamiliarity with academic English styles, specialist terminology and bibliographic jargon and experienced difficulty in selecting search terms and synonyms because of a limited English vocabulary. Bagnole and Miller (2003) also found that ESL students' ability to use synonyms put them at a disadvantage due to barriers of language and found that keyword worksheets allowed ESL students to learn effective techniques for searching. The authors also suggested ways to take language proficiency into account. These included pairing of stronger and

weaker language proficiency students to increase interactivity and serve as a learning tool, and providing a range of activity types to address different learning needs.

## **Methodology**

This research about EFL students' experiences of information literacy used a phenomenographic approach. Phenomenographic research is traditionally an approach used in the education field to study the phenomena of learning, studying, communication and teaching, (Svensson, 1997) therefore it is an appropriate research method to explore experiences of information literacy in an educational context. Phenomenography rose out of research conducted with university students on student learning in Sweden in the 1970's (Marton, 1994; Svensson, 1997). Marton (1994) who first used the research approach wanted to understand why some students learn better than others and used the variations of their experiences of learning to develop categories of description which he described as surface and deep learning. Marton (1994, p. 4424) describes phenomenography as "the empirical study of the limited number of qualitatively different ways in which various phenomena in, and aspects of, the world around us are experienced, conceptualized understood, perceived and apprehended".

Phenomenography asks research questions of a 'how' instead of a 'what' nature, for example how do people experience information seeking (Limberg, 2000). The key research question explored in this research was: how do EFL students experience information literacy. Thirty final year female undergraduate students from a higher education institution in the United Arab Emirates (UAE) were interviewed for this research. These students were studying in the final year of their degree across three different disciplines: Business, Applied Communications and Education. As the students had been studying for at least four years, they had had exposure to information literacy through instruction by both faculty and librarians. The students were interviewed with open ended questions, which were used to elicit responses related to students' experiences of a phenomenon. Pilot interviews were conducted to test the questions and some changes were made to questions for the final interviews. Pilot studies were also conducted with first year students, however first year students could not discuss their experiences in depth in English or discuss their experiences of research as they had limited experiences of finding and using information. The interviews were transcribed and analysed using an iterative process by the main researcher and findings were validated by two other researchers. Results were also disseminated at several seminars among peers in order to test the validity of the categories revealed by the data. Findings using a phenomenographic approach are described as a set of categories and these categories describe the

conceptions or experiences (Edwards, 2007). Also in phenomenography variations that are discovered in the categories are outlined. These are the variations that are experienced by certain phenomenon between the categories of description. These variations run through all of the categories, but are experienced in qualitatively different ways. The variations EFL students' experienced across the categories in this research were information and learning. Finally, phenomenographic findings are illustrated using an outcome space, which is often a pictorial diagram of the logical relations to be found between the categories of description.

Phenomenographic approaches have been used in the library and information science field especially in the context of exploring how students search for and use information. "The first connection between phenomenography and information literacy was established by Bruce's 1997 work, *The Seven Faces of Information Literacy*, which emphasizes a holistic evaluation of people's experience of information literacy as an aspect of learning rather than the assessment of measurable attributes and skills associated with specific information seeking processes" (Andretta, 2007, p. 155). Bruce (1997) argues that within the relational approach to information literacy, how someone conceives information literacy is more important than the behavioural approach of determining what skills they have learnt. Andretta (2007) also points out that the relational perspective of information literacy has shifted the focus from the development of information skills associated with traditional library instruction to a more reflective approach where the holistic view lends itself to a learner centred pedagogy.

## Findings

Phenomenographic analysis of how EFL students experienced information literacy revealed a framework of four categories. The four categories reflected the students' experiences of information literacy while they were completing a research project. The students' experience of information literacy was categorised into four distinct categories that each offer an insight into how EFL students in his particular context experience information literacy. These categories were: Process, Quality, Language and Knowledge. The data also revealed that EFL students have varying experiences of information and learning across all four categories. As EFL students, these experiences of information literacy were experienced in the context of studying in English in a Western style education system in their own country where Arabic is their first language. The findings show that this educational context and language challenges and barriers had an impact on their experiences of how they accessed, read, understood, translated and used information. The findings in each



category are described below according to the varying experiences the students had of information and learning across the four categories.

### **Category 1: *Information literacy is experienced as a process***

In this category students experienced information literacy *as a process*. The students' experience was very methodical and systematic and every stage or part of the research, whether searching, planning or writing the literature review, was approached in a methodical process where they are following a series of steps. Students were following a series of steps to complete the parts of their project. The steps were often taught to them by faculty or librarians.

The following key quote emphasises the students' experience of information literacy as a process.

"I just focus on one thing and start searching for it and then when I'm done I start searching for something else, sometimes I keep the same article and I use it for something else, but I have to finish part by part which is better for me".

#### **Information**

In this category information sources were seen as a step in the process. Students described searching and finding information sources as a step in the process of completing their research project. They were being informed by teachers and librarians on which types of information sources to use and the steps to finding them. In this category, students also described the steps they followed and what were the most beneficial ways for them to find information sources. The students were also using information sources to plan the research or complete the proposal as well as using information to complete certain parts of the project such as the literature review. As seen here in this quote the student found information sources by following a series of steps.

"The steps. I went to the library first and I searched for books. We first search on the library here at the College and I use the internet to find the information and I found information in the library books and research reports".

#### **Learning**

The students' approach to learning in this category was to follow the steps to complete parts of the project. The object of learning in this category was to learn how to complete parts of the research project. Students were following steps on how to complete a research project. This was very clear

cut and is a more surface approach to learning. The approach was simply to follow the steps they needed to take in order to complete the project. In this category students' learning experience was not self directed and they must follow the steps in order to complete parts of the project. The students described this experience as a very methodical process, where they outlined the steps in the process. Although it is a more surface approach to learning it was still a learning experience, as they needed to learn the steps of the research process. In most cases, this was the first time the students had done some parts of the research such as a research proposal or literature review and thus the lead and follow approach was a necessary part of the learning experience. The students started to experience a deeper approach to learning once they start completing the parts of the project. Here a student describes how the research proposal was a new learning experience for her.

"We did this research in three stages. First stage it was really difficult on me because I studied Electronics Engineering and I am now doing my Bachelor in Business Management so it is totally different. The first, it was a research proposal, it was really something new and difficult for me to do and then the next stage was the literature review, it was a little bit easier and today we are submitting the report".

### ***Category 2: Information literacy is experienced as identifying relevant and reliable information***

In this category, students' experienced *information literacy as identifying relevant and reliable information*. The importance of identifying and using relevant and reliable information was emphasised due to project requirements and teacher led instruction or recommendations to use relevant and reliable information. Students were learning in this category why they needed to identify and use relevant and reliable information and what is relevant and reliable information. The students as a consequence learnt relevant and reliable information about their research topic and used this information to prove their findings and produce an academically reliable paper. Although initially directed to use academic information, the criteria or reasons they used to evaluate information were often self directed. There was an emphasis in this category on two evaluation criteria in particular, authority and accuracy and a perception that English information sources were more authoritative than Arabic sources. In this category, the students also experienced a lack of access to information on local topics and had varying experiences on which information sources they used to identify relevant information.

The following quote emphasizes that in the students' experience there was a lack of relevant and reliable information in Arabic.

"I have to do my research in English. It's easier for me and also it's easier to find information in English on the internet because in Arabic you don't find those subjects. It's not available in Arabic and not up to date, that's why when you search in English its better".

### **Information**

Students had varying experiences of which specific information sources contained relevant information. Regardless of which information source they identified as having relevant information, they were focused on finding relevant information for their topic. In the students' experience there was also a lack of access to relevant information sources on local topics and access to information in Arabic. Students chose certain information sources in this category based on their own and others views on which sources were perceived to be reliable and academic. The students used standard evaluation criteria to identify reliable sources such as authority and accuracy. The strongest emphasis was on these two criteria when students were evaluating information sources. The students often emphasized that certain sources contained facts and were written by educated people. The students did not mention other criteria such as bias. Students also identified that English sources were more reliable than Arabic sources as seen in the following quote.

"I think even if I wrote in Arabic it might not be as good as the English written studies. Maybe because the authors who wrote these studies are well educated like I found some great articles made by professors, made by students who are studying at good universities. I think that they also got more exposure to people and also they made on a big audience so I think they were better".

### **Learning**

The approach to learning in this category was to identify relevant information through using searching strategies such as using keywords to narrow search results. The students saw a clear link between finding relevant information and using the most relevant keywords. The students not only used keywords to identify relevant information sources, but to identify relevant information within articles. Students were also learning why they needed to identify reliable information and were learning what reliable information is. Their approach to learning was initially directed but became more self directed once they started searching for reliable information as seen here in this quote.

“Because it’s from the requirement to use it. Usually we don’t use books, really, but in this research we should use it, but actually we took benefit, huge benefit. Like the information, when you read it from a book, it’s not like the websites, websites like people wrote it, but from the book you realize its facts”.

### **Category 3: *Information literacy is experienced as applying techniques to use information across languages***

In this category, students experienced *information literacy as applying techniques to use information across languages*. This category in particular focused on the impact of language on the students’ experience of information literacy. EFL students’ experience of information literacy included reading, understanding, organizing and translating information in English. Students in this category took a strategic approach to how they read and translated information and there is a strong preference to read and use information in English for logical reasons as the research was being conducted in English. Students also preferred translating English words to Arabic due to their focus on understanding the meaning of English words. They also believed that they would make mistakes in meaning and concepts if they used information in Arabic and translated it to English.

The following key quote emphasises the students’ experience of applying techniques to read and understand information.

“I took the book, I have skimmed between the pages until I reached the information that I wanted and then I have tried to know whether I can paraphrase the information or quote it to show that I have done a good research during the finding and also while I was reading the academic journal, also it was a bit tough for me to look through because it’s more complex with new vocab and everything so it was a bit difficult. If it’s complex I would rather try to find other sources which might help to overcome the problem that I had while doing the research”.

#### **Information**

In this category, students chose certain sources based on a number of criteria including the length of the sources and the difficulty in understanding the vocabulary and content in the information source. Students also take a surface approach to reading information sources and often skimmed or scanned information sources. In this category, students chose to use information sources in English.

To them this was a practical decision as they were doing the research in English and they preferred not to translate from Arabic to English, especially as they perceived they would make more mistakes with concepts and meaning if they translated from Arabic to English. In the students' experience time was also one factor they took into consideration either when reading or when deciding which information to use based on which language it was in. The students chose what information sources to read based on the perceived time they felt it would take to read these sources and the perceived time it would take them if they needed to translate and organise information from one language to another. In this quote, we see the student's more surface approach to reading information sources.

"We can't read the whole journal, maybe it would long. If it is a book it will be I don't know how many pages. I have only to do skimming and see the abstract and write the important points, or in this book there is only one chapter that talks about appraisal or motivation or how to satisfy employees and make them happy which was under motivation".

### **Learning**

The approach to learning was to use a variety of reading techniques in order to understand information across the two languages, English and Arabic. The approach to learning was also to apply techniques to translate words in order to understand their meaning. Some of these techniques had been taught to them by teachers and were aimed at students studying IELTS. The students also adapted these techniques to suit their own learning styles. The object of learning was to understand the information they were reading and to understand the meaning of words and text in English. The object was also to use this knowledge to improve their research writing skills in English. Here the student discusses how they applied the techniques and strategies taught to them as an EFL student, however they adapted this to suit their own reading style.

"I am scanning more than skimming and um I like to firstly to know the key points in the article and I think, that's what they taught us in IELTS, for example, looking at the headings, looking at the abstract, the medium of the article, and the power of publication, the background of the author, which will give me a prior or a whole picture about what's the article, and then if I need I go to the details and read. Also I dislike to read like about the history or something, I just want the core of the article. Also my style of reading I like highlighting or mapping in the stage of taking notes".

The following table outlines the techniques EFL students used to read, organise and translate information.

Reading	Organising	Understanding/Translating
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Highlighting vocabulary and paragraphs	Quoting	Translators
Skimming/Scanning	Paraphrasing	Dictionaries
Colour coding	Referencing software	People
Reading multiple times	Writing the main points	
	Comparing and contrasting ideas	
	Taking notes	

**Table 1 Techniques for reading, organising and translating information**

***Category 4: Information literacy is experienced as acquiring knowledge on topics and issues.***

In this category, students' experienced information literacy *as acquiring knowledge on topics and issues*. Students were focused on using information to learn about topics and saw the benefits of using information to learn new skills. The students also used information to stay informed and inform others about issues that were relevant to them. In this category, students saw acquiring knowledge from sources as an essential part of completing a higher degree and wanted to apply what they have learnt in practical situations such as the workplace and teaching practice.

The following key quote emphasises the students' experience of information literacy as acquiring knowledge on topics and issues.

“Because it’s an interesting topic and I found it interesting because I get to know new information about the Mayan civilization, to get some general knowledge and also to be aware of what’s going on around us as we are media students so that’s why. Not even as a media student, as an individual we like to know more about new information related to certain topics”.

**Information**

In this category information sources were not chosen specifically because of the type of information source they were, for example, a specific book or article, but were often discussed more collectively and students discussed the benefits of reading and using information from all information sources. Information itself was viewed as an abstract concept in this category as students saw information sources as the vehicle for them to obtain information and learn about the topic. In this category, students were using information to inform teachers and other students about the knowledge they had obtained about topics and issues. Students also used information to acquire knowledge and inform themselves on issues that were important to them in their particular context as seen here where the student is using information to benefit her and apply what she has learnt in the context of her own environment.

“For example, for the UK book it was about doing research and doing how consultants are applying in UK firms, so it give me the idea how could I achieve this, apply this in UAE, so after I read the book, I put like a paragraph about what this benefit me, in which area it enrich my knowledge”.

## **Learning**

In this category, students were using information to acquire knowledge about topics and issues. The students experienced a relationship between information and learning that was not only centered on the research project. The students saw learning and acquiring knowledge on topics and issues as part of the experience of lifelong learning and used this knowledge in their workplace, teaching practices and to inform other students. Students also saw information and acquiring knowledge as a way to remain current and informed about issues that were relevant to them in their specific cultural context. Here the student emphasises that the object of learning is to use information to turn theory into practice.

“The role of comics which has a lot of graphics which enhance children literacy and motivate them to read because if you remember we are not a reading culture or a culture who is prone to read, and in this way I think it’s a powerful way to encourage our children and this is what we benefit from our literature review to enhance our theories with our practice”.

## **Outcome Space**

The following diagram illustrates the relationships between the four categories of description. The quality and language categories intersect with both the process and knowledge categories. The relationship between the process category intersected with both quality and language as in both categories students were also taking a systematic approach to identifying information and applying

techniques to read and translate information. The students in these categories also had constraints that influence how they approach identifying information and reading and translating information. These included time constraints, project requirements, direction from teachers on what information sources to use and where to find them and constraints due to language abilities. Students were also constrained due to the research topic and a lack of access to relevant and reliable information, especially when the topic was on a local issue. In the language category, reading and using information in English was a practical decision or choice made due to the project being in English, time constraints and issues with translating information from Arabic to English.

In the knowledge category, students were using information to acquire knowledge about topics and issues. This intersected with the quality and language category due to the relationship between information and learning. Although students were constrained or directed in the quality and language categories, they also used more self directed approaches in both these categories, which intersected with the knowledge category. In both categories, they were adapting techniques to fit their own individual style. The students in the language category have self directed strategies they used when choosing which sources to read and had their own preferred techniques or strategies they used to translate information. In the quality category, students often made self directed evaluations on what they considered to be relevant and reliable information. Students were learning how to use information in all three categories: how to identify relevant and reliable information, how to read, organise and understand information, how to use this knowledge to inform others and how to apply theoretical knowledge in real life situations. The overall objective in the intersection of these three categories was using information to learn.





**Figure 1 Outcome space for categories**

## **Discussion**

Findings in this research have revealed that language had a major impact on the information literacy experiences of EFL students and that their experiences of finding, reading, understanding, evaluating and using information were influenced by issues and barriers related to language. The findings in this research indicated that EFL students often only read abstracts or scan information in articles as a reading strategy. The students also indicated that they preferred to read shorter articles as it took too much time to read longer articles and that they chose sources based on whether they understood the English in the articles. Martin, Reaume, Reeves & Wright (2012) also found in their research about ESL students that students had difficulties finding academic papers because of the issues they faced reading academic papers in English, and that they often did not read beyond the abstract of an article. Students in this study also indicated that if they did not understand the language in them, they often choose alternative sources. These findings offer important insights that can be used in learner centred information literacy classrooms. To combat these challenges

librarians can plan activities and discussions with EFL/ESL students on the challenges related to reading and understanding academic information, how to choose sources based on content and relevance, not length and how to successfully scan information to find relevant information. These kinds of activities can be done in group and peer reflective environments as students can learn from each others' experiences. These students have also indicated that their approach to learning is often systematic or to follow a process, therefore developing some sequential based activities would also be beneficial in EFL environments.

The perceptions of the students in this study was that reading information that was relevant to their particular context was an important way to keep themselves informed and they saw information as being more useful when they could see a link between the theoretical and practical use of information. They also liked to choose topics where they already had an interest in the topic and some prior knowledge on the literature surrounding this topic. This indicates that EFL students feel more comfortable in an academic environment where they are able to read sources that are relevant to their particular context or where they can see a connection between information contained in sources and how they could relate it to a local situation. This however, brings up another set of issues as students in this study also experienced difficulties accessing information about local topics and issues. This creates a major barrier to EFL students' experience of information literacy as research suggests that EFL students learn more effectively when given sources to read on issues that are relevant to them, however, at the same time there is a lack of these resources available to them. The students in this research discuss how they dealt with this barrier by finding general information on their topic or information written in other countries and then relating this to a local context. This is one strategy academics and librarians can also employ when developing curriculum for EFL students. Curriculum could be developed that shows students how to find information on topics where limited information has been written in this area, (e.g. non traditional sources of information) and how to relate general information to a more specific context when no information is available on a topic. Several authors in other studies have also found that a lack of access to information was a barrier that EFL students faced when conducting research. Raddawi (2011) found in her study on EFL students in the UAE that the unavailability of resources was one of the factors that influenced their choice of topic when writing essays. Al-Suqri (2007) also found in his study looking at how students found information that they had barriers to finding information, including limited availability of resources, especially a lack of sources in Arabic. This issue is therefore an important barrier that EFL students face and that should be addressed in information literacy curriculum.

EFL students in this study faced barriers identifying and understanding information due to vocabulary and comprehension of words and contexts in English. Bagnole and Miller (2003) in their study about ESL students and information literacy found that their lack of ability to use synonyms put them at a disadvantage due to language barriers. Similarly in her study on international students' experiences of using online information resources to learn, Hughes (2013) found that the outcome of international students' searches for information produced limited or unsatisfactory search results, often due to linguistic difficulties such as spelling errors, limited vocabulary, comprehension and inability to quickly scan results lists and retrieve documents. Students in this research indicated they had some difficulty understanding various words in English, especially as often it was the first time they had seen these words because the topic was new to them. The students used translators, dictionaries and asked teachers in order to understand the meaning of words in both English and Arabic. However students acknowledged that using translators was not always the most effective method to use to understand the meaning of words because translators such as Google Translate may not always translate correctly. Literature about EFL students in the Gulf also often indicates that they have difficulties with reading comprehension and word recognition (Hall, 2011). The findings in this research about EFL students showed that students have difficulties translating from Arabic to English. These difficulties included the time it took to translate from Arabic to English, and the view students have that if they translate from Arabic to English they will make mistakes regarding the context and meaning of words. Students also preferred to translate from English to Arabic as they are doing the research in English and reading information in English, so feel the more logical choice was to just translate words in order to understand meaning. This research also confirmed what Yeh (2009) discovered in her study on Taiwanese students' perceptions of doing a research project. She found that translating Taiwanese resources to English was a perceived difficulty that the students encountered while conducting a research paper. If librarians understand the difficulties and challenges EFL/ESL students' face, especially with reading and understanding information librarians can collaborate with academics to develop materials that will be beneficial to EFL/ESL students struggling with word comprehension and a lack of vocabulary, especially when dealing with new topics. Librarians can pre prepare keyword lists on topics that students will be researching or lists of synonyms, definitions or translations of more difficult vocabulary.

## **Conclusion**

The research question in this study was; how do EFL students experience information literacy? The findings revealed that EFL students experienced information literacy in four qualitatively different

ways: process quality, language and knowledge. In addition they had varying experiences of information and learning and employed a number of learning strategies to how they accessed, read, organised, translated and used information. This research has also revealed that as non native English speakers, EFL students faced a number of challenges related to language that impacted on their experiences of accessing, reading, understanding and translating information. These challenges included: Difficulties reading texts that are aimed at a Western audience and contain information that may not be relevant to them; Choosing what sources to read based on the English contained in them; Taking a surface approach to reading, including skimming and scanning abstracts and texts, some of which can be attributed to the difficulty students have in reading the content in English; Difficulties accessing information both in the native language, (in this case Arabic) and accessing information written in a local context; and difficulties with word recognition. EFL students also preferred to translate from English to their own language and saw many barriers to translating information from their own language to English.

The findings of this research about EFL students provides new insights that contribute to research about EFL and ESL students and to information literacy research conducted using a relational approach. This research contributes to information literacy practice by providing information about the varying experiences EFL students have of information and learning. It is proposed that EFL students' experiences and perceptions of information and learning revealed in the findings are used to inform the development of information literacy curriculum for EFL and ESL students. It is also recommended that librarians take into consideration when developing curriculum and when teaching in the classroom, the experiences EFL/ESL students' have of information, the challenges they face accessing, reading and understanding information, the strategies and techniques they use in order to understand, organise and use information and the approaches they have to learning.

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