

Information Seeking Behaviour of University Students in Klang Valley

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Abstract. The main goal of this study is to investigate the information seeking behaviour of university students in Klang Valley. The study attempted to determine the elements of information seeking behaviour as well as the most important element together with the elements that influence the information seeking behaviour among university students in Klang Valley. The objectives are: i) to determine the elements of information seeking behaviour among university students in Klang Valley, ii) to identify the most important element for information seeking behaviour among university students in Klang Valley and iii) to ascertain the elements that influence the information seeking behaviour among university students in Klang Valley. The data from 166 university students in Klang Valley has been collected. The research methodology and technique used to investigate this phenomenon are the quantitative approach and questionnaire instrument. The results of the data analysis were constructed using SPSS software. The results indicated there are significant relationship exist between Starting, Chaining, Browsing, Differentiating, Monitoring, Extracting and Information Seeking Behaviour.

Keywords: Information seeking behaviour, library management, information behaviour.

1 Introduction

The current era's rapid growth of information has important ramifications for university students' education and library usage. Whatever individual or organisation can use information to achieve any objective or goal they set for themselves. Because knowledge is a valuable resource that is required in any society, gaining, and exploiting it is a significant and important activity. Academic libraries, as a hub of knowledge, play a critical role in helping university students acquire lifelong learning abilities. Students must improve their information management abilities, as well as their ability to use information tools and databases, in order to find accurate

information sources relevant to their studies and courses. Furthermore, it will contribute to one's personal development. As a result, library effectiveness can be thought of as information personalization to match individual needs.

Most information-seeking models are statements, frequently in the form of diagrams, that aim to explain an information-seeking activity, its origins and consequences, or the relationships between phases in information-seeking behaviour. Information seeking behaviour can be defined as a more general field of research. As a subset of the discipline, behaviour is concerned with the many strategies humans use to find and use information resources. Information searching behaviour is described as a subset of information seeking that focuses on interactions between information users (with or without an intermediary) and computer-based information systems.

2 Literature Review

2.1 The Concept of Information

Human beings require information on a daily basis. Information is required in all aspects of life. Information is necessary for socioeconomic growth. People require information in order to make decisions. The field of Information Seeking Behaviour in Information Science is roughly defined as the study of how users determine their information needs, search behaviour, and subsequent information use. Personality research, consumer behaviour, innovation research, health communication studies, organisational decision-making, and other disciplines are involved in determining how people seek and use information, the routes by which they obtain information, and the factors that restrict or encourage information use, and all of these fields of psychology research include information requirements in information system design and information requirements in information system design.

Processed or structured data is how information is described. It is one of the most important commodities that mankind requires in all aspects of existence. The diffusion of knowledge acquired from observations, research, or experience is referred to as information. The word "information" comes from the Latin word "informatio," which meaning "to give form to the mind," "to instruct," or "to teach" (Doraswamy, 2017).

Information as a process is when someone gets informed, their previous knowledge is altered. The act of transmitting knowledge or new of a fact or happening; the act of telling a fact or being told of something is known as information. Information as knowledge where information can also refer to what is recognised as a process; knowledge offered about a fact, subject, or event; that which is evaluated or told, intelligence, and news. The term "information" is also given to objects such as documents that are considered as having the power to convey knowledge or impart instructional information as a thing.

2.2 Information Behaviour

Information is defined as a stimulus that influences the entirety of human behaviour

inconnection to information sources and channels, including both active and passive information seeking and information usage, in the context of this study. As a result, it encompasses both direct communication with people and passive information reception, such as viewing TV advertising without intending to act on the information provided, both of which alter the informed person's World View. In other words, when students see or hear anything that changes their knowledge of the world and/or their role within it, they are deemed to be getting information.

Information Behaviour, according to Case and Given (2016), encompasses browsing and encountering information, and the study of Information Behaviour focuses on how people require, seek, give, and use information in diverse circumstances. Everyday life, life in transition or crisis, the job, or formal schooling could all be examples of these situations. This research studies whether students' subject preferences and choices influence the extent to which they seek, evaluate, and use information, as well as the strategies they employ to do so.

2.3 Purpose of the Study

The purpose of this study is to investigate the Information Seeking Behaviour of university students in Klang Valley.

2.4 Research Questions

The following research questions guided the study:

RQ1. What are the elements of Information Seeking Behaviour among university students in Klang Valley?

RQ2. What is the most important element for Information Seeking Behaviour among university students in Klang Valley?

RQ3. What are the elements that influence the Information Seeking Behaviour among university students in Klang Valley?

2.5 Research Model and Hypothesis

To describe Information Seeking Behaviour, various theories and models have been created. These theories and models can help researchers better understand how people seek information. The model for this research is based on the work of Ellis (1989).

Figure 1 is the framework's development that has been outlined in accordance with the research questions and objectives. This serves to validate Ellis's model in a domain in which it has not previously been applied namely university students in Klang Valley, by assisting in the understanding of university students' Information Seeking Behaviour in Klang Valley.

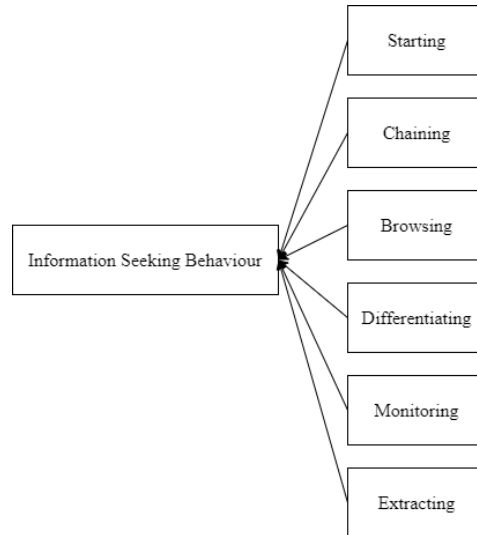


Figure 1: Research model of the study

2.5.1 Starting.

According to Ellis, Starting is the method by which a user begins their search for information, such as by asking a competent co-worker. It includes the activities that make up the initial search for information, such as finding sources of interest that could be used as search beginning points. Familiar sources are frequently identified sources. The perceived accessibility and quality of information from a source have an impact on whether or not it is picked. Perceived accessibility, or the amount of effort and time necessary to contact and use a source, is a strong predictor of source use for many types of information users (such as engineers and scientists). When there is a lot of ambiguity and information trustworthiness is crucial, however, fewer accessible high-quality sources are chosen. When searching these original sources, they may lead to, advise, or indicate further sources or references. Based on the justification provided above, Starting element will influence students' Information Seeking Behaviour, and the following hypothesis is proposed:

H1: Starting is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour.

2.5.2 Chaining

Chaining, as referred by Ellis, is the process of following up on new leads generated by an originating source in a backward or forward direction. Backward chaining is a

well-known method of gathering knowledge among scientists and researchers that occurs when points or references from an initial source are followed. Forward chaining identifies and follows up on other sources, such as the originating source's footnotes and citations. People are less likely to use it since they are either ignorant of it or lack the essential bibliographical tools. Based on the justification provided above, Chaining element will influence students' Information Seeking Behaviour, and the following hypothesis is proposed:

H2: Chaining is one of the elements that influence university students in the KlangValley's Information Seeking Behaviour

2.5.3 Browsing

The next category, according to Ellis is Browsing in which the action of searching in prospective search regions in a semi-directed or semi-structured manner. Browsing, is the process of exposing oneself to a resource space by scanning its content (objects or representations) and/or structure, potentially leading to awareness of unexpected or novel content or paths in that resource space. Browsing occurs in a variety of circumstances when relevant material is put together based on subject affinity. Tables of contents, lists of titles, subject headings, names of organisations or individuals, abstracts, and summaries, and so on are frequently used to simplify browsing. Based on the justification provided above, Browsing element will influence students' Information Seeking Behaviour, and the following hypothesis is proposed:

H3: Browsing is one of the elements that influence university students in the KlangValley's Information Seeking Behaviour.

2.5.4 Differentiating

The user filters and chooses from among the sources examined by identifying differences in the nature and quality of the information provided. Individuals' previous or early experiences with the sources, word-of-mouth recommendations from personal contacts, and reviews in published sources are all likely to have an impact on the differentiation process. Six kinds of criteria have been developed for selecting and discriminating amongst sources: ease of use, noise reduction, quality, adaptability, time savings, and cost savings. Based on the justification provided above, differentiating element will influence students' Information Seeking Behaviour, and the following hypothesis is proposed:

H4: Differentiating is one of the elements that influence university students in the KlangValley's Information Seeking Behaviour.

2.5.5 Monitoring

Monitoring, as described by Ellis, is the practise of keeping up with current events in each area by following specific sources on a regular basis. Individuals monitor by

concentrating on a small number of key sources, which vary by occupation but often include significant personal contacts and magazines. Core journals, internet search updates, newspapers, conferences, magazines, books, and catalogues, for example, are used by social scientists and physicists to keep up with developments. Based on the justification provided above, Monitoring element will influence students' Information Seeking Behaviour, and the following hypothesis is proposed:

H5: Monitoring is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour

2.5.6 Extracting

It is the systematic process of going through a source or sources to find stuff of interest. It identifies the relevant elements in a data source selectively; Extracting can be done directly from the source or indirectly through bibliographies, indexes, or online databases as a type of retrospective searching. Retrospective searching is time-consuming and is more common when detailed or historical information about a topic is required. Based on the justification provided above, Extracting element will influence students' Information Seeking Behaviour, and the following hypothesis is proposed:

H6: Extracting is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour.

3 Research Methodology

3.1 Instrument and measurement

This is a cross sectional study among university students in Klang Valley. Sampling population consisted of 173,254 students enrolled in 8 targeted universities and 20 targeted respondents from each university in the Klang Valley area. The total number of questionnaires distributed will be more than 160 in order to meet the targeted respondents from each of the universities. Both male and female students were randomly selected. However, simple random sampling using Raosoft (sample size calculator) to ensure representativeness of the student population, which resulted in a final sample of 114.

A survey questionnaire was administered consisting of eight sections; demographic profile (Section A), Starting element (Section B), Chaining element (Section C), Browsing element (Section D), Differentiating element (Section E), Monitoring element (Section F), Extracting element (Section G) and Information Seeking Behaviour (Section H). Items were phrased according to a 5-point Likert scales (ranging from 1 for Strongly Disagree to 5 for Strongly Agree). The questionnaires were adapted from previous studies (Salajegheh & Hayati, 2009). In order to ensure its consistency and the language appropriateness, both pre-testing and pilot testing were performed, and the questionnaire was validated by Cronbach's alpha.

3.2 Statistical analysis

SPSS version 28 was used for statistical analysis. The level of statistical significance was defined as a P value of 0.05. Pearson's Correlation Test was the primary statistical analysis used. It was performed to test the relationship between Information Seeking Behaviour (ISB) and the six independent variables: Starting (S), Chaining (C), Browsing (B), Differentiating (D), Monitoring (M) and Extracting (E). The descriptive analysis results were presented in the form of frequency, percentages, mean, standard deviation, and, variance.

4 Results

4.1 Reliability test

A reliability test was performed for each variable of this study. The result of this test is presented in Table 1. Cronbach's alpha was acceptable according to international standards, ranging from 0.70 to 0.80.

Table 1: Reliability test

Variables	Number of Items	Cronbach's Alpha
Starting	5	0.755
Chaining	4	0.809
Browsing	6	0.779
Differentiating	4	0.737
Monitoring	6	0.825
Extracting	4	0.744
Information Seeking Behaviour	18	0.975

4.2 Demographic profiles

The demographic profile of the respondents is detailed in Table 2. Of the 166 respondents, the majority were female students (52%) and the rest were male students (48%). In terms of age, most respondents indicated their age between 20-25 years old ($n = 152$, 92%), while the minority was >41 years old ($n = 4$, 2%). In relation to the university, it shows that 20 respondents from each university met my lowest aim. As for the education level, there are 120 respondents who are Bachelor's Degree students. This made up the majority of the sample, accounting for 72% of the total. The Foundation/ Diploma category came in second with 29 responses (18%), followed by Masters' students with 17 respondents (10%). A total of 0 samples were gathered from PhD students.

Table 2: Demographic profiles

Variables	Dimensions	Frequency	Percentage (%)
Gender	Male	79	48
	Female	87	52
Age	20-25	152	92
	26-30	5	3
	31-35	5	3
	36-40	0	0
	>41	4	2
University	IIUM	20	12
	MSU	20	12
	UiTM	25	15
	UKM	20	12
	UM	20	12
	UNITEN	21	13
	UPM	20	12
	UPNM	20	12
Education	Foundation/Diploma	29	18
	Bachelor's Degree	120	72
	Masters	17	10
	PhD	0	0

4.3 Descriptive statistics of research variables

Table 3 provides a descriptive profile of the research variables. As shown, the mean score of Information Seeking Behaviour is 79.25 and this indicated that the elements that influence university in Klang Valley's Information Seeking Behaviour are Starting, Chaining, Browsing, Differentiating, Monitoring and Extracting. All meanscores of the six variables were above the average value of 20, therefore suggesting that all six elements were average to high among the respondents. Among the six, Browsing scored the highest in mean value, indicating that it was the most prominent elements among university students. Differ, Extracting scored the lowest of all.

Table 3: Descriptive Statistics

Variables	Mean	Standard Deviation	Variance
Information Seeking Behaviour	79.2530	10.08671	101.742

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Starting	21.9337	2.38464	5.686
Chaining	17.2470	2.25748	5.096
Browsing	23.9940	3.64733	13.303
Differentiating	17.1687	2.27407	5.171
Monitoring	23.6747	4.05898	16.475
Extracting	17.1084	2.16031	4.667

4.4 Relationship among research variables

Table 4 portrays the results of Information Seeking Behaviour relationship with Starting, Chaining, Browsing, Differentiating, Monitoring and Extracting elements. As shown, the value of Pearson for all the independent variables varied from $r=0.281$ to $r=0.738$. The highest correlation value was noted between Extracting and Information Seeking Behaviour, whereas the lowest correlation value was between Browsing and Information Seeking Behaviour. Therefore, in general, we can conclude that the variables used in this study have a significantly positive moderate degree to positive weak degree correlation.

Table 4: Relationship among research variables

Variables	ISB	S	C	B	D	M	E
Information Seeking Behaviour (ISB)	1	0.532**	0.404**	0.281**	0.704**	0.367**	0.738**
Starting (S)	0.532**	1	0.564**	0.246**	0.449**	0.216**	0.466**
Chaining (C)	0.404**	0.564**	1	0.454**	0.556**	0.433**	0.449**
Browsing (B)	0.281**	0.246**	0.454**	1	0.464**	0.898**	0.267**
Differentiating (D)	0.704**	0.449**	0.556**	0.464**	1	0.517**	0.696**
Monitoring (M)	0.367**	0.216**	0.433**	0.898**	0.517**	1	0.318**
Extracting (E)	0.738**	0.466**	0.449**	0.267**	0.696**	0.318**	1

** : Significant correlation; $p < 0.05$

5 Discussions

The study's main goal is to investigate the Information Seeking Behaviour of university students in Klang Valley. The study attempted to determine the elements of Information Seeking Behaviour as well as the most important element together with the elements that influence the Information Seeking Behaviour among university students in Klang Valley.

5.1 *Starting*

Starting is comprising those activities characteristic of the initial search for information such as identifying references that could serve as starting points of the research cycle (Ellis, 1989). It can be concluded there is moderate positive relationship between Starting and Information Seeking Behaviour among university students in Klang Valley. Based on the finding of this study, it was consistent with past literature by Ellis (1989). Therefore, Hypothesis 1 is accepted. Generally, respondents have agreed that Starting is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour.

5.2 *Chaining*

Chaining is the process of following chains of citations or other forms of referential connection between materials or sources identified during “starting” activities (Ellis, 1989). It can be concluded that there is moderate positive relationship between Chaining and Information Seeking Behaviour among university students in Klang Valley and that between Chaining and Information Seeking Behaviour is significant. The finding is consistent with past literature by Ellis (1989) since there has relationship between Chaining and Information Seeking Behaviour. Therefore, Hypothesis 2 is accepted. Generally, respondents have agreed that Chaining is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour.

5.3 *Browsing*

Browsing is the action casually looking for information in areas of potential interest (Ellis, 1989). It can be concluded there is weak positive relationship between Browsing and Information Seeking Behaviour among university students in Klang Valley. The findings were consistent with past literature by Ellis (1989). Therefore, Hypothesis 3 is accepted. Generally, respondents have agreed that Browsing is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour.

5.4 *Differentiating*

Differentiating is using known differences such as author and journal hierarchies or nature and quality of information between sources as a way of filtering the amount of information obtained (Ellis, 1989). It can be concluded there is moderate positive relationship between Differentiating and Information Seeking Behaviour among university students in Klang Valley. The findings were consistent with past literature by Ellis (1989). Therefore, Hypothesis 4 is accepted. Generally, respondents have agreed that Differentiating is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour.

5.5 *Monitoring*

Monitoring is keeping abreast of developments in an area by regularly following particular sources such as core journals, newspapers, conferences, magazines, books, and catalogs (Ellis, 1989). It can be concluded there is weak positive relationship between Monitoring and Information Seeking Behaviour among university students in Klang Valley. The findings were consistent with past literature by Ellis (1989). Therefore, Hypothesis 5 is accepted. Generally, respondents have agreed that Monitoring is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour.

5.6 *Extracting*

Extracting is an activity associated with going through a particular source or sources and selectively identifying relevant material from those sources such as sets of journals, series of monographs, collections of indexes, abstracts or bibliographies, and computer databases (Ellis, 1989). It can be concluded there is moderate positive relationship between Extracting and Information Seeking Behaviour among university students in Klang Valley. The findings were consistent with past literature by Ellis (1989). Therefore Hypothesis 6 is accepted. Generally, respondents have agreed that Extracting is one of the elements that influence university students in the Klang Valley's Information Seeking Behaviour.

In sum, the findings discussed above have helped to answer all of the research questions. Specifically, these findings have empirically answered and certified, it is consistent with past literature by Ellis (1989) that the elements of Starting, Chaining, Browsing, Differentiating, Monitoring and Extracting influence the Information Seeking Behaviour among university students in the Klang Valley.

6 **Conclusions**

As a conclusion, based on the finding of this study, it was consistent with past literature by Ellis (1989). As refer to the value of Pearson correlation coefficient has shown that there is a relationship between Starting, Chaining, Browsing, Differentiating, Monitoring and Extracting. Generally, respondents have agreed that Starting, Chaining, Browsing, Differentiating, Monitoring and Extracting are the elements of Information Seeking Behaviour among university students in Klang Valley. Based on the finding of this study, past literature by Ellis (1989) does not mention the most important element for Information Seeking Behaviour. Nevertheless, by conducting the stepwise regression analysis, from the six independent variables, Extracting was significantly explained has the greatest impact which can be identify that Extracting is the most important element for Information Seeking Behaviour among university students in Klang Valley. The value of Pearson correlation coefficient has shown that all of the the elements have relationship and significant with Information Seeking Behaviour. Overall, respondents have agreed that Starting, Chaining, Browsing, Differentiating, Monitoring and Extracting are the elements that influence the Information

Seeking Behaviour among university students in the Klang Valley. Refer to the data obtained, analysed and reviewed, all of the objectives for this study are achieved. Along with, based on the findings, it can also be concluded that H1, H2, H3, H4, H5 and H6 are accepted.

The research objectives have been successfully achieved for this study, which is to investigate the Information Seeking Behaviour of university students in Klang Valley. The study attempted to determine the elements of Information Seeking Behaviour as well as to identify the most important element together with to ascertain the elements that influence the Information Seeking Behaviour among university students in Klang Valley. The study solely focusing on university students from 8 targeted universities, that raised the queries of transmission of findings within different academic institutions in Klang Valley. In a wider range of respondents, further studies are suggested. Apart from that, the study approach used only quantitative research in conducting this research. For that reason, it is recommended that further research should consider engaged either qualitative method or mixed-method to achieve better and solid outcomes.

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