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Abstract: The information revolution presents opportunities as well as challenges for students in finding and getting information that suits their needs. By examining information-seeking behavior in meeting information needs, especially in the undergraduate extension program students in the Faculty of Administrative Science, Universitas Indonesia, a quantitative approach with the descriptive analysis used in this research. The results showed that the information needs of students related to their role as students were to increase knowledge and final project references. Meanwhile, as workers, information is used as a means to develop themselves and meet the demands of work. Information-seeking starts from identifying the topic and subject of the information, preparing keywords as a guideline for searching, selecting, and checking information until the information obtained is then used to reference lectures and jobs. The barriers to information-seeking encountered by students are lack of motivation, limited library collections, and too much and extensive information.

Keywords: information-seeking behavior, information needs, administration students

1 Introduction

Case (2007) stated that information is essential for humans in all aspects, and no one can eliminate information as one of the needs of getting away. Information is taken as a problem solver, decision making, aspects that support and human learning, communication processes, updates on the relevance of the information to information needs, contents of subject specialization, and supporting knowledge (Case, 2007). Further, the progress of Information and Communication Technology (ICT) provides opportunities for each individual to obtain information that is now more accurate, accessible, fast, and is no longer constrained by space and time. Also, the development of information is inseparable from the development of Science, Technology, Engineering, and Math (STEM), and information will be continuously updated, which raises opportunities and challenges for information seekers to meet their information needs. Information needs arise when someone sets specific goals that are associated with one or more job roles played by individuals (Kundu, 2017). In meeting the information needs, there is an impetus to seek for information because there is a feeling in which a person feels a lack of information while possessing limited knowledge. Encouragement also appears to achieve the goals to be achieved by individuals, then the follow-up of individual goals is to search for information that is appropriate and appropriate for themselves in various print and electronic media.

Moreover, in the academic world, knowledge, and information are two inseparable things. For university students, research, learning, and community service activities require them to always depend on information in order to increase knowledge. In fulfilling information needs, each student has different information-seeking behavior but cannot be separated to develop their potential and knowledge. Previous research about information-seeking behavior in academics has been carried out (Komissarov and Murray, 2016; Bukhari et al., 2018; and Elgllab and Shehata, 2019). For example, Komissarov and Murray (2016) also conducted a study in which the purpose of the study was to find out the information-seeking process and identify the factors that influence student information-seeking behavior at the University of Wisconsin, United States. Bukhari et al. (2018) conducted a similar study in which the purpose of the study was to model the information-seeking behavior of international students at the University of Malaya, Malaysia. Also, Elgllab and Shehata (2019) also conducted research related to information-seeking behavior aimed at identifying the information-seeking behavior of scholars to illustrate its information-seeking approach at the University of Shaqra, Saudi Arabia.

Furthermore, this study focuses on looking at the information-seeking behavior of the undergraduate extension program students in the Faculty of Administrative Science, Universitas Indonesia (UI) graduates in 2017. The extension program students are the group of students that has a dual role, as a student, and as a worker who daily requires information to support activities in the academic field and the field of each occupational specialization. Because every student has different information needs due to differences in social, cultural, and occupational backgrounds, this will affect how the behavior in information-seeking behavior. Thus, this study aims to describe the information needs, information-seeking behavior, and identify barriers that arise in conducting information-seeking.

2 Literature Review

2.1 Information Behavior Model

In seeking for information, someone does a series of stages that lead him to get the information intended. Ellis identified the stages of information-seeking into eight stages ranging from starting to end. The following are eight stages of information retrieval, according to Ellis (1989) in Kundu (2017).

1. Starting, the first step in finding this information begins by determining the reference that can be used as a starting point (starting point). Determining references can be by identifying topics or subjects of information based on knowledge held by information seekers.
2. Chaining, the second stage is the stage of tracing the citation or sources identified in the previous stage. At this stage, the follow-up to the source is an effort to ensure the authenticity of a source.
3. Browsing, the third stage is the stage where someone traces or searches for information in information sources that are considered to have the potential for the existence of the desired information.
4. Differentiating, the fourth stage is the stage of selecting information obtained by distinguishing one another by looking at differences by assessing their quality and relevance.

5. Monitoring, the fifth stage is the stage where someone has an awareness of the development of information from a specialization field. Follow developments by following the sources of a field regularly such as journals, conferences, books.
6. Extracting, the sixth stage is the stage where someone does a systematic search to identify relevant information by digging deeper into the source of information selectively to recognize relevant material from the source found.
7. Verifying, the seventh stage is the stage of checking the accuracy, checking the truth and authenticity of the information found.
8. Ending, the last stage is the stage where the search process has been completed, and the results obtained during the information search are combined into one.

2.2 Information-Seeking Behavior

The need for information encourages individuals to search for information to meet information needs. According to Case (2007), information behavior is a characterization of various relevant human behaviors related to information. Furthermore, according to McCluskey (2016), information behavior is related to how humans need, discover, or obtain processes and ultimately use information. According to Wilson (2000), information-seeking behavior is a search that aims to find information as a consequence of the need to satisfy several goals. Information-seeking is a reaction from the need to fulfill information so that there is no distance between information and information seekers.

When someone feels that their knowledge is lacking, while information is always developing every day, then the need for information arises. According to Zha (2015), when individuals experience cognitive gaps that prevent them from understanding specific situations, they will try to find information to change the state of their knowledge and fulfill information needs. After the need for information, someone will be encouraged to search for information to meet the information needs. For this reason, information requests will appear that encourage someone to search for information.

According to Zha (2015), information search is information behavior referring to searches that aim to obtain information as a consequence of the need to fulfill several objectives. Furthermore, according to Wilson (2000), information search is an effort to find information with a specific purpose as a result of the need to meet defined goals. Based on this definition, information retrieval is a process that departs from information needs and then encourages someone to search for information to meet defined objectives.

In the study of Zha (2015) entitled *Understanding information-seeking in digital libraries: antecedents and consequences*, in general, there are four modes of information search, namely search, search, awareness, and monitoring. The four modes of information-seeking are grouped into two, namely active information search and passive information search. Active information retrieval is a condition where the user actively conducts and searches for information through search mode and search mode. Meanwhile, passive information retrieval is a condition where the user conducts and seeks information passively through information conscious mode and information monitoring. Then, after the information needs turn into information-seeking activities, several things influence the behavior, the following are the factors that influence information-seeking behavior according to Robson and Robinson (2013), namely:

1. Context: The environment in which users of information operations, including location, social, cultural influences, related to activities and factors related to work, finance, and technology.
2. Demographics: Age, gender, ethnicity, socioeconomic status of information actors, and others.
3. Expertise: Knowledge, education, training, experience relevant to the subject area, assignments, or use of information sources. Expertise also deals with relevant specializations - in education, career or interests, and career stages.
4. Psychological factors: personality and mental processes of information users, including self-perception, perception of knowledge gaps, cognitive dissonance or cognitive avoidance, ability to cope with stress, and thoughts and feelings when seeking information.
5. Information that is needed desired and intended by the user, which encourages users to find information. It can be internally or externally, recognized or unknown, anticipated or unexpected, cognitive or affective.
6. The needs, desires, and goals of information providers, which encourage providers to communicate information.
7. Motivation and inhibiting factors. Factors that encourage or discourage information behavior.
8. Features of the information search process. Activities, feelings, and thoughts experienced by an individual when seeking information.
9. Characteristics of information and sources, including utility (factors such as usability, relevance, timeliness, accessibility, and ease of use of information or sources), and credibility (trust, authority, reliability, and lack of bias in the source of information and information provided).

2.3 Information Needs

Every individual in society needs information to fulfill a goal to be achieved. Case (2007) states that information needs arise because of feelings of uncertainty, ambiguity, or anxiety as the root causes of information needs. Information needs can change continuously as a result of the rapid and breadth of information circulating. Case (2007) also states in a review by McCluskey (2016), information needs arise because data is easy to obtain and ease of measurement, the term demand for information has been widely used in research on information needs.

According to Case (2007), there are 4 (four) conceptions of how information needs arise. This conception is a collaboration of thought by Taylor (1968), Belkin (1978), and Dervin (1983).

1. Searching for information (seeking information): Taylor (1968) talks about a series of stages where there is vague dissatisfaction. This dissatisfaction then becomes an ambiguous statement, and finally, a question arises. According to Taylor's typology, information needs begin with the emergence of visceral needs, and the emergence of conscious and formal needs then ends with compromised needs. The main focus of this conception is a situation where one person asks a question to another person to get an answer.
2. Reducing Uncertainty: Belkin (1978) emphasizes the idea of anomalies and the uncertainty of information that accompanies them. According to Belkin (1978) Anomalous State of Knowledge (ASK) or anomalous state of knowledge exists when someone recognizes that there are anomalies (gaps or uncertainties) in themselves regarding the state of knowledge about a situation or topic. He

continued, he said, “faced with ASK, individuals may attempt to address their uncertainty by requesting or consulting information” or translation of individuals faced with ASK trying to overcome their uncertainty by requesting or consulting information. Uncertainty of information is a condition where individuals can feel the difference between what they know and what they want to know. Thus, individuals will continuously compare the current level of knowledge with the state of goals they want to achieve through perfect knowledge. This makes individuals react by seeking for information whenever they feel uncertain.

3. Making Sense: Dervin (1983) says that the search for information in everyday life regarding the use of factual information makes sense more likely to emphasize feelings rather than cognition in situations of reaching information. In this conception, what is meant by plausible characterization is where the search for information begins with questions directed to understanding the situation, followed by communicating the core of the process to bridge the gap in order to get some information desired. Strategies are formed to obtain answers, ideas, and information sources.
4. The Spectrum of Motivations: A person’s information needs will reflect assumptions about the information itself — assumptions about why people look for it, and why they use it. Case (2007) explains that there are two motivational patterns, each of which was sparked by Atkin (1973) and Dervin (1983), namely the objective and subjective patterns. The concept of objective motivation patterns was coined by Atkin (1973). Objective patterns look at information by reflecting objective reality, and the search for information by rational judgments that there is an uncertainty that will be resolved with specific information. The emotional motivation of the search process, such as anxiety, tends to be ruled out. Seeking information from an objective point of view is to take specific facts to make a decision or solve a problem. The concept of subjective patterns sparked by Dervin (1983) symbolizes the ideal view that information-seeking is driven by vaguely uncomfortable feelings, feelings of emptiness in knowledge, or anxiety about the current situation. This view emphasizes that humans are often encouraged to “make sense” of the whole situation as well as there are reasonable goals.

Based on the 4 (four) conceptions above, information needs begin because of a feeling of uncertainty about something and a gap between the knowledge held by the information in circulation. This underlies individuals to seek answers to these uncertainties and gaps. The existence of information makes individuals assess that there will be something that is resolved due to the uncertainty and information gap. According to Guha in Syaffril (2017), there are 4 (four) types of information needs:

1. Current need approach, which is an approach to the needs of users of information that is up to date. Users interact with information systems in a very general way to increase their knowledge. This type of approach needs to have constant interaction between the user and the information system.
2. Everyday needs approach, which is an approach to user needs that are specific and fast. Information needed by users is information that is routinely faced by users.
3. Exhaustic needs approach, which is an approach to the user's need for in-depth information, information users have a high dependency on the information needed and relevant, specific, and complete.

4. Catching-up need approach, which is an approach to the use of information that is concise, but also complete, especially regarding the latest development of a subject that is needed and relevant things.

2.4 Barriers to Information-Seeking

In seeking information, each individual may encounter obstacles that can prevent him from getting the information sought. Barriers to information-seeking for each person may be different from others. According to Wilson (2000), some of the obstacles accepted by an individual are as follows,

1. Internal barriers
   a. Cognitive dissonance is a disorder related to individual motivation in behavior. This concept suggests that the existence of conflicting cognition makes individuals feel uncomfortable; as a result, they will try to solve the conflict with one or several solutions.
   b. Selective pressure is when individuals tend to be open to ideas that are in line with their interests, needs, and attitudes. Consciously or unconsciously, humans often avoid messages that conflict with their views and principles.
   c. Emotional characteristics, these obstacles are related to a person's emotional and mental state when finding information.
2. Demographic barriers, including barriers that arise in the context of differences in the level of education and knowledge base, where the lower the education, the lower the level of mastery of their information search. Next includes demographic and gender variables, where the characteristics and socioeconomic status and gender can influence the methods used to find information.
3. Interpersonal barriers, where there is a knowledge gap between the communicant and the communicator, can be one of the reasons for the disruption in interpersonal communication.
4. Physiological barriers, these barriers can be in the form of physical and mental disabilities, either due to congenital birth or due to other factors.
5. External barriers, including barriers regarding time, geographical, and characteristics of information sources. Time limitations can be obstacles in information discovery; the dense activity allows less time to find the information needed. Furthermore, geographical barriers are situations where the information source and information seeker are blocked by distance.
6. Barriers to the characteristics of information sources, namely circumstances where information seekers get too much information and are still considered less relevant.

3 Methodology

A quantitative approach with descriptive analysis was used to explain the information-seeking behavior of undergraduate extension program students in the Faculty of Administrative Science, UI. A questionnaire using a Likert scale measurement tool (see Table 1) was also used in this study to measure the opinions, perceptions, and attitudes of a person or group of people about a social phenomenon that is explicitly specified in research (Sugiyono, 2018).

Table 1. Likert scale

Explanation	Code
Strongly agree/Always	5
Agree/Frequently	4
Neutral/Hesitating	3
Disagree/Almost never	2
Strongly disagree/Never	1

The distribution of questionnaires online using the google form media was conducted from October 28 to November 6, 2019. During the data screening process, online questionnaires were distributed through various means such as personal chatting, disseminating into student chat groups such as WhatsApp groups and line groups. 99 out of 130 undergraduate extension program students in the Faculty of Administrative Science, UI in 2017 responses were collected.

Table 2 shows students' gender where female (*n*=52) and male (*n*=47). Table 2 also shows students' study program, such as from state administration (*n*=37), commercial administration (*n*=36), and fiscal administration (*n*=26). As for the distribution of occupation shows that 48 students work as private employees, followed by 43 students work as entrepreneurs, 6 (six) students work as freelancers and 2 (two) students as civil servants. This occupation shows that students have a role in their daily lives besides being students who are also workers.

Table 2. Respondents' Demographics (*n*=99)

Category	Item	Frequency
Gender	Female	52
	Male	47
Study program	State administration	37
	Commercial administration	36
	Fiscal administration	26
Occupation	Private employee	48
	Entrepreneur	43
	Civil servant	2
	Others	6

Thus, the questionnaire was pre-distributed to the 20 students as a research sample and then distributed to the 79 students. Respond from 99 students that answered 24 questions showed a reliable Cronbach's alpha (*a*=.864). The collected data is then analyzed using descriptive analysis for interpreting the respondent's answer, and the percentage is calculated first to find out the results of the distribution of existing data.

4 Findings

The following are the results of the 24 questions that were distributed to the 99 undergraduate extension program students in the Faculty of Administrative Science, UI. The questions were divided into 3 (three) categories, such as 7 (seven) questions of information needs, 14 questions of information-seeking behavior, and 3 (three) questions of barriers to information-seeking. These study results were analyzed using descriptive analysis.

4.1 Information Needs

In the information needs category, there are 7 (seven) statement items with a reliable Cronbach's alpha (*a*=.664) to find out the information needs of the 99 undergraduate extension program students in the Faculty of Administrative Science, UI. Information needs category has 3 (three) dimensions that consist of 2 (two) questions of sub-dimensions of student information needs, 2 (two) questions of sub-dimensions of worker's information needs, and 3 (three) questions of sub-dimensions of format and types of information.

Table 3. Sub-dimensions of student information needs (*n*=99)

Question	Item	Frequency	Mean
As a student, the information I need is to increase knowledge	5	27	4.13
	4	57	
	3	15	
	2		
	1		
As a student, the information I need is to reference my final project	5	16	3.85
	4	52	
	3	31	
	2		
	1		

The undergraduate extension program students in the Faculty of Administrative Science, UI in their daily lives, aside from being students, are also workers who have the information needs. The impulse of information needs was triggered by the awareness of the need to increase knowledge in supporting the learning process and the need to complete their final project references. In their information needs as students, 57 students, agreed that as information needed was to increase knowledge and as a reference in completing the final project. Thus, sub-dimensions of student information needs showed a reliable Cronbach's alpha (*a*=.716).

Tabel 4. Sub-dimensions of worker's information needs (*n*=99)

Question	Item	Frequency	Mean
As a worker, the information I need to develop myself	5	35	4.19
	4	49	
	3	14	
	2	1	
	1		
As a worker, the information I need is due to work demands	5	7	3.53
	4	44	
	3	42	
	2	6	
	1		

Meanwhile, in their needs as workers, 49 students agreed that the information needed is to develop their potential, and 44 students agreed that information is needed because of their work demands. However, sub-dimensions of worker's information needs showed not reliable Cronbach's alpha (*a*=.149).

Table 5. Sub-dimensions of format and types of information (*n*=99)

Question	Item	Frequency	Mean
I tend to use information in electronic rather than printed format	5	27	4.13
	4	60	
	3	10	
	2	2	

	1		
I prefer journal articles rather than textbooks	5 4 3 2 1	16 58 23 2	3.89
I prefer electronic journals over electronic books	5 4 3 2 1	34 36 26 3	4.02

Students' preferences in the information format and type, 60 students agreed that they tend to use information in electronic rather than printed format. In the selection of printed information format and types, 58 students agreed to prefer journal articles over textbooks. Furthermore, in the selection of electronic information format and types, 36 students agreed, and 36 students strongly agreed to prefer electronic journals over electronic books. Thus, sub-dimensions of student information needs showed a reliable Cronbach's alpha (*a*=.605).

4.2 Information-Seeking Behavior

Information-seeking behavior category also has 3 (three) dimensions of 14 statement items with a reliable Cronbach's alpha (*a*=.833), such as 3 (three) questions of sub-dimensions of information-seeking behavior before finding information, 6 (six) questions of sub-dimensions of information-seeking behavior when finding information, and 5 (five) sub-dimensions of information-seeking behavior after finding information. The following statements will be described according to their respective groups, according to Ellis's information search model (1989). The information-seeking behavior category is to find out how information-seeking behavior of the 99 undergraduate extension program students in the Faculty of Administrative Science, UI starts from before looking for information, when seeking for information, and after seeking for information.

Table 6. Sub-dimensions of information-seeking behavior before finding information *(n*=99)

Question	Item	Frequency	Mean
Identify the topic/subject information before searching	5 4 3 2 1	51 38 10	4.41
Prepare keywords regarding the topics identified	5 4 3 2 1	39 54 5	4.32
Only look for original information	5 4 3 2 1	50 45 4	4.46

Table 6 shows the information-seeking behavior before finding information. Searching for information, according to Ellis (1989), will go through 8 (eight) stages from the *start* to the *ending*. Before seeking for information, students first enter the *starting* and *chaining* stages. In the *starting* stage, students identify topics/subjects

before seeking for information. 51 (fifty-one) students stated that they strongly agreed to identify the topic/subject of information before seeking, followed by 38 students agreed. Identifying the topic/subject of information before seeking for information will make it easier for students to find information as needed because they know in broad terms the related things that they want to find.

Furthermore, most students prepare keywords regarding the topics identified. By preparing search keywords, students will only search for information related matters, and the scope of the search is more focused. This will make it easier for students to get relevant information as needed. At the *chaining* stage, 50 students stated strongly agree only to seek original information, followed by 45 students agreed. Choosing original information will help students to get accurate and trustworthy information to avoid invalid information. Students explore citations or sources identified as an effort to ensure the authenticity of a source. Thus, sub-dimensions of information-seeking behavior before finding information showed a reliable Cronbach's alpha (*a*=.558).

Tabel 7. sub-dimensions of information-seeking behavior when finding information (*n*=99)

Question	Item	Frequency	Mean
Use Boolean logic operators (and, or and not)	5	15	3.10
	4	14	
	3	39	
	2	28	
	1	3	
Search using the internet to find information	5	51	4.46
	4	43	
	3	5	
	2		
	1		
Search using OPAC with a simple search rather than a specific search (advance)	5	28	3.93
	4	43	
	3	21	
	2	7	
	1		
Browse journal contents	5	13	3.04
	4	18	
	3	32	
	2	32	
	1	4	
Choose information sources that can be accounted for	5	57	4.51
	4	35	
	3	7	
	2		
	1		
Monitor the latest information from various information sources	5	36	4.25
	4	52	
	3	11	
	2		
	1		

The information-seeking behavior when finding information entering the stages of *browsing*, *differentiating*, and *monitoring*. 51 (fifty-one) students are looking for information using the internet. In the use of the internet, 39 students felt neutral using the

help of Boolean Logic operators, 28 students did not agree, and 3 (three) students did not use the help of Boolean Logic operators.

Furthermore, in searching using OPAC, 43 students used a simple search rather than a specific search (advance). It is seen that students seek information through OPAC by directly entering topics and subjects that were previously identified and did not search using specific searches. Meanwhile, specific searches can help students to focus their search by filtering search results.

Moreover, 32 students declared neutral in seeking for information by searching the contents of the journal. Students mostly choose sources of information from sources that can be accounted. This shows that students need valid information, and their information authority can be accounted.

Further, the *differentiating* stage of students chooses information sources that can be accounted. 57 students stated strongly agreed to choose the source of information from sources that can be accounted for, followed by 35 students agreed. This shows that students choose information obtained by distinguishing one another by looking at differences by assessing their quality and relevance.

In the *monitoring* phase, students monitor the latest information from various sources of information. 52 students agreed to monitor the latest information from various sources of information, followed by 36 students stated strongly agree that showed students have an awareness of the development of information and follow developments by following the sources regularly to get the latest information. Thus, sub-dimensions of information-seeking behavior when finding information showed a reliable Cronbach's alpha (*a*=.618).

Tabel 8. sub-dimensions of information-seeking behavior after finding information *(n*=99)

Question	Item	Frequency	Mean
Do a further search	5	44	4.25
	4	41	
	3	10	
	2	3	
	1		
Sort out information relevant to information needs	5	48	4.40
	4	43	
	3	8	
	2		
	1		
Compare selected information with information from other sources	5	37	4.26
	4	51	
	3	11	
	2		
	1		
Re-check the information found	5	40	4.32
	4	51	
	3	8	
	2		
	1		
Use the information obtained for reference lectures / jobs	5	40	4.31
	4	51	

	3 2 1	7 1	

The next step is *extracting*, *verifying*, and *ending*. The sub-dimensions of information-seeking behavior after finding information at the *extracting* stage, 44 students stated strongly agree to conduct further searches, while 3 (three) students did not agree or have never conducted further searches. Further search is carried out to obtain relevant information as needed. In addition to further search, students make the selection of relevant information according to information needs.

48 students stated strongly agreed to sort out relevant information according to information needs, while 8 (eight) students stated neutrally. In the final *extracting* stage, students compare selected information with information from other sources. 51 students agreed to compare selected information with other sources. This shows that students identify relevant information by digging deeper into the information source selectively to recognize relevant material from the sources found. Moreover, it shows that students do not easily trust information obtained from a source of information and do a proof of the truth of the information obtained.

In the *verifying* phase, students verify the information by checking the information found. 51 students agreed to double-check the information found. It appears that students check the accuracy, correctness, and authenticity of the information found before ending the information search. In the *ending* stage, students end the search for information whose results are used as a reference in lectures/work. 51 students agreed to use the information found. This shows that the information obtained during the search period makes students feel satisfied with the search results. Therefore, students use the information for reference lectures/jobs. Thus, sub-dimensions of information-seeking behavior after finding information showed a reliable Cronbach's alpha (*a*=.779).

4.3 Barriers to Information-Seeking

In the dimension of barriers to information-seeking, there are 3 (three) statements to find out what obstacles of the 99 undergraduate extension program students in the Faculty of Administrative Science, UI encountered when seeking for information.

Table 9. Dimensions of barriers to information-seeking *(n*=99)

Question	**Item**	**Frequency**	**Mean**
Lack of motivation is an obstacle in finding information	5 4 3 2 1	23 38 28 10	3.75
Limited library collections become obstacles in finding information	5 4 3 2 1	27 41 19 12	3.84
Too much information (broad) becomes an obstacle in finding information	5 4 3 2 1	40 43 16	4.24

Barriers to information-seeking can be from internal or external (Wilson, 2000). Internal barriers to information-seeking are barriers that arise due to cognitive dissonance (related to motivation), selective stress, and emotional characteristics. The results showed that 38 students agreed that the obstacle encountered in seeking for information was lack of motivation, 28 students stated neutral, 23 students stated very agreed, and 10 students did not agree.

Furthermore, external barriers to information-seeking were the limitations of library collections, and too much (extensive) information became obstacles in finding information. External barriers related to the limitations of library collections and the breadth of information shows half of the respondents namely 41 students agreed that the limitations of library collections were obstacles in finding information, 27 students stated strongly agree, the rest were 19 students stated neutral, and 12 students did not agree.

Finally, barriers to information-seeking because of too much information (broad) most of the respondents, 43 students agreed, 40 students stated strongly agree, and 16 students stated neutrally. The existence of these external barriers allows reduced encouragement and motivation due to the limited collection of libraries and extensive information. Thus, the dimension of barriers to information-seeking showed not reliable Cronbach's alpha (a=.496).

5 Discussion

Previous research about information-seeking behavior in academics in Malaysia, United States, and Saudi Arabia has been carried out (Bukhari et al., 2018; Komissarov and Murray, 2016; Elgllab and Shehata, 2019). The contribution of this research on information-seeking behavior in several dimensions, such as information needs, information-seeking behavior, and barriers to information-seeking on the 99 undergraduate extension program students in the Faculty of Administrative Science, UI. The undergraduate extension program students in the Faculty of Administrative Science, UI has unique characteristics because undergraduate students in their daily lives are not only students but also workers. The results showed that all respondents had jobs ranging from civil servants to freelancers. This dual role influences their goals in fulfilling information needs when someone sets specific goals that are associated with one or more job roles played by individuals (Kundu, 2017). Information-seeking behavior is closely related to information needs (McCluskey, 2016). Information needs are one of the crucial aspects that are examined to determine information-seeking behavior. The results showed that the information needs to meet the objectives as students are to support the learning process and final project references, while the information needs as workers are for self-development in the context of the world of work and work demands. In each of their roles, there is a common goal which is to develop in order to improve themselves in each role. As information, students need to add knowledge as an effort to support the learning process, while information workers are needed to increase knowledge as an effort to develop themselves in the context of the world of work. Based on this, it appears that the purpose of meeting the information needs of the undergraduate extension program students in the Faculty of Administrative Science, UI is more diverse than other students in general.

Information-seeking behavior is a search that aims to find information as a consequence of the need to satisfy several goals (Wilson, 2000). This study uses Ellis's information

search behavior model (1989) that identifies the stages of information-seeking into eight stages ranging from *starting* to *ending*. This study divides the stages into 3 (three) sections based on research that has been done by Bukhari et al. (2018), who conduct the information-seeking behavior of students at the University of Malaya, Malaysia. Information-seeking before the information search begins by identifying the topic or subject of information and determining keywords as a guideline for the search to be more focused. Based on the results of the research, students only seek the original information. When seeking for information, students often search for information using the internet and OPAC. Students sometimes even rarely trace information through the contents of a journal. Students' consideration in finding information is to choose the information that can be accounted for and updated. Students also have an awareness of the development of information by following the sources of a field, the field here is their academic field, Administrative Sciences, to support learning and their respective fields of work to suit the specialization of the field of work. Student information-seeking behavior after seeking for information obtained is sorting out relevant information, comparing information, and checking information as a way to assess the contents of information and its credibility to avoid bias towards sources of information that have been obtained. Information obtained during the information search process is used to meet the objectives of information needs.

Furthermore, based on the main findings of the information needs above, it appears that the factors that most influence information-seeking behavior are context factors. According to Robson and Robinson (2013), context factors are factors that influence information-seeking behavior in the environment in which the user of information is located, including location, social influence, culture, related to activities, jobs, finance, and technology. Work is the main factor for students to search for information; this is because the emerging information needs to encourage students to meet their information needs as workers.

When completing an information-seeking, students verify the information obtained by checking the accuracy, correctness, and authenticity of the information by looking at the information obtained. In contrast to previous research conducted by Bukhari et al. (2018) which showed that Malaya University students conducted information checks by interacting face to face to check the accuracy of information. The undergraduate extension program students in the Faculty of Administrative Science, UI, who have the highest average searches for information using the internet, tend to verify the information by reviewing the information obtained.

In the barriers to information-seeking, students feel the limitations of library collections, and the presence of too much (extensive) information become obstacles in information-seeking. This shows students, on the one hand, feel that the information they want to find is so difficult to obtain because of the limited collection of destruction, but on the other hand, when information is too much (broad), students also consider it an obstacle. When seeking for collections in the library, students feel that the information obtained is limited, mainly because students more often search for information on OPAC with a simple search rather than a specific search (advance). On the other hand, students feel that the obstacles encountered during the process of finding information are too much and extensive information. Thus, students hesitate and rarely use the help of Boolean logic operators or specific searches (advance) that can help in narrowing and expanding the search so that it is more focused and precise but still relevant.

6 Conclusions

The impulse of the information-seeking behavior of the 99 undergraduate extension program students in the Faculty of Administrative Science, UI, was triggered by the awareness of the information need, information-seeking, and barriers to information-seeking. Students who are also workers need information in order to meet the demands of work and self-development in the context of the world of work.

The conceptual model based on the information search behavior model by Ellis (1989) is the primary model used as a theoretical framework. Findings showed that the students' information-seeking starts with identifying the topic and then continues by preparing keywords as a guide to search for information so that the focus of the search becomes specific. To get information, students use sources such as the internet, OPAC, and journal lists. Students rarely use the use of Boolean Logic operator assistance and other information retrieval strategies. Students make the selection and monitoring of the latest information and choose relevant information as needed to obtain information that is appropriate to the needs and credible truth of the information. The selection and checking of important information considering that accurate and valid information is used as a reference in lectures and work. Seeking for information is not always easy; obstacles can arise from outside or inside the student. Students encounter several internal and external barriers. Internal barriers that arise related to motivation, while external barriers that arise related to library collections and information limitations, are too abundant.

Furthermore, Universitas Indonesia's library must be aware of and know these issues. These issues must be taken into consideration and as input for developing information-seeking practices. The publication and database socialization efforts that are subscribed by Universitas Indonesia must continue to be intensified. There is a need for user education by Universitas Indonesia's library for the undergraduate extension program students that have dual roles, as a student and as a worker to improve their ability to track information. For students, these issues are essential to know and realize in order to maximize the ability to search for information and the creation of students who are superior and competitive in the academic field and their respective fields of work specialization.

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