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THE LIBRARY'S ADAPTATION STRATEGY TOWARDS THE INFORMATION-SEEKING BEHAVIOUR PATTERNS OF THE 2019 OUTSTANDING STUDENTS IN UNIVERSITAS NEGERI MALANG (UM)

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Abstract

Information-seeking behavior for Outstanding Students of Universitas Negeri Malang (UM) is an activity to increase information literacy in the era of information technology development, and it is necessary to use this activity as a reference or an example for other students in improving their information literacy and achieving effective and efficient learning. Therefore, in order to find the pattern of information-seeking behavior as reference material, the role of the university library is needed for designing an adaptation strategy of this pattern. The purpose of this research is to show the strategies or efforts of the library in adapting to the information-seeking behavior patterns of the 2019 UM's Outstanding Students. The method used in this research is the descriptive qualitative method. The research samples are the eighteen finalists of the 2019 UM Outstanding Student Competition who were selected through purposive sampling technique. The data was collected through interviews. The results of this research show that the library is able to adapt to the Outstanding Students' information-seeking behavior patterns through its effort in improving the quality of library materials presentation in various formats, organizing scientific forum activities, socializing library policies related to the function improvements and the roles of the library as a reference center, subscribing to reputable online journals that are needed by each study programs and collaborating with journal providers to facilitate the publication of articles or book chapters internationally.

Keywords : information seeking behaviours, outstanding students

1. Introductions

Outstanding Students (*MAWAPRES*) have a different level of information needs from students in general. The information that the Outstanding Students need is the information that will be used as a source of learning and being productive to achieve great accomplishments in both academic and non-academic aspects. This information is obtained through an activity of tracing information sources, starting from the way the Outstanding Students analyze what information sources are most needed, the way they obtain the information sources needed, to the way they manage the obtained information sources. The information-searching activities carried out by the Outstanding Students are referring to the information-seeking behavior model by

Meho and Tibbo. The information-seeking behavior model by Meho and Tibbo consists of ten sequential elements ranging from starting, chaining, browsing, monitoring, accessing, differentiating, extracting, verifying, networking, and information managing.

In this era of information technology development, the information-seeking behavior model which consists of ten elements can be applied easily by Outstanding Students in obtaining the needed information sources. In fact, they are able to apply the ten elements of the information-seeking behavior model either not sequentially or not as a whole. Thus, it can be concluded Outstanding Students have different behavior patterns in information seeking. The 2019 Universitas Negeri Malang (UM) Outstanding Students have nine different patterns in their information-seeking behavior. Hence, it is necessary to know how the library of the Universitas Negeri Malang (UM), as the center of information sources, collaborates with the advancement of information technology in fulfilling the information needs of the Outstanding Students.

The library, which has a role as a center for information sources, is not only a place to provide information sources for outstanding students and other students, but also an active promoter in producing students who are rich in achievements. Therefore, to make the nine patterns of the information-seeking behavior by the Outstanding Students as a sort of stimulus or motivator for other students in improving their academic and non-academic achievements and information literacy, UM Library needs to create strategies to adapt themselves towards those patterns of information-seeking behavior.

The results show that the UM Library has created some strategies to adapt to the information-seeking behavior patterns of 2019 UM Outstanding Students to increase other students' information literacy and their academics and non-academics achievement. Those strategies are improving the collection provision facilities and creating library work programs related to information literacy as an effort to increase the achievement of UM students. The benefits of this research are (1) as insight and knowledge enhancement for UM students; (2) as a source in motivating students to seek achievements in both academic and non-academic aspects; (3) as a form of input to the UM library in maintaining the quality of the library services; (4) as a reference for future research with similar topics of discussion; (5) as an insight to the readers regarding the strategy constructed by the UM library which has a role in educating the students so that they are able to increase the academic and non-academic achievements.

2. Literature Review

2.1. Library in Higher Education

"The heart of a college" is the term that has been mentioned by the researcher in the introduction to the research section. The term "heart of college" or "heart of higher education" is a term that describes that there is a source of knowledge that can support the development of higher education. The term "heart of college" is referring to the library of a college.

Imran Berawi (2012) states that a library in higher education is a supporting facility that aims to support the academic and non-academic activities of the academic community. A higher education library is a unit that is affiliated with a higher education institution. This statement can be used as a reference to the importance of organizing libraries in higher education.

Another statement by Rizki (2013) says that a higher education library is a unit within the higher education environment that acts as a provider and disseminator of information sources with the aim of achieving higher education goals (education, research, and service).

Based on those two opinions, it can be concluded that a college library is an institution that is in the scope of higher education, which acts as a center for information sources and as learning support for the academic community to achieve academic and non-academic learning achievements and the purpose of higher education (education, research, and service).

Higher education library as has been explained from several opinions above have a general-purpose as a central place for information sources in achieving higher education goals (education, research, and service). These objectives in detail are elaborated by Ulya (2017), which include:

- a) Fulfilling the information needed by the academic community, who in general are lecturers and students
- b) Providing references for all levels of academicians, starting from undergraduate students, postgraduate students, and lecturers
- c) Providing an exclusive learning place for the visitors of the library
- d) Providing appropriate circulation services (borrowing, returning, and extending) for all visitors
- e) Providing services for the presentation of active sources of information that are not limited to the scope of universities but also include local industrial institutions

Furthermore, the function of the college library has been mentioned and explained by Rizki (2013):

a) Educational function; the library seeks to provide facilities in optimizing the development of student potential through learning that is contained in the educational curriculum.

b) Informative function; the library guides the students to get the needed information through the information searching system in the library.

c) Research function; The library supports the research process by providing various sources of information so that the research of the academic community can be carried out using data obtained from university libraries.

d) Recreational functions; students or other academics can use the college library to relax the mind after studying with light, relaxing, and entertaining reading materials

University libraries are also required to develop libraries in accordance with developments in information technology. According to Imamah (2017), there are several functions/uses of college libraries including:

a) Center for preserving information sources

The library can be used as a place to preserve knowledge as a product of the nation's creativity which is stored properly as local content in the repository software system.

b) Center for disseminating information sources

The function of the library is not only to provide, present, and preserve, but also to play a role in disseminating information sources through social media and mass media.

c) Center for the disseminating knowledge

Apart from having a function to disseminate information, the library also functions to disseminate knowledge through the library collection.

Based on the functions described above, the core function of the college library is as a place to support the improvement of the higher education quality and a place for sources of information and learning that are used to develop self-potential in science and technology to compete in the era of globalization.

2.2.The Need for Information

Needs can be defined as something that must be achieved or owned. Information needs are a person's need for the information that must be obtained. The definition of information needs is mentioned by Juhaidi & Syawqi (2017) as something that arises because there is a gap between the knowledge held and the information required. Hasan (2016) also explained the need for information is

information that someone wants to get as a kind of support for their daily life. The information needs of each person vary according to the type of information and the level of the need.

A similar opinion related to the information needs was mentioned by Prezz (2008): "An information need arises when an individual senses a problematic situation or information gap, in which his or her internal knowledge and beliefs, and model of the environment fail to suggest a path towards the satisfaction of his or her goals".

Another opinion expressed by Juhaidi & Syawqi (2017) says that the need for information is the awareness of a person's uncertainties of information, and thus, it requires someone to search for information in order to be able to overcome their uncertainties. In today's lifestyle, information needs are similar to the demand for information. If someone is sure that information is indeed needed, then the need or desire for that information will turn into a demand for information because there is a need for the information.

Based on several descriptions above, it can be concluded that the need for information is a condition and awareness of a person where the situation in the environment is not conducive and is unable to fulfill the goal of filling the information gaps using the pre-existing knowledge.

2.3.Information-Seeking Behavior

Behavior is a series of responses, actions, and activities that a person carries out in the process of thinking, learning, and working (Anwar, 2017). When the term of behavior is combined with information, it will produce a definition of all activities or actions carried out by humans in obtaining and responding to information.

The definition of information-seeking behavior was put forward by several experts in the field of information science. Wilson (2000) defines information-seeking behavior as an effort or action carried out by humans when dealing with information sources in both active and passive information sources, and information utilization. Thus, both face-to-face communication activities with other people, as well as a person's response to information passively such as watching TV advertisements with no intention of reacting to the information provided are all included in the information-seeking behavior. Information seeking behavior, as has been explained above, can be interpreted as a form of human action in actively and passively seeking sources and channels of information. Active search behavior can be manifested by a person through direct face-to-face communication with others, while passive information-seeking behavior can be manifested in other forms such as the absence of a response to information from the advertisements on television that are being watched.

Information seeking behavior can be divided into information behavior and information seeking. Putu Laxman Pedit defines information behavior as patterned human action to trace and obtain information (Huda, 2016). In life, people needs, thinks, acts, explores, and uses information from various sources and other information media. Meanwhile, Information seeking explanation was put forward by several experts, and one of them was the opinion of Krikelas. From those expert opinions, it can be concluded that information-seeking behavior is a pattern of actions or efforts made by people in searching, tracing, and finding information from various types of information sources in order to fulfill their information needs.

Research related to information-seeking behavior models has been carried out by many researchers. One of these studies is the study by Meho and Tibbo in 2003 which reviewed research on information seeking behavior previously conducted by David Ellis. Meho and Tibbo studied 65 faculty members from 14 countries. Informants involved in the study were: one third from political scientist scholars, another third (range 18.5% and 13.8%) came from sociology and the remaining third came from history, geography, and 10 others. This study shows strong compatibility between informants' information-seeking behavior and David Ellis' information-seeking behavior model theory.

However, it should be noted that Meho and Tibbo also found some information-seeking characteristics that were not found in the 1989 Ellis model. These characteristics are accessing, networking, verifying, and information managing. Although not all of these new features are included in information searching or gathering activities, the four of them have an important role in improving information-seeking models and facilitating researches (Meho and Tibbo, 2003).

Referring to research on the information-seeking behavior model by David Ellis which has been improved by Meho and Tibbo in 2003, the information-seeking behavior model has a composition of ten elements, namely the starting element, chaining element, browsing element, differentiating element, monitoring element, extracting element, accessing, networking elements, verifying elements, and information managing elements (Meho and Tibbo, 2003).

If the ten steps of information-seeking behavior are described further, it will produce a series of continuous processes, where the output from one process of information-seeking behavior can be the input of another information-seeking behavior process. So if sorted from the beginning to the end, the behavior pattern of information seeking begins with 'starting' where a person searches for information firstly by searching for literature in various information sources such as libraries, journals, and the internet, then communicating to other people who are considered

experts such as teachers, lecturers, and friends who have broad and competent insight related to the information needed.

The results (output) of the initial step will be used as input in the next step of information-seeking behavior, namely chaining. Chaining is the step of processing the obtained information by identifying or following up on the information. This information is followed up by tracing the citations and the list of references contained in the obtained information. The searching action can be in the form of communicating information with competent teachers, lecturers, and friends.

The next step is browsing, which is to browse information from the identification results or output in the chaining step. The results of the browsing step are the sources of information obtained in the form of literature from various texts on similar topics and information from teachers, lecturers, librarians, and friends who are considered competent. Next, after the browsing step is the monitoring step, which is an act of monitoring the sources of information needed both formally and informally. The purpose of monitoring is so that information seekers are always able to get the latest sources of information. Formal monitoring of information sources conducted through the participation of information seekers in conferences, workshops, seminars, journals, reviews or book reviews, and publisher catalogs. Informal monitoring of information sources can be done through interactions with friends, colleagues, correspondence, and discussions.

After the monitoring step is completed, the results of this step will be the input of the next step, namely accessing. In the accessing step, information seekers access the needed information after the monitoring process. Information accessing is carried out by information seekers on various sources of information (libraries, internet, journals, catalogs, and even from people who are considered competent such as teachers, lecturers, and librarians) in order to obtain the needed information on an ongoing basis. When the accessing step is finished, move on to the next step, namely differentiating.

In the differentiating step, information from various texts that have been accessed and obtained will be sorted again through an evaluation process. The evaluation is carried out by information seekers based on the views of each individual which includes quality, relevance, and usefulness of the information sources. The purpose of this evaluation step is to obtain accurate and relevant information that is in accordance with the needs of information seekers. After obtaining information through the process of differentiating steps, the information searching process will continue to the extracting steps.

The extracting process is where information sources from various texts that have been evaluated by information seekers are reviewed so that only important information needed is used. In the process of extracting steps, information seekers

can creatively find important information so that it can be used as relevant reference material.

After obtaining important information from the extracting process, information seekers establish and build relationships (networking) with friends, colleagues, and other people in order to support the information needs of each individual. In this networking process, it is expected that information seekers with friends, colleagues, and others are able to share the information needed. The results of the networking process are the information that is mutually needed by information seekers. Next, the step then moves to the verifying process.

The verifying process is an action in checking the accuracy of the information that has been obtained. This action can also be interpreted as assessing the validity of the obtained information. Nowadays, there are so many sources of information and various types of texts that require information seekers to verify the information first in order to obtain accurate and relevant information.

Finally, after the verifying process is the action of information seekers in managing, organizing, storing, and using the information that has been obtained. This process is called Information Management. The purpose of Information Management is to make it easier for information seekers to find previously obtained information, store the information obtained in a neat and structured manner, and prevent the loss of information that has been obtained. At this stage, it is recommended that the information seeker has an archive that is easy to organize individually or in groups.

3. Research Methods

This study used the descriptive qualitative approach with data collected through interviews. Other supporting data taken by researchers before conducting the interview process were data from observations in tracing information on participants who took part in the 2019 Universitas Negeri Malang (UM) Outstanding Student Competition and the collection of the Curriculum Vitae of each of the participant where the CV contained the data related to the achievements that they have achieved so far. Additionally, there was also data collection on the number of Outstanding Students' visits to the campus library that shows their effort in fulfilling their information needs. Moreover, In the qualitative approach, the informants are the samples of the study. The sampling technique used in this study was purposive sampling.

Purposive sampling is a technique in taking data sources as sampling with predetermined considerations. In this study, the considerations in determining the sampling were students who had the predicate as Outstanding Students at the Universitas Negeri Malang (UM) who made it into the final stage of the 2019 UM Outstanding Students Competition. The data analysis used data reduction, coding,

data presentation, and conclusions. This research is intended to trace the data and information that will be used to describe the information-seeking behavior patterns of the outstanding students. The information-seeking behavior patterns of the outstanding students then will be used as reference material for the Universitas Negeri Malang Library in developing strategies to improve information literacy and other students' achievement.

4. Research Result and Discussion

The research results on information-seeking behavior patterns of the UM Outstanding Students were supported by their number of visits to the library which indicates their effort in fulfilling their information needs. The existence of a library is very meaningful as a support of the implementation of education at the tertiary level in terms of research, innovation, and improving the quality of science. UM library plays an important role as a place to support information-seeking behavior for the Outstanding Students as it has various sources of information. Table 4.1 below presents the number of library visits of 2019 UM Outstanding Students.

Table 4.1 The number of library visits of 2019 UM Outstanding Students in 2016-2019

Number	Name	Faculty/Departments	The Number of Visits
1.	ARI	Faculty of Economics / Accounting	70
2.	ASM	Faculty of Sport Science / Public Health	126
3.	DAN	Faculty of Engineering / Mechanical Engineering Education	52
4.	DEN	Faculty of Economics / Management	7
5.	DIA	Faculty of Economics / Accounting	8
6.	FAJ	Faculty of Social Science / Historical Science	106
7.	FAR	Faculty of Social Science / Geography	31
8.	HAS	Faculty of Education Science / Education administration	38
9.	IZZ	Faculty of Math and Science / Mathematics education	96
10.	JHO	Faculty of Psychology / Psychology	37
11.	LIL	Faculty of Engineering / Catering Education	116
12.	LIN	Faculty of Education Science / Elementary Teacher Education	44
13.	MOC	Faculty of Math and Science / Physics	55
14.	MUH	Faculty of Engineering / Civil Engineering	3
15.	NOR	Faculty of Education Science / Non-formal Education	28

16.	RAH	Faculty of Letters / English Language Teaching	113
17.	REV	Faculty of Sport Science / Public health	23
18.	SOF	Faculty of Letters / English Language Teaching	95

After further examination, the number of 2019 UM Outstanding Students' visits to UM library are varied. This is because each student has different information needs based on their respective departments. Thus, their efforts in fulfilling their information needs are also different. Moreover, the 2019 UM Outstanding Students has nine patterns of information-seeking behavior that refer to the information-seeking behavior model by Meho and Tibbo which consists of ten sequential elements, namely starting, chaining, browsing, monitoring, accessing, differentiating, extracting, verifying, networking, and managing information.

The number of visits to the library cannot be used as the sole reference data in understanding the patterns of information-seeking behavior by the outstanding students. It is necessary to do other forms of data collection in order to obtain supporting data. The most prioritized form of data collection in this study was the direct interview process with the Outstanding Students. The results of the interview then were analyzed through a process of coding or categorizing the answers of the informants. In this process, these codes were written in general terms.

The results of this research in understanding the patterns of outstanding students' information-seeking behavior is presented in the form of codes or general terms that were formed by reducing the transcripts of the interview generally on each element of information-seeking behavior that was carried out by eighteen outstanding students. The results of the data reduction process or the coding process are in the form of codes/general terms which represent the constructive aspects that form each of the elements in the information-seeking behavior model. These Constructive Aspects can be observed in table 4.1

Table 4.2. Constructive Aspects that form the elements in the information-seeking behavior that was carried out by 2019 UM Outstanding Students

Information Seeking Behavior Elements	Coding Results
1. <i>Starting</i>	(1) Internet; (2) Curiosity; (3) Ideas; (4) Books; (5) Strategy; (6) Verification; (7) Identification of sources of information; (8) Relations
2. <i>Chaining</i>	(1) Clarification materials; (2) Information Comprehension; (3) Verification; (4) Information Recency; (5) Information enrichment; (6) Consideration materials; (7) Time effectiveness; (8) Information Reputation
3. <i>Browsing</i>	(1) Digital media; (2) Printed media; (3) Multimedia (printed and

		digital); (4) Consideration materials; (5) The validity of the information; (6) Information enrichment; (7) Clarification materials; (8) The Freshness of information; (9) Information Comprehension; (10) Networking
4.	<i>Monitoring</i>	(1) Competition; (2) Networking; (3) Social media followers; (4) Conference; (5) Workshop / seminar; (6) Discussion; (7) Verification; (8) Reputable journal; (9) Curiosity
5.	<i>Accessing</i>	(1) Online access; (2) online & offline access; (3) Interaction; (4) Networking
6.	<i>Differentiating</i>	(1) Verification; (2) The substance of the information; (3) The Freshness of information; (4) Classifying information, (5) Underlining sentences.
7.	<i>Extracting</i>	(1) Paraphrasing important sentences, (2) highlighting important sentences, (3) writing information points, (4) underlining important sentences, (5) making summaries, (6) typing in keywords.
8.	<i>Verifying</i>	(1) Information providers; (2) the substance of the information; (3) Comparison of information sources; (4) Author's achievements
9.	<i>Networking</i>	(1) Competition; (2) Discussion forums; (3) Networking; (4) Organization
10.	<i>InformationManaging</i>	(1) Folder of information sources; (2) Application

In table 4.2, the right column is the constructive aspects of the ten elements of information-seeking behavior that are presented sequentially in the left column.

Next, those constructive aspects of the ten elements of information-seeking behavior were classified again under each Outstanding Student as presented in tables 4.3 and 4.4 below:

Table 4.3. Information-Seeking behavior Elements of 1st to 9th Outstanding Students

Outstanding students Elements	1	2	3	4	5	6	7	8	9
<i>Starting</i>	1,2,3,5	1,2,6	1,3,7	1,2,3,4	1,2,3	1,7	1,2	1,2,4,7	1,3,5
<i>Chaining</i>	8	5	1	7	5	1	5,6	2,3	3,4
<i>Browsing</i>	1,9	1	3	1,7	3,10	3,7	1,6	1	1
<i>Monitoring</i>	1,2	2,3,6	5,8	5,9	3,5,7	1,6	2,5	2,3	5
<i>Accessing</i>	1,3	1	1,3	1	1	1	1	1,3,4	2,3
<i>Differentiating</i>	1,2	1,2	2	2	1,2	1,3	1	1	1
<i>Extracting</i>	1	2	3	1	4	4	2	4	4
<i>Verifying</i>	1	1,2	1,2	1,3	1	1,3	1	1	1

<i>Networking</i>	1	2	4	4	4	3	3,4	3	4
<i>Information</i>	1	1,2	1	2	1,2	1	1	1,2	1
<i>Managing</i>									

Table 4.4 Information-Seeking Behavior Elements of 10th to 18^h Outstanding Students

Outstanding students Elements	10	11	12	13	14	15	16	17	18
<i>Starting</i>	1,3,4,6	1,5	1,2,4	1,8	1,2,3,4	1,3,4,5	1,6	1,2,4	1,2
<i>Chaining</i>	2	2	1,2	1,5	3	1	2	1	1,2
<i>Browsing</i>	1	1	3	1,6	2,8	1,4	3,6	3,6	1,5
<i>Monitoring</i>	8	3	3	5	3,5	3,5	3,5	3,4	3
<i>Accessing</i>	1,3	1,3	1,3	1,3	1,3	1,3	1,3	2	1
<i>Differentiating</i>	1,2	1,2,4	1	2	2	2	2	1,5	1,2
<i>Extracting</i>	5	6	4	4	1	3	1	4	5
<i>Verifying</i>	1,4	2	1	1	1	2	1	1	1
<i>Networking</i>	4	3	3	2	4	4	2	3,4	4
<i>Information</i>	1	1	1,2	1,2	1,2	1,2	1	1,2	1,2
<i>Managing</i>									

The arrangement of numbers in table 4.3 and table 4.4 were obtained based on observations and analysis of the interview results. The analysis was carried out by observing the direction of the informants' answers to the interview questions which are arranged based on elements of information-seeking behavior sequence, starting from starting, chaining, browsing, monitoring, accessing, extracting, verifying, networking, and information managing. Therefore, not every outstanding student has the same sequence pattern as the information-seeking behavior model from David Ellis which has been revised by Meho and Tibbo.

Moreover, the results of the interview were processed again into codes. The results of this process were used in constructing the information-seeking behavior patterns of 2019 UM Outstanding Students by referring to the ten elements of the information-seeking behavior model by David Ellis which had been revised by Meho and Tibbo. The information-seeking behavior patterns of the students are shown in table 4.5 below

Table 4.5. The Elements Arrangements of Each Pattern in the Seeking Information Behavior of 2019 UM Outstanding Students

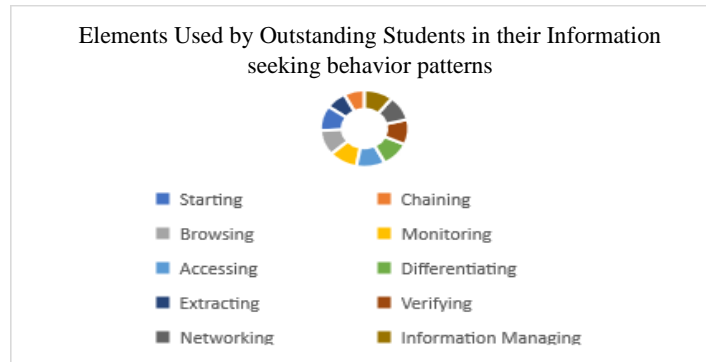
Outstanding Students	The Pattern of the Information-seeking Behavior

1	13	<i>Starting Verifying Networking Differentiating Extracting Chaining Browsing Monitoring Accessing Information Managing</i>
2	3, 10, 12, 15, 17	<i>Starting Verifying Differentiating Extracting Chaining Browsing Monitoring Accessing Networking Information Managing</i>
3	2, 5, 6, 7, 18	<i>Starting Verifying Differentiating Extracting Chaining Browsing Monitoring Networking Accessing Information Managing</i>
4	16	<i>Starting Verifying Differentiating Chaining Browsing Monitoring Accessing Networking Information Managing</i>
5	11	<i>Starting Verifying Differentiating Information Managing Monitoring Chaining Browsing Accessing Networking</i>
6	8	<i>Starting Verifying Differentiating Extracting Browsing Monitoring Accessing Networking Information Managing</i>
7	9	<i>Starting Verifying Differentiating Extracting Browsing Monitoring Networking Accessing Information Managing</i>
8	4 dan 14	<i>Starting Verifying Differentiating Browsing Monitoring Accessing Networking Information Managing</i>
9	1	<i>Starting Verifying Differentiating Browsing Monitoring Networking Accessing Information Managing</i>

Table 4.5 describes the behavior patterns of the outstanding students in finding the needed sources of information. There are nine different patterns of information-seeking behavior that was carried out by 2019 UM Outstanding Students. As a matter of fact, the information-seeking behavior elements in these patterns were carried out randomly or not in order. There were also several outstanding students who do not fully use all of the ten elements of information-seeking behavior. The color of each element is only a form of the author's initiative to make it easier for the readers to observe the pattern of information-seeking behavior in each student.

A total of 13 students did not go through chaining and extracting elements in finding the needed information sources with the rationalization of time effectiveness. The percentage of the information-seeking element pattern that was carried out by 2019 UM Outstanding Students is presented in the following diagram 4.1

Diagram 4.1. Elements Used by Outstanding Students in their information-seeking



behavior patterns

From the results of the tabulations and diagrams above, it can be seen that most outstanding students neither apply the ten elements of the information-seeking behavior model by Mebo and Tibo fully nor do it in the right order based on the model. This is because the supporting equipment for searching information has advanced like the source of information that is in digital form, the internet that can be accessed anytime and anywhere, and the existence of reputable journal collection providers and information provider websites that are corresponded to the types of the local institution.

The pattern of Outstanding Students' information-seeking behavior can be used as an example and reference for other students to increase their achievement while still in college. Therefore, students need a supporting unit like a library which has a role to be the center of information sources and a role to improve the education quality of the academic community by adapting the information-seeking behavior patterns of the outstanding students. The higher education library is the main unit of higher education in supporting the implementation of the Higher Education's *Tri Dharma* mission, namely: education and teaching, research, and community service, with the aim of educating, advancing, and empowering the lives of the nation and also taking part in spreading science and technology to the Indonesian society continuously, both in academic and non-academic aspects (Ulya, 2017)

Educating, advancing, empowering the lives of the nation, and participating in spreading science and technology, of course, the library has a strategy to achieve those goals. The strategy of the library in educating, advancing, empowering the productivity of Malang State University students in improving the quality of information literacy and achievement has constructed according to the pattern of 2019 UM Outstanding Students' information-seeking behavior.

The strategy of the Universitas Negeri Malang Library in adapting to the pattern of the information-seeking behavior of the 2019 Outstanding Students is generally aimed to improve the quality of information literacy and achievement of other students by constructing work programs and innovative facilities such as:

1. Improving the quality of the presentation of collection materials in various formats, both printed and digital. The library collection materials can be accessed anywhere and anytime by utilizing a computer website program and making an application system for a collection of digital format library collection materials.
2. Organizing scientific forum activities, such as book reviews, public discussions, and writing competitions
3. Organizing a "common learning" program in the library in order to facilitate students for research, discussion, collaboration, and creation activities.
4. Socializing the library policies related to the roles and functions of the library. The outreach activities can be in the form of seminars or workshops
5. Cooperating with reputable journal providers, as well as subscribing to online journals needed by each study programs, and maximizing library services in fulfilling student information needs in each study program

5. Conclusion

UM library has an important role in producing academicians with high-quality information literacy and in motivating students to be productive in making achievements. The 2019 UM Outstanding Students can be used as role models by other students to increase their information literacy and achievement. One part that indicates that these Outstanding Students have qualified information literacy is their behavior pattern in finding or tracing the sources of information needed effectively. Furthermore,UM library has created several adaptation strategies according to the information-seeking behavior pattern of 2019 UM Outstanding Students which aimed to improve the quality of information literacy and achievements within UM Students.

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