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Internal and external factors in the information-seeking behavior pattern of the 2019 Outstanding Students in Universitas Negeri Malang (UM)

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Abstract. The purpose of this study is to determine the internal and external factors in the information-seeking behavior pattern of the 2019 Outstanding Students in Universitas Negeri Malang (UM). Within the behavioral pattern of each Outstanding Student in their activities of searching information, there are internal and external factors that form the structure of the behavioral pattern. This study used the descriptive qualitative approach. The sample was eighteen finalists of the 2019 Outstanding Student Competition in Universitas Negeri Malang that were selected using the purposive sampling technique. The data was collected through an interview. The results of this study show that there are factors that shape the pattern of information-seeking behavior within the Outstanding Students in Universitas Negeri Malang (UM). These factors are classified into internal factors which consist of curiosity and critical thinking, and external factors which include the relationship between Outstanding Students, lecturers, and peers, the access to scientific references, and the facilities to the citation sources and reference sources.

Keywords : information seeking behavior, internal factors, external factors

1. Introductions

Outstanding Students (MAWAPRES) are a part of the Universitas Negeri Malang (UM) students who have a myriad of academic and non-academic achievements. These Outstanding Students have different motives from other students in the aspect of fulfilling their information needs. While the other students generally need information for completing assignments purposes, Outstanding Students need information not only for completing assignments purposes but also for supporting them in writing scientific works and achieving the Outstanding Student title.

The 2019 UM Outstanding Students fulfill their information needs through a series of activities of information searching, starting from analyzing what information sources are needed, getting the information sources needed, and managing the obtained information sources. Those information searching activities are referring to the information-seeking behavior model according to Meho and Tibbo which consists of ten elements that form a sequence starting from starting, chaining, browsing, monitoring, accessing, differentiating, extracting, verifying, networking, and managing information.

However, in practice, 2019 UM Outstanding Students do not always carry out the ten elements of the information-seeking behavior model as a whole. Each of 2019 UM Outstanding Students has their own habits or behavior in tracing information sources. Thus, the flow of activities carried out by the students in tracing information sources also varies. The difference in information-seeking behavior carried out by each Outstanding Student is due to certain factors. Here, the researcher is interested to study those factors that cause the differences in the information-seeking behavior of 2019 UM Outstanding Students by referring to Meho and Tibbo's information-seeking behavior model which consists of ten sequential elements.

The purpose of this study is to describe the internal and external factors that cause differences in the information-seeking behavior pattern of each of the 2019 UM Outstanding Students by referring to the information-seeking behavior model theory from David Ellis that has been revised by Meho and Tibbo in 2003. The benefits of this research include (1) as additional insight and knowledge for students of Universitas Negeri Malang; (2) as a reference in motivating students to achieve both academic and non-academic aspects; (3) As a reference for future research with similar topics of discussion; (4) as an additional input to readers regarding the factors that cause differences in information-seeking behavior owned by 2019 UM Outstanding Undergraduate Students

2. Literature Review

2.1. Information Resources

The definition of information sources according to Latifah [9] is a collection of information that is processed and presented with important meanings that people need in order to find a variety of information. This information can be obtained from various sources of information. Sources of information can be divided into two categories, namely printed and non-printed [2]. Printed information sources include visible and touchable documents such as books, magazines, and newspapers. Meanwhile, non-printed information sources include information that can be seen, cannot be touched but can be heard. Some examples of non-printed information sources are the opinions of informants, lecturers or lecturers, electronic books, electronic journals, and other electronic or digital information sources.

Sources of information provided by the library generally include printed sources of information. Non-printed sources of information such as electronic journals, electronic books, references in the form of music and videos are also available in most libraries. Latifah [9] mentions several types of information sources, namely primary, secondary, and tertiary. The following is an explanation of the three sources of information.

A. Primary Resources

Primary Resources are sources of information in the library which consists of information in the form of original works compiled by an author. These sources are stored in the library in the reference service section. Primary sources are the writings of the main author that are written directly based on the observations and research that has been done. Materials that are included in the type of primary sources in the library are:

- a) Final project
- b) Thesis
- c) Thesis
- d) Dissertation,
- e) Journal,
- f) Proceedings,
- g) Research reports

B. Secondary Resources

Besides having a collection of primary sources of information, the library also has a collection of secondary sources of information to complement the collections in the library. Secondary sources of information are sources of information that consist of knowledge that has been reprocessed or repacked into a format that is easier to understand and access by users. Secondary sources of information can be used as a sort of guidance to find a type of primary information [12]. Library collections which included in secondary information sources are

- a) Magazines
- b) Index
- c) Abstract
- d) Monograph
- e) Dictionary
- f) Encyclopedia
- g) Thesaurus

C. Tertiary Resources

Tertiary sources are the supplemental sources of information aside from the primary and secondary information sources. Tertiary sources of information according to Suwandi [13] are literature from another source of information that can be used to find secondary sources of information. The sources of tertiary information include:

- a) Bibliography
- b) Yearbook
- c) Manual books

Based on some of the opinions above, it can be concluded that the three types of information sources, namely primary, secondary and tertiary sources, are the mediums for storing and providing a variety of information that someone wants and needs to fulfill the information needs, and the references material for the learning process.

2.2. Information Needs

Needs can be defined as something that must be achieved or owned. Information needs are a need that someone has for the information they want to get. The definition of information needs mentioned by Juhaidi & Syawqi [8] is something that arises because there is a gap between one's knowledge and the information someone needs. The need for information is also explained by Hasan [6] as information that someone wants to get to support his daily life. The information needs of each person are varied according to the type of information and the level of need.

A similar opinion regarding information needs is stated by Prezz [11] as follows. "An information need arises when an individual senses a problematic situation or information gap, in which his or her internal knowledge and beliefs, and models of the environment fail to suggest a path towards the satisfaction of his or her goals".

Another opinion expressed by Juhaidi & Syawqi [8] says that the need for information is the awareness of a person's uncertainties of information, and thus, it requires someone to search for the 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 Search Behavior

Many research studies related to information-seeking behavior are conducted by focusing on a person's behavior or attitude problems in seeking, finding, and fulfilling information needs. Behaviour is a series of responses, actions, activities that a person does in the process of thinking, learning, and working [1]. When the term behavior is combined with information, it will produce a definition of all activities or actions performed by people 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 [14] 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, namely, watching TV advertisements with no intention of reacting to the information provided is 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 watched.

Information seeking behavior can be divided into information behavior and information seeking. Putu Laxman Pendit defines information behavior as patterned human action to trace and obtain information [7]. 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 include 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 model and facilitating researches [10].

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 [10].

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 sampling technique 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 Student 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 different patterns and behavior of the Outstanding Students' information-seeking activities.

4. Research Results and Discussion

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 generally reducing the transcripts of the interview on each element of the 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 4.1. 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/Constructive Aspects
1. <i>Starting</i>	(1) The Internet; (2) Curiosity; (3) Ideas; (4) Books; (5) Strategy; (6) Verification; (7) Identification of the source of information; (8) Relationships
2. <i>Chaining</i>	(1) Clarification materials; (2) Understanding information; (3) Verification; (4) Up-to-date information; (5) Enrichment of information; (6) Contingency material; (7) Effectiveness of time; (8) Reputation of informsai
3. <i>Browsing</i>	(1) Digital media; (2) Print media; (3) Multimedia (print and digital); (4) Contingency material; (5) Validity of information; (6) Enrichment of information; (7) Clarification materials; (8) Factual information; (9) Understanding information; (10) Relationships
4. <i>Monitoring</i>	(1) Competition; (2) Relationships; (3) Social media followers; (4) Conference; (5) Workshop/seminar; (6) Discussions; (7) Verification; (8) Reputable journals; (9) Curiosity
5. <i>Accessing</i>	(1) Online <i>access</i> ; (2) Offline <i>online access</i> ; (3) Interaction; (4) Relationships
6. <i>Differentiating</i>	(1) Verification; (2) Substance of information; (3) Factual information; (4) Information grouping, (5) Underline sentences.
7. <i>Extracting</i>	(1) Paraphrase important sentences, (2) highlight important sentences, (3) write information points, (4) underline important sentences, (5) create summaries, (6) type keywords.
8. <i>Verifying</i>	(1) Information providers; (2) Substance of information; (3) Comparison of sources of information; (4) Achievements of the author
9. <i>Networking</i>	(1) Competition; (2) Discussion forum; (3) Relationships; (4) Organization
10. <i>Information Managing</i>	(1) Information source folder; (2) Application

In table 4.1, 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 4.2 and 4.3 below:

Table 4.2. 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 Managing</i>	1	1,2	1	2	1,2	1	1	1,2	1

Table 4.3 Information-Seeking behavior Elements of 10th to 18th 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 p.m.	2	1	1	1	2	1	1	1
<i>Networking</i>	4	3	3	2	4	4	2	3,4	4
<i>Information Managing</i>	1	1	1,2	1,2	1,2	1,2	1	1,2	1,2

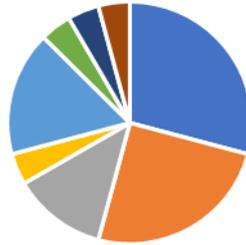
The arrangement of numbers in table 4.2 and table 4.3 were obtained based on observations and analysis of the interview results that were previously presented in the form of codes. The coding result in table 4.2 and 4.3 can be presented in the form of diagram (see diagram 4.1) to know the percentage of each constructive aspects on each information-seeking behavior elements that were carried out by 2019 UM Outstanding Students.

Starting



- Internet
- Curiosity
- Idea
- Book
- Strategy
- Verification
- Identification of Resources
- Relationship

Chaining



- Clarification Materials
- Understanding Information
- Verification
- Information Up-to-Date
- Enrichment of Information
- Contingency Materials
- Time Effectiveness
- Reputation Information

Browsing



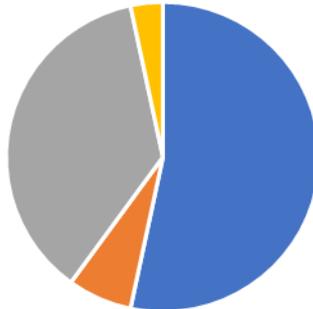
- Digital Media
- Print
- Multimedia (print and digital)
- Contingency Materials
- Validity of Information
- Enrichment of Information
- Clarification Materials
- Factual Information
- Understanding Information
- Relationship

Monitoring



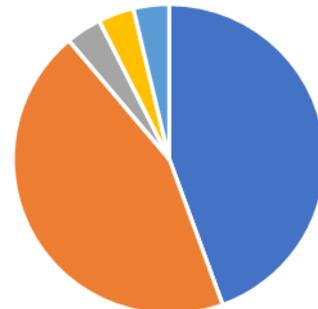
- Competition
- Relationship
- Social media followers
- Conference
- Seminar
- Discussion
- Verification
- Reputable Journal
- Curiosity

Accessing



- Online Access
- Online and Offline Access
- Interaction
- Relationship

Differentiating



- Verification
- Substance of Information
- Factual Information
- Information Grouping
- Underline sentences

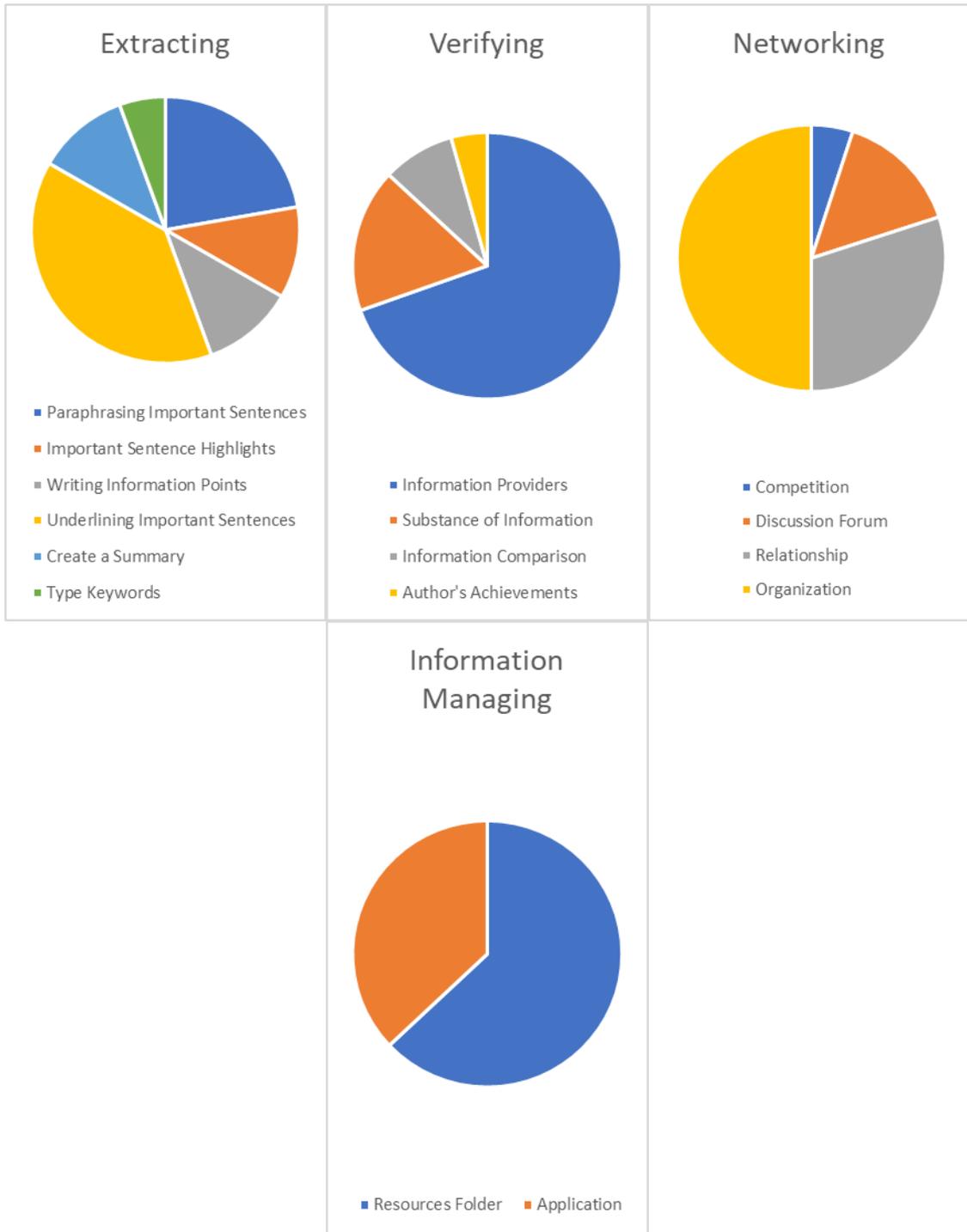


Diagram 4.1. Percentage of the constructive aspects of each information-seeking elements

Diagram 4.1 presents the percentage of constructive aspects of each information-seeking element that are capable to be the cause of the differences in each information-seeking pattern that was carried out by 2019 UM Outstanding Students. The arrangement of the information-seeking behavior pattern is presented in Table 4.4

Table 4.4. The Elements Arrangements of Each Pattern in the Seeking Information Behavior of 2019 UM Outstanding Students

The pattern of-	Pattern Arrangement (Element) Of Information Search Behavior						
1	<i>Starting</i>	<i>Verifying</i>	<i>Networking</i>	<i>Differentiating</i>	<i>Extracting</i>	<i>Chaining</i>	<i>Browsing</i>
2	<i>Starting</i>	<i>Verifying</i>	<i>Differentiating</i>	<i>Extracting</i>	<i>Chaining</i>	<i>Browsing</i>	<i>Monitoring</i>
3	<i>Starting</i>	<i>Verifying</i>	<i>Differentiating</i>	<i>Extracting</i>	<i>Chaining</i>	<i>Browsing</i>	<i>Monitoring</i>
4	<i>Starting</i>	<i>Verifying</i>	<i>Differentiating</i>	<i>Chaining</i>	<i>Browsing</i>	<i>Monitoring</i>	<i>Accessing</i>
5	<i>Starting</i>	<i>Verifying</i>	<i>Differentiating</i>	<i>Information</i>	<i>Managing</i>	<i>Monitoring</i>	<i>Chaining</i>
6	<i>Starting</i>	<i>Verifying</i>	<i>Differentiating</i>	<i>Extracting</i>	<i>Browsing</i>	<i>Monitoring</i>	<i>Accessing</i>
7	<i>Starting</i>	<i>Verifying</i>	<i>Differentiating</i>	<i>Extracting</i>	<i>Browsing</i>	<i>Monitoring</i>	<i>Networking</i>
8	<i>Starting</i>	<i>Verifying</i>	<i>Differentiating</i>	<i>Browsing</i>	<i>Monitoring</i>	<i>Accessing</i>	<i>Networking</i>
9	<i>Starting</i>	<i>Verifying</i>	<i>Differentiating</i>	<i>Browsing</i>	<i>Monitoring</i>	<i>Networking</i>	<i>Accessing</i>

Table 4.4 above presents the arrangements of the elements of each pattern in seeking the needed source of information that were carried out by 2019 UM Outstanding Students. The arrangement pattern was obtained from the analysis of the informants' answers related to searching needed information during the interview process. The questions were asked to the informants in the sequence based on the order in the information-seeking elements. This way, the order and the direction of the informants' answers can be analyzed.

There are nine different patterns of information-seeking behavior that were carried out by 2019 UM Outstanding Students. The information-seeking behavior elements in these patterns were carried out randomly or not in order. There are 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.

The difference in information-seeking behavior patterns shown by 2019 UM Outstanding Students was due to the different information needs that were possessed by these students, the different skills of each student in tracing information sources, the different disciplines occupied by each of these students, and the rapidly developing information source search facilities. Therefore, the differences in information-seeking behavior patterns have implications towards each of the 2019 UM Outstanding Students' achievements and towards their library visits intensity

According to the nine patterns of information-seeking behavior by 2019 UM Outstanding Students, there are several external and internal factors which encourage the activity of information seeking that are generally carried out at the starting element stage.

Table 4.5 Factors affecting differences in the Information Seeking behavior pattern of 2019 UM Outstanding Students

Internal Factors	External Factors
1. Curiosity	1. Peers
2. The absence of an idea	2. Lecturer
	3. Communication forum (discussion)

Internal and external factors are important aspects of information-seeking activities. Curiosities, the existence of ideas, and the searching strategy are the internal factors or the self-motivation in information-seeking activities. Self-motivation arises in Outstanding Students because they are aware of the importance of information sources in supporting the learning and creative process. Information awareness is a state in which the individual feels that he needs and wants to understand information, and feels the next urge of knowing what actions will be taken to fulfill that information need and understand it [4].

That self-awareness is a part of the Outstanding Students' internal information-seeking behavior. Apart from the theory of information-seeking behavior, there is an explanation related to human behavior which says that in general, human basically wants to get information. Some examples are when someone is paying attention to the weather forecast, deciding to visit another city, finding out about vacation schedules, and buying airplane tickets. That kind of action is included in the activities of finding, needing, selecting, and using information [3].

Information-seeking behavior, if explained according to the previous statement, can be elaborated as a person's effort, with their respective methods, to obtain the information that they currently need. If the needed information has been obtained, that person will reproduce or recycle the information by producing new information. Those 2019 UM Outstanding Students are academics who are thirsty for information for the benefit of their learning and creative process.

Each of these Outstanding Students has their own behavior in finding the information needed which then forms a different pattern that shows the characteristics of each Outstanding Students in seeking information. However, there are also similarities in the information-seeking patterns among those students, especially in the starting element. This element is manifested by the existence of an initial action or response taken by the students to trace the needed information. In the theory of information seeking behavior by Meho and Tibbo, the starting element is the initial activity of information search to obtain literature reviews and collect primary and secondary materials. The Starting element is also the initial activities of a particular work which aimed to find the topic that is recognized as a method to compile the information that has been planned before [10].

The starting elements by David Ellis can be explained essentially like finding the topic of information and the information of the compiling methods that have been planned before. 2019 UM Outstanding Students implement the starting element by organizing the strategy to search for the desired information as a response to their sense of curiosity that arises several new ideas. These curiosities and ideas are the forms of internal factors of motivation in oneself (intrinsic motivation) as they are able to trigger the urge and enthusiasm to search for the information needed on the basis of personal initiative or awareness.

Curiosity can generate new ideas to find the topic of information needed. These new ideas can be found by an individual who thinks hard or critically. The act of critical thinking is a form of an individual's effort in making decisions to solve a problem. Critical thinking in its implementation is skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information generated by observation, experience, reflection, reasoning, or communication [5].

Those aspects form the action concept in the starting elements based on internal factors. This concept is illustrated in the following chart below

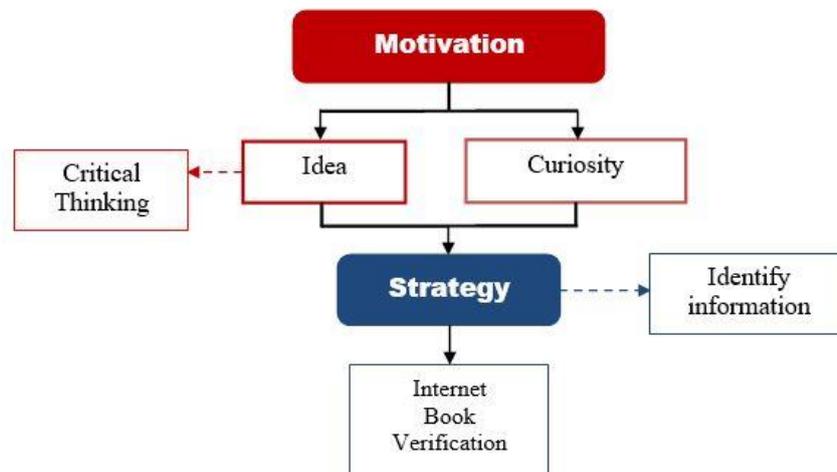


Chart 4.1. The concept of action in the starting element based on internal factors

Motivation is the core activity in the starting element that was carried out by outstanding students. Motivation consists of curiosity and ideas to make decisions and overcome problems. Critical thinking is an effort by those outstanding students to create innovative and solutive ideas. With the existence of these two points, outstanding students formulate a plan or strategy in exploring sources of information to fulfill their learning needs and creative process.

Next, the motivation within the Outstanding Students' selves was strengthened by the existence of external factors such as peers, lectures, and scientific communication forums (workshop/seminar). The first external factor comes from peers who can provide some support to the Outstanding Students in information-seeking activities. The support can be in the form of excellent information-seeking skills that can help the Outstanding Students to find the information sources that are relevant and accurate. The support can also in the form of a supportive atmosphere that is created by peers so that the outstanding students can have a good learning environment that enables them to explore their creativity in seeking information like holding group discussions or scientific competitions.

The second external factor is a lecturer who is the role model for Outstanding Students in learning and being productive. Lecturers have the role of motivators for Outstanding Students in tracing information sources accurately and relevant, as mentors in college, and as role models in recommending sources of information needed. The role of a lecturer can be realized by always providing direction and guidance to Outstanding Students both during lectures in class and in the creative process of making scientific works. The role of the lecturer in providing direction and guidance in exploring sources of information is accompanied by objectives as the achievement targets for outstanding students. The objective is determined so that the search for information sources is always focused on the information needed.

Scientific forums can be the third external factor for outstanding students in tracing the sources of information needed. Scientific forums in the form of workshops or seminars attended by students with various backgrounds can become the arena for the students to improvise in conveying ideas and the place for them to collaborate with other students. Not only limited to workshops or seminars, but scientific forums can also be in the form of discussions and even competitions.

External factors, which are factors that strengthen internal factors, have implications towards the strategies planned by Outstanding Students. The strategy to be implemented by outstanding students involves assisting tools such as information sources providers from digital media (internet) and printed media. These media make it easy for the students to get the desired sources of information. However, Outstanding Students need to verify the credibility of information sources in order to be able to obtain the accurate and relevant information.

The strategy is then followed up with further actions. This action is a response from the starting element which includes actions taken on the chaining element, the browsing element, the monitoring element, the accessing element, the differentiating element, the extracting element, the verifying element, the networking element, and the information managing element. This action is the real action of outstanding students in identifying the references used in information sources, exploring primary and secondary sources of information, controlling sources of information to obtain the latest information, selecting sources of information selectively, interacting with other people with the intention of getting the information needed and establishing relationships, and also managing both digital and printed sources of information that have been obtained,

These actions were carried out to obtain and understand the needed information holistically so that the learning resources owned by outstanding students are broad, controlled, and able to become a source of reference in making papers with in-depth discussion. The goal or the final target of 2019 UM Outstanding Students in searching for information is to gain the appropriate knowledge to be used in making decisions.

5. Conclusion

According to the results of this study, it can be concluded that there are internal and external factors that cause the differences in the information-seeking behavior pattern of 2019 UM Outstanding Students. Internal factors, or can also be called self-motivation, appear at the initial stage of information search. Self-motivation consists of several elements such as curiosity and ideas. This curiosity resulted in a strategy for 2019 UM Outstanding Students in obtaining the information needed. And on the other hand, the idea arose from critical thinking. Therefore, Outstanding Students need to strive in realizing these ideas by obtaining the required information materials. Then there are external factors that have the role of supporting the internal factors, such as peers, lecturers, and scientific communication forums (workshops/seminars).

6. References

- [1] Anwar, S. (2017). *Perilaku Mahasiswa Jurusan Ilmu Perpustakaan dalam Menyelesaikan Tugas-Tugas Mata Kuliah*. In *Fakultas Adab dan Humaniora UIN ALAUDDIN Makassar*. <https://doi.org/10.1017/CBO9781107415324.004>
- [2] Ati, S., Nurdien, Kistanto, & Taufik, A. (2014). *Pengantar Konsep Informasi, Data, dan Pengetahuan*. Kencana, 105.
- [3] Case, D. O. (2007). *Looking for Information: A Survey of Research on Information Seeking, Needs, and Behavior*. In *Journal of Chemical Information and Modeling* (Second, Vol. 53, Issue 9). Academic Press. <https://doi.org/10.1017/CBO9781107415324.004>
- [4] Deanawa, N. A. (2016). *Analisis Kebutuhan Informasi (Information need assesment) Lansia di Kota Surabaya*. *Adln_Perpustakaan Universitas Airlangga*, 12.
- [5] Gambrell, E. (2019). *Critical Thinking and the Process of Evidence-Based Practice*. Oxford University Press.
- [6] Hasan, H. (2016). *Perilaku Penelusuran Informasi Siswa SMP Negeri 4 Alla Kabupaten*

Enkerang (Issue June).

- [7] Huda, N. (2016). *Perilaku Pencarian Informasi Oleh Siswa SMK Triguna Utama dengan Menggunakan Model Theory of Reason Action*.
- [8] Juhaidi, A., & Syawqi, A. (2017). *Perilaku Pencarian Informasi (Information Seeking Behaviour) Guru Besar Iain Antasari Banjarmasin*. *Pustaka Karya: Jurnal Ilmiah Ilmu Perpustakaan Dan Informasi*, 5(10), 1. <https://doi.org/10.18592/pk.v5i10.1610>
- [9] Latifah, N. (2018). *Perpustakaan sebagai Sentral Servis Benih (Sumber) Informasi*. 1(2), 1–14.
- [10] Meho, L. I., & Tibbo, H. R. (2003). Modeling the information-seeking behavior of social scientists: Ellis's study revisited. *Journal of the American Society for Information Science and Technology*, 54(6), 570–587. <https://doi.org/10.1002/asi.10244>
- [11] Prezz, M. Du. (2008). Information Needs and Information-Seeking Behavior of Consulting Engineers: A Qualitative Investigation. In *University of South Africa* (Issue April).
- [12] Safitri, H. (2017). Perilaku Pencarian Informasi Mahasiswa Pascasarjana UHAMKA.
- [13] Suwandi. (2017). Literasi Abu-Abu dalam Perpustakaan. 11(01), 135–147.
- [14] Wilson, T. D. (2000). Human information behavior. *Informing Science*, 3(2), 49–55. <https://doi.org/10.1007/s12599-016-0458-9>

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