# Information-Seeking Behaviour of Darul Qur'an Mulia Islamic Boarding School Students in Determining Study Programs in Higher Education

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***Abstract***

*Obtaining information related to higher education is important in determining the study program experienced by final-year students of Islamic boarding schools (santri). This study aims to determine the level of the information-seeking behaviour of SMA Class XII students at the Darul Qur'an Mulia Islamic Boarding School in determining the study program in higher education. This study is descriptive research with a quantitative approach. A sample of 67 students was obtained from the population of 204 Class XII students at the Darul Qur'an Mulia Integrated Islamic Boarding School by using the Slovin formula. This study uses Kuhlthau's 1993 Information Search Process (ISP) Model. The findings revealed that most students had feelings, thoughts, and behaviours that were consistent with each stage of the Kuhlthau model, with Initiation scoring 3.27 (Very Good), Selection scoring 3.12 (Good), Exploration scoring 2.92 (Good), Formulation scoring 3.12 (Good), Collection scoring 3.06 (Good), and Presentation scoring 3.22. (Good). Students experienced all stages of the Kuhlthau model, particularly the Initiation stage, regarding their feelings, thoughts, and actions. At the exploration stage, students tend not to feel stopping the search and the inconsistency of information as in Kuhlthau's model. Overall, students' information -seeking behaviour was at a good level in deciding on study programs in higher education, earning a score of 3.11 on a scale of 2.52 to 3.27 (Good). The study's findings can be used to guide future research by extending the discussion of the variables that influence university students' study choices*

***Keywords:*** *Information seeking behavior, Kuhlthau model, Santri.*

**Abstrak**

Memperoleh informasi terkait perguruan tinggi merupakan hal penting dalam tahap penentuan program studi yang dialami santri tingkat akhir. Penelitian ini bertujuan untuk mengetahui tingkat perilaku pencarian informasi santri SMA Kelas XII Pesantren Terpadu Darul Qur'an Mulia dalam menentukan program studi di perguruan tinggi. Jenis penelitian adalah penelitian deskriptif dengan pendekatan kuantitatif. Populasi berjumlah 204 santri Kelas XII Pesantren Terpadu Darul Qur'an Mulia, dan sampel diambil dengan teknik *purposive sampling* rumus Slovin, sehingga diperoleh sampel 67 santri. Penelitian ini menggunakan Model *Information Search Process* (ISP) milik Kuhlthau 1993. Teori Kuhlthau memiliki enam tahap di antaranya *innitation, selection, exploration, formulation, collection,* dan *presentation*. Hasil penelitian menunjukan dari setiap tahapan model Kuhlthau, sebagian besar santri mengalami perasaan, pikiran dan aksi yang sesuai dengan model Kuhlthau, yaitu: *Initiation* memperoleh skor sebesar 3,27 (Sangat Baik), *Selection* memperoleh skor sebesar 3,12 (Baik), *Exploration* memperoleh skor sebesar 2,92 (Baik), *Formulation* memperoleh skor sebesar 3,12 (Baik), *Collection* memperoleh skor sebesar 3,06 (Baik) dan *Presentation* memperoleh skor sebesar 3,22 (Baik). Santri mengalami semua tahapan yang ada pada model Kuhlthau terutama pada tahapan *Innitiation*, baik secara perasaan, pikiran, dan tindakan yang dilakukan. Pada tahapan *exploration*, santri cenderung tidak merasakan perasaan menghentikan pencarian dan ketidakkonsistenan informasi sebagaimana dalam model Kuhlthau. Berdasarkan hasil penelitian, tingkat perilaku pencarian informasi santri dalam menentukan program studi di perguruan tinggi secara keseluruhan sudah di tingkat baik dengan memperoleh skor 3,11 pada skala interval 2,52 – 3,27 (Baik). Dari hasil penelitian dapat dilakukan penelitian selanjutnya dengan memperluas pembahasan faktor-faktor santri menentukan program studi di perguruan tinggi.

**Kata Kunci**: Perilaku Pencarian Informasi, Model Kuhlthau, Santri.

## INTRODUCTION

It might be difficult for students who have recently graduated from high school to choose universities and programs of study. The considerations are given to interests, abilities and other aspects outside qualifications are not insignificant (Saputro, 2017). Errors in this process could have a negative impact on students' futures as well as their education. Students must therefore obtain complete information about the college and consider the suitability between interests, passing grade standards, and new student admission quotas that align with students' abilities to avoid making a mistake when choosing the study program to enrol in.

Information is very important in reducing uncertainty in people by serving as input in problem solving, which can increase understanding to make decisions or develop plans (Case, 2007). To ensure that the search topic does not spread widely, it is important to prioritize needs when searching for information to make an immediate decision. Various types of information sources, including primary, secondary and tertiary sources, can be used by a person and adapted to meet his needs. This was later stated by Wilson with information behavior as a person's pattern of responding to information. (T.D. Wilson, 2006). Likewise, Ingwersen added by searching for information using information sources both primary, secondary and tertiary through an information retrieval system. (Ingwersen, 2005). Therefore, someone who wants to reduce uncertainty by choosing a source of information that suits his needs can effectively save time and cost in finding information.

For a variety of reasons, including to expand access to information and foster information literacy, different information seeking models have been developed. This model is continually changing, with various accents. The Kuhlthau model is a powerful example of a model. Kuhlthau discovered "general patterns" in tasks requiring learning and building through six phases, including initiation, selection, exploration, formulation, collection, and presentation, based on a number of longitudinal studies. As the user progresses through several stages, their thoughts, feelings, insecurities, and behaviors change and fluctuate. According to Kuhlthau, going through this process imparts to pupils the knowledge and abilities necessary to become information literate, including knowing "when and why one needs information, where to acquire it, and how to evaluate, use, and transmit it. The Kuhlthau model was then improved by Vakkari, who categorized its stages as the prefocus, focus formulation, and postfocus stages (Vakkari, 2001). Throughout a semester-long project, Vakkari observed students at three different

stages and found variations in relevance assessment, search strategies, phrases, and operators.

Students at boarding schools appear to have also gone through the experience described in Kuhlthau's paradigm. This is due to the informational needs of boarding students. Students will encounter a stage at the high school level of education (SMA), particularly in the third grade, where they must decide their future course of study, from college to the study program they select. To avoid making a mistake, Islamic boarding students should consider the suitability of their hobbies, the college's passing grade criteria, and new student admission quotas that suit their skills.

In general, Islamic boarding schools are the oldest Islamic educational institutions that play an important role in developing the energy of Islamic education within the national education system (Winarko, 2007) Santri has activities that depend on the learning schedule provided by the pesantren, so they have to manage time to access the information they receive. Regulations do not allow students to use personal electronic devices in the pesantren environment. The only internet access (wi-fi) that can be used daily is the school library computer. (Interview with Ustazah Veranita Rizal, 3 October 2020) Students in class XII, in particular, are permitted to use their respective gadgets for tutoring (Bimbel) three times per week from 13.30 to 15.00 under the teacher's supervision. Ustadz and ustazah, special Guidance Counseling teachers, counselling guidance classes teachers once a week, Internal Education Fair by alumni, and audiences universities by parties to invite from campuses in Indonesia are additional sources of information that students can use to determine study programs at universities. (Interview with Ustazah Saadah, May 3, 2021)

There has been much discussion about the research on santri and pesantren. Mustas addresses how students create information behaviour, specifically how literacy develops when students develop information behaviour and demonstrates that students are equally conservative (Mustas, 2021). By joining the generation that is accustomed to using information technology to obtain information in cyberspace, Santri has adapted to the changing times in the digital age. The process of implementing multiliteracy of information and policy was founded on the idea of "Al-muhafadhotu 'ala qodimis sholih wal akhdzu bil Jadidil Ashlah," according to research by Widyasari et al., and a curriculum that assisted students in adapting to the advancement of the digital age (Widyasari et al., 2020). Issues about studies on students' health-related habits also exist. More specifically, Pesantren Tebuireng Jombang students' dental and oral health behaviours are influenced by social support. In this survey, Bramantoro found that most pupils prac-

ticed appropriate dental and oral hygiene habits. Additionally, most students received substantial instrumental, emotional, and informational support (Bramantoro et al., 2020). The same research was conducted by Bajari et al. on students' opinions of website apps made to assist in educating students about clean and healthy living practices and opportunities to communicate with physicians and teachers through online discussion forums (Bajari et al., 2021). Additionally, the study program recommendation system is a computer-based information system that intends to give high school pupils an overview or recommendation of study programs based on their interests or character from testing utilizing the Case-Based Reasoning approach (Lutfiyani & Arifin, 2019). In order to help universities to determine the concentration of students who will supply or order the alternatives to be picked, study program determination can also be done with the use of models. (Oktavia & Madyatmadja, 2018)

By prioritizing the information required at this time (information need) to decide on study programs in higher education, this information requirement leads to a search for information about students.Using Kuhlthau's 1993 theory, this study looks at students' affective, cognitive and psychomotor aspects in information search at six stages: initiation, selection, exploration, formulation, collection and presentation. Students' behaviour can be shown in the form of skills and the embodiment of students' attitudes when they respond to information from various information sources, so that information is collected and can help them determine their study program in higher education. Therefore, this study aims to determine the information seeking behavior of the Class XII students of the Darul Qur'an Mulia Islamic Boarding School in determining the study program in higher education.

**METHODS**

This study employs a quantitative approach and a descriptive research design. A questionnaire with 55 statement questions was used to collect the study's data, which was subsequently given to 67 samples drawn from 204 populations of Santri Class XII SMAIT Darul Quran Mulia. The samples were calculated using the Slovin algorithm. Then, using six indicators from the Carol Kuhlthau 1993 Model, including initiating, selecting, exploring, formulating, collecting, and presenting information, as well as paying attention to affective, cognitive, and psychomotor aspects at each stage, the pattern of information seeking for students was examined. According to Kuhlthau's model, affective is a crucial component of information seeking for students in high school and college that is influenced by their sense of self-worth, aspirations, and interests (Fitzgerald,

2018). The same is true for the cognitive component, where a person can better know how the therapist is currently seeking information thanks to the intelligent system and information pertinent to their needs. It is a crucial action to increase users' information demands and encourage information seeking behavior (Akbari et al., 2020). There are four response options for each question: strongly agree (4), agree (3), disagree (2), and disagree (1). The data is then calculated using an interval scale, with the results being interpreted as Very Good if the score is 3.28 to 4.03, Good if it is 2.52 to 3.27, Not Good if it is 1.76 to 2.51, and Not Very Good if it is 1.00 to 1.75.

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## RESULTS AND DISCUSSION

Questionnaires distributed to 67 samples received different scores for each of the 55 questions given. Following are the results of the phases of the search and generally based on each question's scores:

### *Initiation*

At the initiation stage, students experience an affective feeling of anxiety when they realize the problems they face, namely the determination of the study program at the university (3,34). Affective feelings felt arise from thoughts about concerns about how to gather information about universities (3.51), which colleges to choose (3.74) and preparation/how to enter them (3.66). These concerns encourage students to seek information when they are aware of the problems they face (3,68).

### Tabel 1. Initation

| No. | Statement | Aspects Psychological | Score | Interpretation |
|---|---|---|---|---|
| 1 | Conduct information searches when aware of the problems encountered (determine the study program in Higher Education) | Affective (Assignment) | 3.68 | Very good |
| 2 | Feeling anxious when realizing the problem | Affective (Feeling) | 3.34 | Very good |
| 3 | Thinking about the college to be chosen | Cognitive (Mind) | 3.74 | Very good |
| 4 | Thinking about the preparations that will be made to enter college | | 3.66 | Very good |
| 5 | Thinking about how to collect information related to the desired university | | 3.51 | Very good |
| 6 | Making a strategy in the form of concepts in conducting information retrieval | Psychomotor (Strategy) | 3.07 | Good |
| 7 | Directions of pesantren in finding information related to higher education | | 3.25 | Good |
| 8 | Searching for information independently in the school library | | 2.12 | Not good |
| 9 | Discussion with family/relatives | Psychomotor (action) | 3.34 | Very good |
| 10 | Consultation with ustadz/ah or counseling guidance teacher (BK) | | 3.12 | Good |
| 11 | Discussion with friends/ alumni | | 3.1 | Good |
| | **Total** | | **35.93** | |
| | **Average Score** | | **3.27** | |

The initial psychomotor action or reaction they did to search for information related to higher education was to make a strategy in the form of a concept in the search for information (3.07). Afterward, the students conduct counseling or discussions with many parties such as family/family members (3.34), ustadz/ah or counseling guidance teachers (BK) (3.12), and friends/alumni (3.10). Pesantren also contributes to giving direction to students to find information related to higher education (3,25). However, very few students do independent information searches in the school library (2,12).

*Topic Selection*

Selection criteria for the sources of information they seek that are easy to obtain and accessible at any time, reliable, up-to-date and complete. In searching for this information, students have the intensity to take the time to regularly search for information about universities (3.36), with quite a lot of time they have to search for information about universities (3.27). In terms of the type of information sources used by the majority of students are electronic information sources (3.67). In contrast, information sources rarely used by students are printed information (2.46), which may not meet the requirements. In addition, they also usually use information from interpersonal or other individuals, such as CC teachers, through Telegram discussion groups (3.15) and information about activities or exhibitions of Higher Education Audiences and Campus Alumni forums of Islamic residences (2.85).

**Tabel 2.** Topic Selection

| No. | Statement | Psychological Aspects | Score | Interpretation |
|---|---|---|---|---|
| 1 | Take the time to look for information related to higher education | | 3,36 | Very good |
| 2 | Have enough time to find information | Psychomotor (Strategy) | 3,27 | Good |
| 3 | Utilization of printed information sources | | 2.46 | Not good |
| 4 | Utilization of electronic information sources | Psychomotor (Action) | 3.67 | Very good |
| 5 | Utilization of interpersonal information sources (other individuals, such as BK teachers through Telegram Discussion Groups) | | 3.15 | Good |
| 6 | Utilization of information sources through activities or exhibitions (Audience College and Campus Alumni Forum) | | 2.85 | Good |
| 7 | Use of information sources that are easy to obtain and accessible anytime | Cognitive (Mind) | 3.6 | Very good |
| 8 | Utilization of reliable, *up to date*, and complete | | 3.58 | Very good |
| 9 | Open to information provided by pesantren only | | 1.78 | Not good |
| 10 | The first information needed is job prospects | Affective (tasks) | 2.81 | Good |
| 11 | The first information needed is how to enter college | | 3.42 | Very good |
| 12 | The first information needed is the cost Education | | 2.75 | Good |
| 13 | The first information needed is Quality of Education | | 3.43 | Very good |
| 14 | Feeling optimistic about determining the study program in per high teacher | Affective (Feeling) | 3.49 | Very good |
| | **Total** | | **43.62** | |
| | **Average Score** | | **3.12** | |

The information sources used by students are easily obtained and accessible at any time (3.60), reliable, up-to-date and complete (3.58). Santris are very optimistic that they can find the information they need without relying solely on the information provided by the pesantren (1,78). Students determine general topics about the information they need at the Selection stage. The majority of students conduct extensive information searches ranging from the quality of education (3.43), how to enter college (3.42), career prospects (2.81) and cost of education (2.75). At this stage, students begin to feel optimistic and confident in affective responses, encouraging them to continue searching for information about determining study programs in higher education (3,49).

### *Prefocus exploration*

**Tabel 3.** Prefocus exploration

| No. | Statement | of Psychological Aspects | Score | Interpretation |
|---|---|---|---|---|
| 1 | Searching for additional information that is more focused on problems | Affective problems (Task) | 3,55 | Very good |
| 2 | Adding as much information as possible to strengthen the information that has been obtained | Cognitive (Mind) | 3,57 | Very good |
| 3 | Difficulty determining the information more needed | | 2.36 | Not good |
| 4 | Information obtained is inconsistent and confusing | Psychomotor (Strategy) | 2,13 | Not good |
| 5 | Additional information obtained only from pesantren | | 1.76 | Not good |
| 6 | Additional information sought about acceptance quotas, *passing grades*, and *try out* | Psychomotor (Action) | 3.25 | Good |
| 7 | Additional information sought about courses, campus environment, and student or alumni testimonials | | 3.33 | Very good |
| 8 | Feeling more optimistic and confident after receiving additional information | Affective (Feelings) | 3,4 | Very good |
| 9 | **Total** | | **23.35** | |
| | **Average Score** | | **2.92** | |

Additional information required by the majority of students on the questionnaire is about the course, campus environment and testimonials from students or alumni of the study program at the college they want (3,33). In addition, students also need information about acceptance quotas, pass marks and trials in the study program they want (3.25) and about courses, campus environment and student or alumni testimonials of the study program at the college I want. (3,33). Santri has

no problems determining what information they need more (2.36), and the information students get is consistent and not confusing (2.13). It also creates a sense of optimism for students to get the information they need without giving up and not relying on additional information obtained only from the pesantren (1,76). Santri look for more information that focuses on their problems (3.55) by adding as much information as possible to strengthen the information obtained (3.57). The affective reactions that the students felt at this stage were optimistic and confident (3,40). It is contrary to what Kuhlthau said, that a person at this stage is described as feeling increasing uncertainty, difficulty determining the additional information needed, and inconsistent information obtained.

### *Focus Formulation*

**Tabel 4.** Focus Formulation

| No. | Statement | Psychological Aspects | Score | Interpretation |
|-----|-----------|----------------------|-------|----------------|
| 1 | Understand the information collected before making a decision | Psychomotor (Strategy) | 3,46 | Very good |
| 2 | Formulate the information found to be more focused | Psychomotor (Action) | 3,24 | Good |
| 3 | Formulating information will help to get focus in finding information | | 3.36 | Very good |
| 4 | Takes only the information needed | Cognitive (Mind) | 2.75 | Good |
| 5 | Only uses up-to-date information | | 2.43 | Not good |
| 6 | Feelings of confidence will get the information needed to determine the course of study needed to determine the program of study | Affective (Task) | 3.3 | Good |
| 7 | Feeling more optimistic and confident after formulating information according to needs | Affective (Feeling) | 3.27 | Good |
| | **Total** | | **21.81** | |
| | **Average Score** | | **3.12** | |

Before making a decision, students act during the formulation stage by understanding the information they have learned (3,46). Then, in order to concentrate on the search results, the students organize the data they have discovered (3, 24). (3,36). Their method of gathering the information they have gotten is based on their cognitive reactions, which lead them to take only the information they require (2.75), rather than just using the most recent information (2.43). This implies that students gain from relatively dated knowledge yet still functional. Students are assured that they will receive the information they require to choose their study program once it has been developed after the material has been developed (3,30). The conclusion can be derived from the students' affective reactions at this point are more upbeat and self-assured in selecting the study program in higher education (3,27).

### *Information Collection*

**Tabel 5.** Information Collection

| No. | Statement | Psychological Aspects | Score | Interpretation |
|---|---|---|---|---|
| 1 | Grouping information based on the quality of information | Psychomotor (Strategy) | 2.94 | Good |
| 2 | Grouping information based on the source of information | | 2.82 | Good |
| 3 | Storing information in memory | | 2.78 | Good |
| 4 | Storing information in digital media (*computer files, cloud*, etc.) | Psychomotor (Actions) | 3.18 | Good |
| 5 | Storing information in physical media (notes, files, etc.) | | 3.01 | Good |
| 6 | Grouping information makes information obtainable clearer | Cognitive (Thought) | 3,27 | Good |
| 7 | Feeling more optimistic and confident after classifying information | Affective (Feeling) | 3,39 | Very good |
| | **Total** | | **21,39** | |
| | **Average Score** | | **3.06** | |

Students group the data they keep in memory (2.78), digital media (computer files, the cloud, etc.) (3.18), and physical media (notes, files, etc.) (3, 01) during the collection stage. The category is based on the information's quality (2.94) and the kind of information source (2.82). Santri views grouping information as a tactic for improving the clarity of the information they receive (3,27). To reach the following stage, which is presenting information, students feel more upbeat and confident after completing this one (3,39).

### Information Presentation

**Tabel 6.** Information Presentation

| No. | Statement | of Psychological Aspects | Score | Interpretation |
|---|---|---|---|---|
| 1 | Starting to determine the study program at the college to be chosen | Affective (task) | 3,36 | Very good |
| 2 | Feeling satisfied with the results of the search for information that has been done | Affective (Feeling) | 3,25 | Good |
| 3 | Planning to choose a study program in college based on the suitability of interests and talents possessed | | 3,54 | Very good |
| 4 | Planning to choose a study program in higher education based on the request and support of parents, teachers, relatives and friends | Cognitive (Mind) | 2.73 | Good |
| 5 | Planning to choose a study program in higher education based on the suitability of the material and environmental conditions | | 2.82 | Good |
| 6 | Planning to choose a study program in higher education based on the subjects to be taught and the job prospects offered in the future | | 3.13 | Good |
| 7 | material preparation | Psychomotor (Strategy) | 3.31 | Very good |
| 8 | Preparing mental preparation | | 3.61 | Very good |
| | **Total** | | **25.75** | |
| | **Average Score** | | **3.22** | |

At the presentation stage, students feel satisfied with the results of their search for information (3,25). The information search they did fulfil their information needs and solved the problems they experienced by allowing them to begin to determine the direction of study in higher education (3,36). Based on the questionnaire questions asked, the majority of students would choose a program of study in higher education based on the suitability of their interests and talents (3.54), based on the courses to be offered and job prospects (3.13 ), suitability of materials and environmental conditions (2.82) and based on the request and support of parents, teachers, family and friends (2.73). They did the preparation based on the questionnaire results, namely mental preparation (3.61) and material (3.31). Of the 67 students who are respondents of this study, 13 of them will choose a psychology study program, 7 of them will choose a management study program, and 6 of them will choose a medical study program and other study programs.

Overall score Recapitulation of information seeking stages

**Table 7.** Overall score Recapitulation of information seeking stages

| No | Stages | Score | Interpretation |
|----|--------|-------|----------------|
| 1. | Initiation | 3,27 | Good |
| 2. | Selection | 3,12 | Good |
| 3. | Exploration | 2,92 | Good |
| 4. | Formulation | 3,12 | Good |
| 5. | Collection | 3,06 | Good |
| 6. | Presentation | 3,22 | Good |
| **Total Score** | | **18,69 / 6** | |
| **Average Score** | | **3,11** | Good |

Based on the summary table of the information seeking stages above, the average score achieved is 3.11 on an interval scale of 2.52-3.27. It can be interpreted that students who are said to have experienced well in the Kuhlthau model, in the form of feelings, thoughts and feelings action in the search for information. Initiation achieved the highest score of 3.27 with intervals of 2.52-3.27, so the average score was in a good category. On the other hand, the lowest score was obtained in the exploration stage, which was 2.92 on an interval scale of 2.52-3.27, but this statement was still in the excellent category. Furthermore, the research results will be discussed along with the broader implications for the search system. There are many statements in each stage of information seeking, which makes each stage get its score. The tendency of students' behaviour in information searching to determine study programs at universities is evidenced in the form of numbers from the results of the calculation of the lowest and highest questionnaire answers at each stage. The following are the details of the discussion based on the stages:

### Initiation Stage

In the first phase or initiation phase, students have concerns when they realize their problems with information needs. As a solution to their concerns, when they realized their problems, students sought information to determine the study program at the university. It is consistent with what Kuhlthau said in Chirag Shah, that initiation occurs when the user becomes aware of their lack of knowledge or understanding. Uncertainty and fear are common, and the mind will focus on pondering and understanding the problem (Shah, 2017, p. 195). At this point, statement No.3 scored the highest and indicated that the students were worried about which university to choose, with an average score of 3.74. Most students think about the college they will choose. It can be said that this is the

biggest fear at the initiation stage. From that fear arose an initiative to seek the information they needed, commonly called the information need. The highest score is Question no. 3, namely, Think of the College to be chosen (3,74)
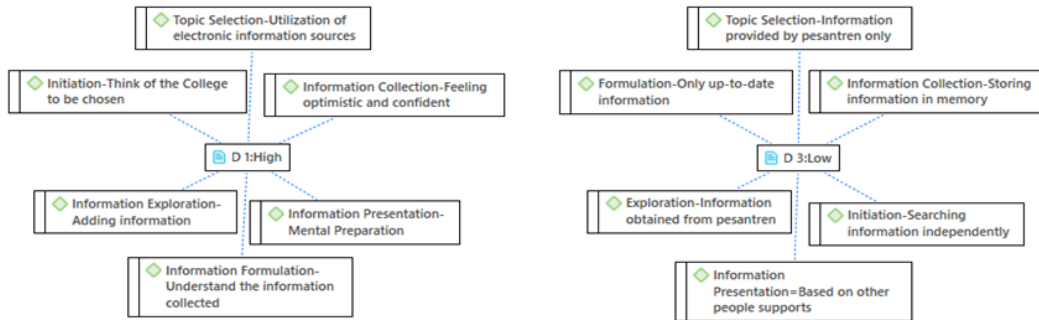
**Figure 1.** High and low scores in each step of the information search process

In this initiation stage, students take various actions; as Kuhlthau said, the actions or methods carried out at this stage usually involve discussing which topics to look at or which topics to approach (C. Kuhlthau, 1993, p. 42). The statement about using the school library to independently search for information in determining students' study programs in higher education is not good. It is proven in the average score of question no. 8 is 2.12. The score on this statement is on an interval scale of 1.76 – 2.51, so the average score is in a bad category. Doing an independent search in the school library received the lowest score at the initiation stage. Searching for information in the library is usually common because the library as a center for teaching and learning activities in schools provides facilities and a very long service time. However, students more often take action in the form of conversations with family/relatives and conversations with friends/alumni, although most of these can only be found outside the pesantren. At the initiation stage, the overall average score achieved was 3.27 (Good), this stage has the highest average score compared to other stages. Santri experiences what is said in the Kuhlthau model, especially during the initiation stage, in feelings, thoughts and actions. It is likely to happen because students are very anxious about the problems they face before they try to find the necessary information about the college they will later choose.

### Topic Selection

At the Selection stage, the overall average score was 3.12 (Good), which proves that the students experienced what was said in the Kuhlthau model, both in feelings, thoughts and actions taken. During Topic Selection, you only have to choose the general topic to search for or the approach used (C. Kuhlthau, 1993,

p. 42). At this stage, students use an approach by selecting information sources with criteria that are easily accessible and can be accessed at any time, reliable, up-to-date and complete. It states that students have their criteria for gathering information by looking at the criteria for the sources of information used. With these criteria, students tend to criticize any information obtained so that there are no obstacles to finding information. The ability to assess the right source of information means that the santri is not closed and is not only open to the information provided by the pesantren, which is in question no. 20, but the average score achieved is also 1.78. This statement achieved the lowest score at the selection stage, on an interval scale of 1.76 – 2.51, so the average score was in a bad category.

According to Wilson, there are a variety of obstacles relating to the characteristics of information sources, such as access (lack of easily accessible information sources or even high costs), credibility (some sources of information obtained are not reliable in terms of quality and accuracy), and information channels (the more palatable form of communication channel) (T. Wilson, 1997, p. 562). One may say that the santri refused to admit that they were just interested in the information provided by the pesantren. This can show that learners are tenacious in their pursuit of information when making academic decisions at institutions.

Students report that some of the information sources they use and that satisfy the criteria they have are electronic sources of information with a total score of 3.67 on a scale ranging from 3.28 to 4.03, placing the statement score No. 15 in the very good category. This information was gathered during the topic selection process using the criteria of information sources that students use. This score is the highest score in the selection stage. It states that with limited time to access electronic resources, students remain dominant in using them to find information and determine university study programs.

After completing the Selection stage, the students admitted that they felt more optimistic about continuing to search for information to determine the study program at the university. According to what Kuhlthau stated, feelings of uncertainty often turn into optimism after topic selection is made, and there is readiness to start searching (C. Kuhlthau, 1993, p. 42). This statement achieved an average score of 3.49. The score on this statement is on an interval scale of 3.28 – 4.03, so the average score is in the excellent category.

### *Prefocus exploration*

Exploration the overall average score achieved is 2.92 (Good), which proves that

students experience what is said in the Kuhlthau model, both in feelings, thoughts and actions taken. However, this stage achieved the lowest overall mean score compared to the other stages.

The exploration stage in the Khulthau information search process is the stage where students look for additional information to find focus on the information search they are doing. The average score achieved is 3.57. The score of the statement is on an interval scale of 3.28 – 4.03, in the very good category. The statement received the highest score in the exploration stage. According to Kuhlthau, the task in the exploration step is to examine the information from general topics to increase personal understanding. Thoughts are centred on orientation and sufficient information about the subject to form a personal focus or point of view (C. C. Kuhlthau, 1991, p. 366). At this stage, students are not looking for general topics that are carried out during the selection stage, but topics that are focused on their problems, such as acceptance quotas, pass marks, tests, courses, campus environment and testimonials from students or alumni in the desired study program.

Santri are also optimistic to get information related to the study program they will choose by not giving up on getting additional information by not only receiving it from pesantren. This can be proved by the data from statement no. 30 that the additional information that students only get from the pesantren only gets an average score of 1.76 on an interval scale of 1.76 – 2.51 (not good). This statement scored the lowest in the exploration stage. It is contrary to what Kuhlthau said: at this stage, a person usually feels hopeless and wants to stop searching for information. In Kuhlthau's model, this stage is often said to be the most challenging process due to feelings of confusion. Uncertainty often increases in this stage due to the discovery of information that is unsuitable, inconsistent and does not fit the previous concept ( Widyastuti, 2016). , p. 59). Kuhlthau also reveals that the inability to reveal exactly what information is needed makes communication between the user and the system difficult (C. Kuhlthau, 1993, p. 46).

This exploration stage achieved the lowest mean score compared to the other stages because neither statement was justified in this study. Research to get students has no problems determining what information is more needed, and the information tends to be consistent and not confusing. This statement can be proven by the data obtained by the statement that students struggle to determine the information they need more and achieve an average score of 2.36. Next is the statement that the information students get is inconsistent and confusing, which achieves an average score of 2.13. The scores on these two statements are on an

interval scale of 1.76 – 2.51 so the average score is in a bad category. Upon discovering new information that complements the previously sought-after information topic, the students said that they felt more optimistic and confident in determining the study program at the university. The average score achieved was 3.40 on an interval scale of 3 .28 - 4.03 (very good).

### *Focus Formulation*

The Formulation stage achieved an average score of 3.12 (Good). It proves that students act by feeling, thinking and taking actions as stated in the Kuhlthau model. Focus formulation or formulation is the fourth stage of information search on the Carol C. Kuhlthau model carried out by class XII students of SMAIT Darul Qur'an Mulia in determining the study program at the university. This stage is the stage where students try to focus on the information they have acquired in the previous stages. The students' efforts to focus the information they find are to re-understand the information gathered. According to Kuhlthau, the strategy for choosing a specific concentration from a general topic is to read and reflect on notes with various themes, discuss and write down their ideas. Topics become more personal during this stage (C. Kuhlthau, 1993, p. 47). The statement that received the lowest score in the exploration stage was the statement of the santri who does not only use the latest information. It can be interpreted that students formulate information by taking the latest information as well as old information to support other information obtained and taken into account. Another attempt students made to formulate information is to take only the information they need from the information they have. Santri also feel more optimistic and confident after formulating information according to their needs, in the fourth stage of Kuhlthau's ISP model.

### *Information Collection*

 Collection Stages achieved an overall average score of 3.06 (Good). It proves that students act by feeling, thinking and taking actions, as stated in the Kuhlthau model. The task to be done in the gathering stage is gathering information related to the topic focused (C. Kuhlthau, 1993, p. 49). Grouping information makes the information students have acquired more precise for re-reading and makes it easier to make decisions. Statement No. The 46 achieved the highest score in the collection stage, amounting to 3.27 on an interval scale of 2.52-3.27 in the good category.

According to Kriklass in Donald O. Case, information-gathering activities are related to the form of memory or physical form presented in the form of

personal files or other storage mechanisms (electronic media or online) (Case, 2007, p. 124) ). Students' statements about storing the information they acquired in memory scored the lowest at the collection stage. It can be proven by the results of the data from the statement which obtains a score of 2.78 on an interval scale of 2.52-3.27 in the good category. Santri more often stores their information in digital media (computer files, cloud, etc.) and physical media (notes, files, etc.). Memory can be lost and can fade over time. Memory is also not in physical form, so it cannot be read using the sense of sight. Statement No. This 43 scored the lowest in the collection stage but was still in the good category. According to Preben Hansen, users in the Khulthau ISP model will experience negative affective states such as uncertainty, anxiety or frustration at various stages of the search process. Then positive affective states can play a major restorative role, stemming from certain affective experiences (Hansen et al., 2015, p. 195). The experience of affective responses that give students a sense of optimism is obtained from the second stage of information search Selection, Exploration, and Formulation to the Collection stage. After doing the Gathering stage, the students felt more optimistic and confident after grouping the information. The statement achieved a mean score of 3.39 on an interval scale of 3.28 - 4.03 (very good). After this stage, students will enter the presentation stage or information presentation, which is the stage of preparing to present findings or use them to make decisions later.

### Presentation

The Presentation Stage achieved an overall average score of 3.22 (Good). It proves that students act by feeling, thinking and taking actions, as stated in the Kuhlthau model. Presentation, namely the stage where there is no feeling of re-lief, and a feeling of satisfaction when the search goes well or disappointment when the opposite happens. The task at this stage is to complete the search and prepare to present or use the findings (C. Kuhlthau, 1993, p. 49). The students also feel this after they have completed the previous stages of the search for information. Santri is satisfied with the results of the information done and can start to determine the study program at the college they will choose.

There are things that students must prepare before taking a study program at a particular university. Mental preparation is the statement that receives the highest score at this stage. Statement No.55 achieved an average score of 3.61 on an interval scale of 3.28 - 4.03 so the average score is included in the very good category. The use of information is identified as an action that occurs after an information search has been performed or information has been obtained or received

(Mishra et al., 2015, p. 3). However, information is only a support for individuals to make decisions. The use of information carried out by students is to choose a study program at a university based on the suitability of their interests and talents, which is predicted as a conclusion from the information they have evaluated.

The statement that gets the lowest score in the presentation stage is the statement that the santri will choose a study program at the university based on the request and support of parents, teachers, family and friends. The average score of the statement obtained is 2.73, on an interval scale of 2.52-3.27, the average score in the good category. However, the statement is still in the good category, which means that the decision to choose a study program at a university based on requests for support from parents, teachers, family and friends is the final choice of students after they have considered the information that they get, reconsidered.

This pattern is closely related to Case's statement that in Kuhlthau's model, uncertainty is the initial stage in any search, and it is often accompanied by feelings of anxiety that are a strong motivator to continue the search for information (Case, 2007, p. 74). . In this study, students used these concerns as motivation to solve their problems by continuing to search for information about universities. The will to reduce uncertainty arises from an awareness of what they do not know. The things they don't know are so important in trying to help determine the course of study in college. After getting the information search results, the students will use the information they obtained by choosing a study program at the university. In this study, which was done on 67 students, everyone had different choices. Among the answers to the last question, the majority of students chose the Psychology study program, namely as many as 13 students, the Management study program was chosen by seven students, the Medical Sciences study program was chosen by six students, and there were many other study program options that they chose.

## CONCLUSION

This study shows that the level of students' information-seeking behavior in determining the study program in higher education is classified as good. Santri experiences all the stages that exist in the Kuhlthau model, especially in the initiation stage, because students are distraught before they take the initiative to search for information to determine study programs at universities. However, in the initial stage, students independently search for information in the school library, even though the library offers facilities that can be accessed at almost any time.

The exploration phase scored the lowest. Santri tends to feel optimistic and does not feel the feeling of stopping the search, as well as the inconsistency of information as described by the Kuhlthau model. In addition, students are very good at thinking about universities and utilizing electronic information sources by adding and understanding information and having feelings of optimism and self-confidence in determining study programs. Contrary to what Kuhlthau said, someone in the exploration stage usually feels hopeless and wants to stop searching for information. Based on the study results, the level of student information seeking behavior in determining the study program in higher education as a whole was at a good level and achieved a score of 3.11. Santri tends to have feelings (feelings), thoughts (thoughts) and actions (actions) as described in the Kuhlthau model. This study also shows several things that should be improved by students, including independence in the search for information, breadth in the search for information and not only on information that comes from the pesantren, also not on the latest information and only rely on memory in storing information and giving space. to information from parents, teachers and parties deemed appropriate to provide informational support. This research can be further expanded by conducting further research on the factors that influence students in determining the study program in tertiary institutions, taking into account the religious education background and general knowledge acquired in the pesantren.

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