

Fixed Mindset vs. Growth Mindset: A Phenomenon in Higher Education to Achieve a Bachelor's Degree

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Abstract

This study investigates students' experiences with the research process as one of Indonesia's bachelor's degree graduation requirements. The underpinning for the research procedure was Carol Dweck's notion of fixed and growth mindsets. This study followed the qualitative phenomenology method and included semi-structured interviews. Eleven undergraduate seniors or fourth-year students participated in interviews lasting 45 to 60 minutes. According to the data, students had difficulty with the three stages of the research process. (1) Erroneously identified the problem and had difficulty discussing it with the supervisor. (2) Lack of comprehension and application of the research method. (3) Insufficient scholarly writing. Moreover, individuals described two contributing elements, first, psychological factors such as motivation and the desire to conduct the independent study. Second, social issues inside the supervisory and academic institutions. Participants proposed that the complete technique course and academic writing should be taught by faculty beginning in the third year after mastery of the theoretical framework. Research involving quantitative surveys is required to determine the correlation between each internal and external variable.

Keywords: *fixed mindset, growth mindset, higher education*

A. Introduction

The majority of students in Indonesia need to do independent research as one of the requirements for graduating from a bachelor's program. The independent study is compiled into an undergraduate thesis which must be presented and declared eligible by the examiners. The process in the final stage makes students fear and worry. The data showed that students in the last year tend to experience academic stress caused by difficulties determining research topics, relationships with supervisors, and understanding analytical data. Students could finish selecting research topics before the third year to shorten the process. However, the density of the learning process often makes them choose to focus on issues when they enter the final year.

In addition, students also tend to quickly feel discouraged and demotivated when completing research for an undergraduate thesis. This is triggered by a feeling of difficulty in facing the challenges that arise in the research process. Another problem is the desire to stop while conducting research. The difficulties present are considered as closings that are difficult to pass. Students can also feel psychologically tired and choose to take a break from the ongoing research process. However, starting over is often considered difficult and requires considerable effort. The mindset influences the fluency of students in the academic field. The mindset helps students choose a practical way when facing obstacles.

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Two types of mindsets that are pretty popular are fixed mindset and growth mindset. The fixed mindset is a fixed and unchangeable perspective (Dweck, 2019). Students with this mindset tend to give up easily, are reluctant to face change, and want to be in their comfort zone. They only focused on personal experience and complex accepting challenges. The fixed mindset also discourages students from maximizing their potential, reducing their grit level (Chrisantiana & Sembiring, 2017). Besides being difficult to change, the fixed mindset can hinder the process of receiving information that requires many adaptive ways of learning.

On the other hand, a growth mindset is a notion that human abilities are not fixed but may be developed through time, and mindset research investigates the ability of such beliefs to impact human behavior (Dweck, 2019). The growth mindset makes students desire to face challenges and accept the change process by trying to adapt. The growth mindset is also related to integrating information received by a person from the environment. Individuals with a growth mindset tend to receive academic support for the smooth learning process (Zander et al., 2018). Moreover, a growth mindset is related to grit affecting academic achievement (Barbouta et al., 2020). Students become open to the situation and immediately look for effective ways to deal with challenges. Research on growth mindset is mainly associated with grit (Barbouta et al., 2020; Kaparang et al., 2020), academic achievement (Claro et al., 2016; Rattan et al., 2015), student performance (Paunesku et al., 2015), and motivation (Cacali, 2018). The development of programs that apply a growth mindset has also been noted to have advantages and can improve student learning (Yeager et al., 2016).

Another factor that needs to be considered when working on an undergraduate thesis is the duration of the work. The average duration of students completing research is six months to 1 year. It can take longer if the student faces some challenges and responds negatively. Students feel inferior when they pass the time limit, especially when many classmates have graduated. The student's way of thinking is adaptable and seems to change over time. Previous studies have considered interventions encouraging students to develop a growth mindset. The program consists of a simple activity or task that motivates students to adopt a new mindset. The mindset intervention improves student grades and persistence (Yeager et al., 2019).

While there are several studies to understand the mindset of students, few published studies focus on the research process among Indonesian bachelor's degree students. The study explores students' experiences doing the research process as one of Indonesia's graduation requirements for a bachelor's degree. Mindset theory was used as a framework for the research. As a part of this research, the following research question was examined:

1. What factors affect the fluency of student thesis work?
2. What obstacles did students face to fulfilling the bachelor's degree in the research process?
3. How did students respond to the obstacles?
4. What are students' strategies to deal with the obstacles?

B. Methods

A qualitative approach is used to describe experiences related to students' research process to get a deeper exploration. Participants in this study are eleven students in the 4th year of the psychology department at a university. All participants are still in the process of final research and started their research a minimum of six months ago.

Semi-structured interviews explore students' perspectives on the research process to fulfill the bachelor's degree requirements. Data was collected from one-on-one interviews with each

student to present the participants' experience, views on research progress, and their mindset to face the challenge. This approach has made it easier for participants to explain their experiences in open and safe situations as part of their ethical research. The researchers interacted with each student at least three times. The first session consisted of an introduction and an explanation of the purpose of the study. Second, we will determine the respondent's intention to interview and provide an overview of the interview. The third consisted of the formal interview itself. Each formal interview lasted 45 to 60 minutes.

At the end of the interview, the researcher entered a verbatim transcript of the answer and coded and categorized similar concepts in the interview data. After the interview, the researcher summarized the participants' notes and asked for the accuracy of their meaning. To disguise the respondent's personal information, the researcher gave each participant a code number, such as "S-1" for "Student-First Participant."

The researchers created an interview guideline as a tool. The questions included in the overview are in table 1.

Table 1. *Sample of Interview Guideline*

<i>Mindset Situations</i>	<i>Research Question</i>	<i>Sample of Questions</i>
Challenges Barriers	What obstacles did students face to fulfilling the bachelor's degree in the research process?	Please tell us about the obstacles you experienced during the research. What is your strategy for dealing with these obstacles?
Effort	What factors affect the fluency of student thesis work?	How would you describe the research process so far? What kind of support does the campus provide to research students?
Feedback Success of others	How did students respond to the obstacles? What are students' strategies to deal with the obstacles?	What is on your mind when you face obstacles? What is your strategy to face the barriers? What are the consequences of the strategies you have implemented?

Source: Dweck (2017)

C. Findings and Discussion

This study explored the research process from an undergraduate student's point of view, including the challenges and their response, the strategies to deal with the process, and the factors that affect their progress.

Theme 1. Factors that affect the student research process: psychological and social challenges

Two main factors influence the student research process, psychological and social. Psychological factors include motivation, targets, and efforts to give the best results. Internal factors come from within students who are not influenced by others. Meanwhile, social factors come from supervisors, faculty, and friends.

1.1 Psychological factors included motivation, willingness, and goal setting. *Motivation is the one that most influences the smoothness of the thesis. But generating this motivation is indeed such a difficult task.* [S-10]

The will to learn is sometimes challenging to build. If you want to do it, you can do a lot. But often, his will doesn't come, so the thesis work is delayed. [S-9]

The most important thing is the willingness to complete the research process immediately. So it needs to be managed. [S-5]

Setting a target is crucial because we know when to finish and motivate us to be consistent in working. [S-4]

1.2 Social factors from supervisors, faculty rules, and friends. *The supervisor is the most crucial party in the smooth running of the thesis. I have experience with two different lecturers. [S-1]*

The supervisor is a significant figure in the smooth running of the thesis. If students often have slow responses, they will wait a long time, and the progress will be slow. [S-8]

Campus regulations are adequate and support the smooth process of student research, but sometimes the socialization needs to be more detailed and thorough. [S-7]

Friends who understand academic writing are essential and helpful in working on the thesis. I often discuss this with friends to find out the progress and how he completes his research. [S-5]

Some of the challenges that arise in working on the undergraduate thesis come from internal or external factors. Internal factors include motivation that consistently declines and the absence of goal setting. The absence of goal-setting also makes students less focused on research (Abu Bakar et al., 2014; Wilson & Brookfield, 2009). In addition, students are also prone to a lack of self-confidence, especially when they see their classmates who have graduated first and completed research in a short time.

External factors that affect students include the characteristics of the supervisor (Armstrong, 2004). Students still in the learning stage of doing research need a supervisor as a companion and adviser to get quality results (Davis, 2019). Supervisors play an essential role in the overall research process. However, problems can also arise from the student's relationship with the supervisor, such as the length of the supervisor's response or feedback to students. Furthermore, campus policies also play a role in determining the smooth process of completing the student thesis. Research subjects can also be one of the factors that affect student fluency. Research subjects that are difficult to obtain or find can reduce student enthusiasm.

Theme 2. The obstacles to the student research process: A competency problem

The obstacles experienced by students are closely related to their competencies. These competencies consist of mastery of the topics, understanding of research methods, and lacking academic writing. Strengthening student competencies is essential to do and be trained as a prevention model.

2.1 Blurred problem statement identification of research.

I wanted to research something, but when it was executed, it was stuck in searching for previous research. In the end, I got even more confused. [S-1]

Sometimes I understand, but when discussing it with the supervisor, I become even more confused. [S-4]

Working on my thesis has been going on for eight months, but I still can't retrieve data because I have received many revisions from the lecturers. So, I became more confused about what the supervisor wanted. [S-5]

The most challenging part of this thesis is finding a journal. Journals help in identifying problems, right? The research process was complicated when I looked for journals and couldn't find them. [S-7]

2.2 Lack of understanding and applying the research method. *The research methodology course is given when students start college, around the second or third semester. Meanwhile, the thesis writing implementation is in the seventh semester, so I think it is too long.* [S-6]

The research methodology course lecture process needs to be made more comprehensive. I took the class with several assignments. But unfortunately, the lecturers did not give feedback. [S-8]

Writing this thesis is a beneficial thing. But I find it difficult to understand because I had forgotten the lecture material given quite early when I was a junior student. [S-3]

Honestly, I am clueless about qualitative and quantitative methods. This course is combined into one, and in my opinion, it is ineffective because there are too many materials in one semester. [S-9]

2.3 Lack of academic writing technique.

I was surprised when I was suddenly asked to write an article but I didn't get sufficient material regarding this before. [S-9]

I got lots of notes from my supervisor regarding writing techniques. Indeed, my ability to do this is very lacking, so I must keep practicing. [S-1]

Academic writing requires a different approach. I found it difficult initially, so I had to learn a lot and adjust to the lecturer's writing style. [S-6]

Research conducted by undergraduate students often faces unique challenges. Most of the obstacles that arise are due to competence limitations. Understanding research methods is essential for students to master before conducting research (Davidson & Palermo, 2015). However, this is still an obstacle that stems from a lack of understanding of the material or not getting good material beforehand. In addition, the lack of academic writing is also experienced by students even though they write in Indonesian. The thesis guide provided by the faculty does not provide a concrete understanding.

Theme 3. Respond to the obstacles: Fixed or growth

Some students choose to find their way of dealing with the research problems. On the other hand, some students choose not to do anything and just follow the flow. Student responses to research problems are a form of fixed and growth mindset.

3.1 Do nothing. *Hmm, I don't do anything new. I prefer to wait for the supervisor's response and follow what they say.* [S-8]

I just followed the teacher's directions. So, every week, the lecturer usually gives many revisions. Completing it alone was quite energy-consuming. [S-9]

3.2 Evaluate the learning process. *I can learn a lot from the lecturer's feedback, especially in academic writing. Lecturers often give constructive criticism, but in my opinion, it is fun and makes me look again at the way of learning that has been applied.* [S-1]

Usually, I see from the results that if the supervisor's response is good, it means that my method is correct. But if there are still many inputs, I need to re-evaluate the process. [S-11]

One style of the fixed mindset in students is not doing anything when faced with obstacles. Students only wait for a response from the supervisor and lack initiative. A fixed mindset can inhibit students' persistence and willingness to learn (Chrisantiana & Sembiring, 2017). On the other hand, the practice of a growth mindset for students can be seen in their strategies for dealing with obstacles. Students with a growth mindset tend to take strategic initiatives and steps to solve

problems (Kamriana et al., 2022). They don't have to wait for other people or directions from their supervisors to solve problems. This is an important indicator because the adult learning model emphasizes the willingness to take steps to solve problems (Abeni, 2020). Supervisors can act as companions and discussion partners, so they are not directors who control students. The initiative also helps students to complete the research process on time quickly.

Theme 4. Students with a growth mindset tend to have strategies to deal with the research process problem, using the internal and external sources

There are two sources of student strategies when dealing with thesis challenges. The first source is internal, which consists of taking the initiative and learning independently. The situation of thesis writing that relies heavily on self-management requires students to take action without waiting for directions from their supervisor actively. The second source comes from external, namely support groups and seniors. Students feel more comfortable interacting with peers and seniors so they can ask more questions than supervisors.

4.1 Take the initiative. *Like it or not, you must take the initiative to find your research sources and communicate directly with lecturers. If not, it might take much longer to complete the script.* [S-1]

I choose to have the initiative to find my way when I encounter obstacles. I contact one by one contact in the student group. Otherwise, my data collection is stuck at one point, or the number is insufficient. [S-10]

Usually, I take the initiative to contact the parties who can help search for respondents immediately. Incidentally, I took qualitative that need special access to respondents. Luckily, I was made easier with the technique I took. [S-11]

4.2 Learning independently. *I learned how to do academic writing independently. After being given feedback by the lecturer, it's embarrassing to keep repeating the same mistakes.* [S-4]

Every final semester student must do self-study. I forced myself to read English sources and many journals even though they were difficult to understand. [S-5]

4.3 Search support group. *I think gathering with friends with the same passion is very important. Moreover, I am the type who is very easily influenced by the external environment.* [S-3]

My strategy is always to join a friend who wants to do a thesis at a cafe or campus. This method is helpful if I want to finish quickly because I am motivated to follow my friends' progress immediately. [S-7]

4.4 Collect information from seniors. *I often ask my seniors to understand the methodology or the process of working on the thesis. Sometimes with supervisors, some things are difficult for students to ask, but it becomes much more comfortable with seniors.* [S-2]

In my opinion, looking for information from seniors is very helpful in the smooth process of the thesis. There are many things I can ask because it is more convenient to communicate. [S-6]

I think asking seniors or discussing with them can be a good strategy. I often contact two or three seniors to ask about the thesis process. [S-10]

Independent learning is the students' next quality of a growth mindset (Zander et al., 2018). Students prefer to study individually and steer themselves toward predetermined goals. Students do not limit their options and are willing to embrace change. In addition, a social method including peers and elders is utilized to aid in the completion of student study. They are knowledgeable about the social context that encourages graduation. Understanding the social

environment that has a favorable impact can help students achieve their personal objectives more effectively (Kismiantini et al., 2021).

D. Conclusion

Constraints that arise in students mainly come from a lack of competency. Even though they are already final-year students, most still need further strengthening and debriefing regarding the research process. In this process, students have two mindsets when facing obstacles; fixed and growth. Students with a fixed mindset tend to be silent and do nothing. Students do different things with a growth mindset with a series of systematic ways to overcome obstacles. Some of these methods are sourced from internal students, such as the initiative and willingness to learn independently. External sources from friends and seniors also help students generate new understanding and complete the research process more effectively.

Based on the results, the recommendation for future research is to focus on the effect of fixed and growth mindsets on students' research. An experiment of the intervention program of growth mindset also could be one for future work. Moreover, the research on growth mindset intervention in Indonesia is still limited. For institutions, they can make several intensive programs for the student before taking the research for a thesis. Most of the participants agree that they need an intensive program, especially in practical research methodology and academic writing.

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