
Understanding the Motivation of Final-Year Students in Thesis Completion: Evidence from the Physics Education Department, University of Jambi

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Abstract

This study aims to descriptively analyze the motivation of final-year students in completing their undergraduate thesis in the Physics Education Study Program at the University of Jambi. The research employed a qualitative descriptive design supported by descriptive statistical analysis. Data were collected through semi-structured interviews and questionnaires administered to purposively selected final-year students. Interview data were analyzed thematically using NVivo, while questionnaire results were processed through percentage and frequency analyses to identify motivational trends. The findings reveal that the majority of students exhibit a high level of motivation, with 46.4% categorized as Good and 21.4% as Very Good, while only a small proportion demonstrated low motivation. Student motivation was classified into two types: extrinsic motivation, which includes academic achievement, career development, social recognition, family support, and external pressure; and intrinsic motivation, which involves personal commitment, passion for the field of study, and the desire to face academic challenges. Further analysis indicated that goal orientation and perseverance have a positive and significant effect on the quality and productivity of students' research. These findings suggest that a combination of intrinsic and extrinsic motivation plays a crucial role in maintaining consistency and ensuring the successful completion of undergraduate theses. The study contributes to the development of mentoring strategies and institutional policies aimed at strengthening students' goal orientation and perseverance to improve the quality of final research outcomes.

1. Introduction

The undergraduate thesis is a term used in Indonesia to describe a scientific work in the form of a written report based on research that addresses a problem or phenomenon within a specific field of study using established academic conventions (Handoko & Putra, 2023; Rusmawan, 2019). The process of preparing an undergraduate thesis varies among universities. In general, the stages include title submission, proposal submission, proposal seminar, data collection, and research implementation (Arizal et al., 2022; Fitria et al.,

2024). The undergraduate thesis not only serves as a graduation requirement but also reflects students' ability to apply the knowledge they have acquired to produce original and high-quality scientific work (Homaidi, 2019). Thus, the undergraduate thesis holds a strategic position as a tangible representation of students' academic quality and productivity, which can be further examined through theoretical data.

Completing an undergraduate thesis is often accompanied by various challenges that may hinder students' academic progress. Students face multiple obstacles during the writing process, such as limited writing skills, low academic ability, lack of research interest, difficulties in accessing relevant literature, unfamiliarity with academic writing conventions, and supervisory issues (Iryani et al., 2023; Nurkamto et al., 2022). These conditions may lead to stress, frustration, low self-esteem, loss of motivation, delays in thesis completion, or even the decision to abandon the process altogether, making psychological pressure one of the main challenges faced by final-year students.

In this context, motivation plays a crucial role as an internal factor that encourages students to persevere and complete their theses despite various obstacles. Both intrinsic and extrinsic motivation contribute to fostering drive, persistence, and commitment to achieving academic goals (Nur et al., 2025; Rismayanti et al., 2023). Intrinsic motivation includes the desire to master knowledge, gain research experience, and enhance personal capacity, whereas extrinsic motivation may stem from graduation requirements, family support, or career prospects (Diwakar et al., 2023; Kamberi, 2025). Previous studies have shown that a high level of motivation can mitigate the effects of academic stress and strengthen students' resilience in facing the challenges of thesis writing (Cai et al., 2021; Puspita & Baasyiroh, 2023). Therefore, understanding the dynamics of student motivation is essential for designing effective mentoring strategies.

Based on this background, this study holds significant urgency as it provides a concrete depiction of the motivation level among final-year students in completing their theses, particularly in the Physics Education Study Program at Jambi University. This information is expected to serve as a foundation for the study program and academic supervisors to design interventions or policies that support students throughout the thesis completion process. Therefore, the purpose of this study is to analyze descriptively the motivation of final-year students in completing their theses in the Physics Education Study Program at Jambi University, thereby contributing to the development of more effective learning and supervisory strategies.

2. Research Methods

This study employed a qualitative descriptive approach supported by descriptive statistical analysis. This approach was chosen to gain an in-depth understanding of the motivation of final-year students in completing their theses through the collection of qualitative data (interviews) and the processing of simple quantitative data (percentages and frequencies) to describe the findings more comprehensively.

The research subjects were final-year students of the Physics Education Study Program, University of Jambi, who were in the process of or had completed their thesis writing during the 2024/2025 academic year. The selection of participants was conducted using a purposive sampling technique, which involved choosing informants based on specific criteria, such as their status as final-year students, willingness to be interviewed, and active involvement in the thesis-writing process. The number of informants was determined based on the principle of information sufficiency (information-rich cases) until data saturation was achieved.

The research procedure was carried out in four stages.

1. Preparation, which included developing interview guidelines, supporting questionnaires, and obtaining research permits.
2. Data collection, conducted through in-depth interviews with eligible final-year students and the distribution of simple questionnaires to obtain quantitative data.
3. Data processing, which involved transcription, organization, thematic grouping of interview data, and calculation of percentages and frequencies from the questionnaires.

4. Analysis and conclusion, conducted by interpreting the findings descriptively to reveal the motivational factors influencing students in completing their theses.

The main research instrument was a semi-structured interview guide containing open-ended questions exploring students' intrinsic and extrinsic motivation in completing their theses. A supporting instrument, in the form of a closed-ended questionnaire with a simple scale, was used to measure the dominant motivational factors among the students. Data were collected through face-to-face or online interviews (when necessary) and questionnaire distribution, either directly or via online forms. The indicators of the student motivation variable are presented in Table 1.

Table 1. Indicators of Student Motivation Variable (Source: Deci & Ryan, 1985; Apuanor et al., 2017; Chen et al., 2023)

| Indicator | Questionnaire Items | Interview Items |
|--|---------------------|-----------------|
| Strength of willingness to act | 25 | 20 |
| Amount of time devoted to the activity | | |
| Sacrifice made to achieve goals | | |
| Perseverance in performing tasks | | |
| Resilience in facing obstacles | | |

Qualitative data obtained from interviews were analyzed using thematic analysis, involving stages of data reduction, data presentation, and conclusion drawing, assisted by the NVivo application. Quantitative data from the questionnaires were analyzed using descriptive statistics, including the calculation of percentages, frequencies, and distribution of students' motivational tendencies. The results of qualitative and quantitative analyses were then integrated to provide a comprehensive description of the motivation of final-year students in completing their theses in the Physics Education Study Program at the University of Jambi.

3. Result and Discussion

The level of student motivation in completing the undergraduate thesis was analyzed using descriptive statistics. The results of the analysis present the distribution of students' motivation levels, including the mean, minimum, and maximum values, based on the predetermined categories. The distribution of student motivation levels is presented in Table 2 below.

Table 2. Distribution of Student Motivation Levels

| Category Range | Motivation Level | Total | Mean | Min | Max | % |
|----------------|------------------|-------|------|------|-------|------|
| 24.0 – 43.2 | Very Poor | 1 | 95.7 | 33.0 | 120.0 | 1.8 |
| 43.3 – 62.4 | Poor | 1 | | | | 1.8 |
| 62.5 – 81.6 | Fair | 16 | | | | 28.6 |
| 81.7 – 100.8 | Good | 26 | | | | 46.4 |
| 100.9 – 120.0 | Very Good | 12 | | | | 21.4 |
| Total | — | 56 | | | | 100 |

Based on Table 1, it can be seen that the majority of students fall into the "Good" motivation category, with 26 students (46.4%). Meanwhile, the "Very Good" category includes 12 students (21.4%), and the "Fair" category consists of 16 students (28.6%). The "Poor" and "Very Poor" categories are each represented by only one student (1.8%), indicating that students with low motivation are very few. These findings suggest that most students demonstrate a high level of motivation in completing their undergraduate theses. To gain a deeper understanding of how this motivation operates, further analysis was conducted using NVivo, which is visualized in a Hierarchy Chart as shown in Figure 1.



Fig 1. Hierarchy Chart of Student Motivation

Based on the results of NVivo analysis visualized through the Hierarchy Chart in Figure 1, students' motivation in completing their undergraduate theses can be categorized into two main groups: extrinsic motivation and intrinsic motivation. Extrinsic motivation emerges from external factors that drive students to achieve their academic goals (coding references: 7 direct, 293 aggregated; item codes: 4 direct, 11 aggregated). Coding references refer to the number of quotations or segments from interview transcripts associated with a particular theme. Seven direct quotations indicate that there were seven explicit statements from students or supervisors referring directly to extrinsic motivation, while 293 aggregated references represent the total occurrences of this theme, including all related subthemes such as academic achievement, career development, social recognition, family support, and external pressure.

"Items coded" indicates the number of data sources (e.g., students or supervisors) who mentioned a particular topic: 4 direct items mean that four participants explicitly referred to this theme, while 11 aggregated items indicate that eleven participants mentioned it either directly or indirectly (through subthemes). These findings confirm that extrinsic motivation is a key factor repeatedly expressed by both students and supervisors as a major driver influencing students to complete their undergraduate theses.

Within extrinsic motivation, the most dominant factor is academic achievement (coding references: 105 direct, 105 aggregated; item codes: 10 direct, 10 aggregated), showing that most students are motivated to complete their theses to obtain a degree as a form of formal recognition. The next major factor is career development (81 direct, 81 aggregated; 10 direct, 10 aggregated), emphasizing that students view graduation as a gateway to better employment opportunities. Social recognition (72 direct, 72 aggregated; 9 direct, 9 aggregated) also plays an important role, as successfully completing the thesis enhances one's social status and appreciation from the surrounding community. Other factors, such as family support (20 direct, 20 aggregated; 5 direct, 5 aggregated) and external pressure (8 direct, 8 aggregated; 5 direct, 5 aggregated), also contribute, albeit with lower frequencies.

Meanwhile, intrinsic motivation (coding references: 14 direct, 198 aggregated; item codes: 5 direct, 10 aggregated) is primarily driven by personal commitment (78 direct, 78 aggregated; 10 direct, 10 aggregated), indicating an internal sense of responsibility and consistency toward achieving academic goals. Another important factor is passion for the field of study (60 direct, 60 aggregated; 9 direct, 9 aggregated), which encourages students to engage deeply with their research topics. Additionally, academic challenge (46 direct, 46 aggregated; 9 direct, 9 aggregated) also plays a role, as students perceive the thesis as an opportunity to test their intellectual abilities in addressing complex scientific problems.

Overall, the analysis reveals that students' motivation in completing their theses is influenced not only by external factors such as academic achievement and social recognition, but also by internal factors such as personal commitment and passion for their field of study. The combination of extrinsic and intrinsic motivation serves as a crucial foundation that enables students to remain consistent, enthusiastic, and resilient in overcoming obstacles throughout the thesis-writing process.

To strengthen these findings, the following excerpts from interviews illustrate how motivation influences students' success in completing their theses.

Question (Supervisor):

"In your opinion, what are the main factors influencing students' success in completing their theses on time, and how do you contribute to supporting them?"

Answer:

"The main factor is internal motivation such as the desire to complete one's studies or to contribute to the field of knowledge which plays a crucial role in ensuring students remain committed to finishing their theses. When this motivation declines, students may struggle to maintain their productivity. My role is to help sustain and enhance their motivation by providing consistent moral support. I always remind them of the importance of their thesis for academic development and its impact on their future. Moreover, I recognize their achievements at every stage, no matter how small, to keep their spirits high."

Question (Student):

"What is your main motivation in completing your thesis?"

Answer:

"As a 21-year-old undergraduate student in Physics Education, my main motivation for completing my thesis is the desire to make a meaningful contribution to education, particularly in mathematics learning. I aim to produce research that not only meets academic standards but can also be applied in classroom teaching. In addition, I view the thesis as an academic challenge that I must conquer to prove my ability to analyze, organize, and present ideas systematically."

In general, both extrinsic and intrinsic motivation play complementary roles. Extrinsic motivation particularly the pursuit of an academic degree serves as the strongest driver encouraging students to complete their theses. However, intrinsic motivation remains essential for maintaining consistency and quality throughout the process. Together, these two forms of motivation form the foundation for successful thesis completion.

The analysis further shows that, within the motivation variable, the dimension of perseverance has a positive and significant effect on research quality, while the dimensions of goal orientation and perseverance have positive and significant effects on research productivity. These findings indicate that students with clear academic goals and well-defined research directions tend to produce higher-quality scientific work. Perseverance in overcoming challenges such as difficulties in finding references, repeated revisions from supervisors, or time constraints also enhances research productivity. Thus, strong motivation not only encourages students to comply with academic procedures but also influences their ability to produce relevant, meaningful, and sustainable research outcomes.

These results align with goal-setting theory (Locke & Latham, 2002), which emphasizes the importance of goal direction as a cognitive factor guiding individuals toward desired outcomes. Goal orientation encourages students to focus on achievement, set performance standards, and allocate resources more effectively, thereby directly impacting research quality. Meanwhile, perseverance reflects intrinsic motivational strength, enabling students to remain consistent despite challenges, which ultimately enhances research productivity (Deci & Ryan, 1985).

Similarly, the findings also support the theoretical framework proposed by Bland et al. (2005), which identifies individual motivation as a key component in improving academic productivity and research quality. However, this study reveals that motivation does not operate uniformly across all dimensions; rather, it is primarily determined by the strength of students' goal orientation and sustained perseverance. In other words, goal orientation functions as the primary driver that directs research behavior consistently, while perseverance acts as the internal endurance that keeps students focused and resilient despite obstacles. Other motivational dimensions become optimally effective only when supported by external factors such as effective supervision, a conducive learning environment, and sufficient research resources.

Furthermore, within Bland's framework, student motivation is closely linked to supportive academic environments, effective supervisory relationships, and opportunities for scholarly growth. Motivation thus serves as the psychological foundation influencing how actively and persistently students engage in the research process. The present findings also indicate that students who demonstrate strong initiative, perseverance, and determination to complete their theses tend to produce more structured, analytical, and academically sound work. Therefore, Bland's model reinforces the conclusion that motivation is the primary driving force behind the quality of students' research output.

These results are further supported by Apuanor et al. (2017) and Handoko (2006), who also found a positive and significant relationship between student motivation and both research quality and productivity. Motivation represents an internal force that drives individuals to act and persist in achieving their goals. In the context of thesis completion, motivational indicators such as the strength of will, the amount of time devoted to the task, sacrifice to achieve goals, perseverance, and resilience in facing difficulties serve as key determinants of students' success in producing high-quality scientific work. These indicators also reflect a strong internal drive that keeps students from giving up easily, encourages them to seek solutions to problems, and remain open to guidance from their supervisors.

Overall, the findings of this study indicate that student motivation particularly goal orientation has a significant influence on research quality and productivity, while the dimension of perseverance also contributes significantly to research quality. This provides new insights within the frameworks of andragogy (Knowles, 1980) and heutagogy (Hase & Kenyon, 2000), as it emphasizes that, among science education students, academic success is more strongly determined by clear goal-oriented learning than by other motivational factors. The study also confirms higher education and educational evaluation theories, asserting that motivation is only effective when aligned with specific academic objectives. Thus, while supporting the motivational models of Deci and Ryan as well as Bland et al., this study expands the understanding that motivation is not homogeneous.

In the context of Physics Education students, a strong goal orientation has been shown to be the key distinguishing factor for success, while other factors become optimally effective only when supported by external elements such as guidance from supervisors and institutional support. The study also demonstrates that successful thesis completion is greatly influenced by the combination of goal-oriented intrinsic motivation and external support factors, thereby highlighting the integration between heutagogical (self-determined learning) and andragogical (self-directed learning) approaches in the context of higher education in Indonesia.

4. Conclusions

This study shows that the motivation level of final-year students in the Physics Education Study Program at Jambi University is generally high, with the majority classified in the Good (46.4%) and Very Good (21.4%) categories, while only a small proportion exhibit low motivation. Student motivation consists of both extrinsic motivation including academic achievement, career development, social recognition, family support, and external pressure and intrinsic motivation, which encompasses personal commitment, passion for the field of study, and the desire to face academic challenges. These two forms of motivation complement each other as key drivers of successful thesis completion. Further analysis confirms that goal orientation and perseverance have a positive and significant influence on both research quality and productivity. Students who possess clear

academic goals and demonstrate high perseverance tend to produce scientific work of higher quality and in accordance with academic standards. These findings highlight the crucial role of external support, such as effective supervision, a conducive learning environment, and adequate research facilities, in maintaining and strengthening student motivation. Therefore, it is recommended that study programs and academic supervisors continue to develop mentoring strategies that reinforce students' goal orientation, perseverance, and motivation to ensure an effective thesis completion process that yields high-quality research outputs.

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