



Exploring Differences in Learning Interest Between First-Year and Second-Year Undergraduate Students

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Abstract

This study investigates the differences in learning interest between first-year and second-year undergraduate students within a higher education setting. Learning interest is a key aspect of student engagement that reflects emotional involvement, attention, participation, and intrinsic motivation in learning activities. The study employed a quantitative comparative design with a sample of 301 students from Ma'soem University selected through stratified proportional random sampling. Data were collected using a validated questionnaire encompassing four dimensions of learning interest and analyzed using JASP software. The results indicate that second-year students reported a higher mean level of learning interest than first-year students, and the difference was statistically significant. These findings suggest that learning interest tends to increase as students advance in their academic journey, possibly due to improved self-regulation, adaptation, and familiarity with university learning environments. The study highlights the importance of designing instructional strategies that are responsive to students' academic stages, emphasizing early interventions for first-year students to enhance engagement and motivation.

Keywords: academic year, higher education, learning interest, student engagement

1. Introduction

In recent years, Indonesia's educational reform through initiatives such as Merdeka Belajar (Freedom to Learn), Sekolah Penggerak (Driving Schools), and Transformasi Pendidikan Nasional (National Education Transformation) has emphasized improving learning quality and promoting equity across institutions. Despite these efforts, limited attention has been given to sustaining and enhancing students' learning interest, a key component of academic motivation and long-term engagement (Harackiewicz, Smith, & Priniski, 2016; Renninger & Hidi, 2016).

Learning interest represents a dynamic motivational state that drives students to engage in learning activities with enthusiasm, persistence, and emotional involvement (Hidi, 1990; Krapp, 2002). It serves not only as an affective reaction but also as a cognitive resource that supports attention and self-regulation (Sansone & Thoman, 2005). Research has consistently shown that students who perceive learning as interesting demonstrate greater persistence, improved performance, and deeper conceptual understanding (Schiefele, 1991; Wigfield & Eccles, 2000). However, maintaining learning interest is a major challenge, especially when students transition into higher education, where academic demands and self-directed learning increase significantly (Bye, Pushkar, & Conway, 2007).

Studies on student engagement and motivation in higher education often emphasize the importance of intrinsic factors—such as curiosity, task value, and self-regulated learning—alongside external supports from the academic environment (Blumenfeld & Paris, 2004; Kahu & Nelson, 2016). Nevertheless, most prior research treats university students as a homogeneous group and rarely examines how learning interest varies across academic years. The first and second years of study represent critical stages in students' academic and psychological development, where adaptation, self-regulation, and motivation evolve rapidly (van der Veen et al., 2005). The lack of differentiation between these stages limits our understanding of how learning interest develops and changes over time.

Recent empirical evidence indicates that students' motivation and engagement often decline during their first year, when they are adjusting to new learning environments, workloads, and expectations (Setiana, Kusumaningrum, & Purwoko, 2021; Puspita, Ristianti, & Soviyah, 2022). In contrast, second-year students tend to demonstrate more stable learning patterns as they gain familiarity with institutional culture and academic routines. However, few studies have quantitatively compared learning interest between these two stages, leaving a gap in understanding the developmental trajectory of engagement in higher education.

Therefore, this study aims to explore the differences in learning interest between first-year and second-year undergraduate students in higher education. By identifying variations across academic levels, this research seeks to provide empirical insights that can inform the design of targeted instructional strategies. The findings are expected to contribute to a more nuanced understanding of how learning interest evolves throughout students' academic progression and to support the development of interventions that foster sustained engagement in higher education contexts.

2. Literature Review

2.1. Concept of Interest

Interest is generally defined as a psychological state of focused attention and positive emotion that arises when an individual perceives personal relevance or value in a specific activity or topic (Hidi, 1990; Krapp, 2002). It plays an essential role in motivation, influencing how students allocate effort, maintain engagement, and achieve learning goals. In educational psychology, two major types of interest are commonly identified: situational interest and individual interest (Renninger & Hidi, 2016).

Situational interest refers to a temporary state of engagement triggered by external stimuli such as instructional design, teaching methods, or contextual novelty (Ainley, 2006). It depends heavily on environmental cues and tends to fluctuate across different learning conditions. By contrast, individual interest is a more enduring preference toward certain subjects or tasks, rooted in prior experience and intrinsic value. Students with high individual interest are more likely to persist and engage deeply, even under challenging conditions (Krapp, 2002; Sansone & Thoman, 2005).

Importantly, situational and individual interests are not mutually exclusive. Hidi and Renninger's (2006) Four-Phase Model of Interest Development explains that situational interest can evolve into a well-developed individual interest through repeated engagement, self-regulation, and positive emotional reinforcement. This model highlights that interest is dynamic and develops over time—a perspective particularly relevant when comparing students at different stages of higher education.

2.2. Learning Interest and Motivation

Learning interest functions as both a motivational driver and an affective response that sustains students' engagement in academic tasks (Schiefele, 1991; Wigfield & Eccles, 2000). According to the Expectancy-Value Theory, interest is influenced by students' beliefs about their ability to succeed (expectancy) and the perceived value or usefulness of the task (value) (Eccles & Wigfield, 2002). When students perceive a learning activity as meaningful and relevant to personal or professional goals, their intrinsic motivation strengthens, leading to improved performance and persistence (Sansone & Thoman, 2005).

Similarly, Self-Determination Theory (SDT) posits that learning interest grows when students' basic psychological needs—autonomy, competence, and relatedness—are fulfilled (Deci & Ryan, 2000). Students who feel empowered to make learning choices, capable of success, and connected to peers or instructors are more likely to develop sustained interest. These motivational processes are vital during the early stages of higher education, where students experience shifts in responsibility and learning independence.

2.3. Learning Interest and Student Engagement

Interest is closely linked to student engagement, which encompasses behavioral, emotional, and cognitive dimensions (Blumenfeld & Paris, 2004). It often serves as the initial catalyst for deeper engagement, encouraging students to participate actively, invest mental effort, and experience enjoyment in learning (Kahu & Nelson, 2016). Research consistently demonstrates that strong learning interest predicts higher academic achievement, greater persistence, and reduced dropout rates (Allen & Robbins, 2008; Schneider & Preckel, 2017).

In higher education, maintaining learning interest is particularly challenging due to increasing academic demands, self-directed study, and reduced external structure (Bye, Pushkar, & Conway, 2007). However, when educators design meaningful and autonomy-supportive learning environments, situational interest can transform into long-term engagement and commitment to learning (Wu et al., 2024).

2.4. Conceptual Implications

Based on these theoretical and empirical perspectives, learning interest can be conceptualized as a multifaceted construct shaped by internal factors—such as values, self-efficacy, and motivation—and external influences—such as learning environments and instructional strategies. It develops progressively over time, making academic year level a meaningful variable for analysis. Understanding how learning interest differs between first-year and second-year students provides insights into the developmental nature of engagement in higher education and offers an evidence-based foundation for designing targeted pedagogical interventions.

3. Materials and Methods

3.1. Research Design and Participants

This study employed a quantitative comparative design to examine the differences in learning interest between first-year and second-year undergraduate students. The comparative approach was chosen because it allows for identifying variations in psychological constructs across distinct groups while controlling for external factors (Creswell & Creswell, 2018). The population consisted of 935 undergraduate students enrolled at Ma'soem University, Indonesia, during the 2023–2024 academic year. Using stratified proportional random sampling, the sample was determined through the Slovin formula, resulting in 301 participants representing both year levels. This approach ensured balanced representation of each group and minimized sampling bias.

3.2. Research Instrument

Data on learning interest were collected using a structured questionnaire adapted from previous validated studies (Shofwan et al., 2021; Aisyah et al., 2024). The instrument consisted of four dimensions of learning interest: (1) positive emotional response, (2) attention, (3) active participation, and (4) internal motivation. Each item was rated on a five-point Likert scale ranging from 1 (Never) to 5 (Always).

Prior to the main data collection, the questionnaire was pilot tested with 30 respondents to evaluate validity and reliability using IBM SPSS Statistics (Version 24). All items met the validity requirement with corrected item–total correlations above 0.30. The Cronbach's alpha coefficient for the overall scale was 0.760, exceeding the minimum reliability threshold of 0.70 (Nunnally & Bernstein, 1994), indicating satisfactory internal consistency. Based on these results, the instrument was considered valid and reliable for the main survey.

3.3. Data Collection Procedure

Data collection was conducted following formal approval from the Rector of Ma'soem University. Invitation letters were distributed to participants selected through stratified proportional random sampling. Respondents completed the online questionnaire via Google Forms during scheduled academic sessions to ensure participation integrity. Anonymity and voluntary participation were guaranteed, and all participants provided informed consent before completing the survey.

The questionnaire responses were automatically recorded and exported into a CSV file for statistical analysis. Data screening was performed to check completeness, outliers, and normality before analysis.

3.4. Data Analysis

The data analysis was conducted using JASP software (Version 0.18.1; JASP Team, 2023). Statistical procedures consisted of three stages:

- a) Descriptive Analysis — to summarize the distribution, mean, and standard deviation of students' learning interest scores for each academic year.
- b) Assumption Testing — including the Shapiro–Wilk test for normality and Levene's test for homogeneity of variances, both at a significance level of 0.05.
- c) Inferential Analysis — a one-way Analysis of Variance (ANOVA) was used to test whether there was a significant difference in learning interest between first-year and second-year students. ANOVA was selected instead of an independent samples t-test to accommodate potential variance heterogeneity and provide more robust comparison results.

The results were interpreted based on the p-value threshold of 0.05, and effect size measures (η^2) were considered to evaluate the magnitude of differences between groups.

3.5. Ethical Considerations

Ethical approval for this study was obtained from the Institutional Research Ethics Committee of Ma'soem University. Participants' confidentiality and data privacy were maintained throughout the study, and responses were used solely for academic purposes.

4. Results and Discussion

4.1. Normality Test

The normality of the data was examined using the Shapiro–Wilk test because the sample size was below 500 participants. The result indicated that the data were normally distributed ($p = .219$), meeting the assumption for parametric analysis.

4.2. Homogeneity of Variance Test

Levene's Test for Equality of Variances was conducted to verify the assumption of homogeneity. The result was not significant ($F(1, 299) = 2.64, p = .105$), suggesting that the variances between first-year and second-year groups were homogeneous.

4.3. Descriptive Analysis

Descriptive statistics were calculated to examine the overall distribution of students' learning interest scores across the two academic year levels.

Table 1: Descriptive Statistics of Learning Interest by Academic Year

Academic Year	N	Mean	SD	Minimum	Maximum
First-year students	154	90.84	7.57	72	111
Second-year students	147	93.56	8.81	72	113

As shown in Table 1, second-year students reported a higher mean level of learning interest ($M = 93.56, SD = 8.81$) compared to first-year students ($M = 90.84, SD = 7.57$). This suggests an upward trend in learning interest as students advance in their academic journey.

Figure 1: Mean Learning Interest Scores of First-Year and Second-Year Students

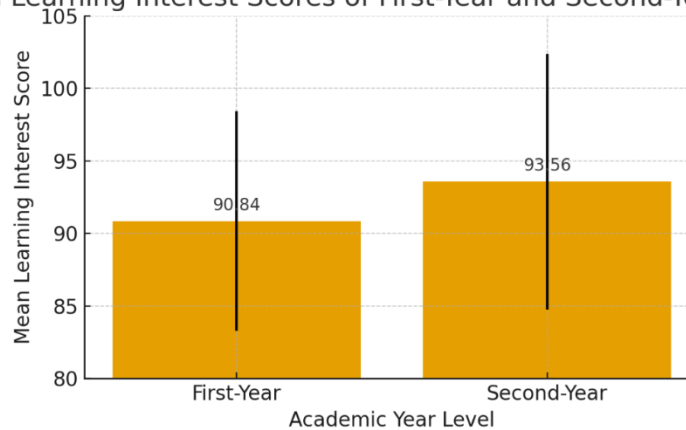


Figure 1: Mean Learning Interest Scores of First-Year and Second-Year Students

Note. Error bars represent ± 1 standard deviation. Second-year students demonstrated a higher mean level of learning interest ($M = 93.56, SD = 8.81$) compared to first-year students ($M = 90.84, SD = 7.57$).

4.4. Hypothesis Test

To determine whether the observed difference between groups was statistically significant, a one-way ANOVA was performed. The analysis revealed a significant difference in learning interest between first-year and second-year students, $F(1, 299) = 8.24, p = .004, \eta^2 = .027$, indicating a small-to-moderate effect size.

Table 2: One-Way ANOVA of Learning Interest by Academic Year

Source	SS	df	MS	F	p
Between Groups	553.84	1	553.84	8.24	.004
Within Groups	20102.52	299	67.23		
Total	20656.36	300			

These results confirm that the null hypothesis was rejected, indicating a statistically significant difference in learning interest between first-year and second-year students.

4.5. Discussion

The results demonstrate a significant difference in learning interest between first-year and second-year students, with the latter group showing higher engagement and motivation toward academic activities. This finding suggests that learning interest develops progressively as students gain familiarity with the university learning environment and adapt to academic expectations.

According to Hidi and Renninger's (2006) Four-Phase Model of Interest Development, students' interest evolves from a triggered situational phase to a well-developed individual interest through repeated exposure, self-regulation, and emotional reinforcement. The higher scores among second-year students may reflect their transition from situational interest—typically seen in newcomers adjusting to college life—to a more stable individual interest supported by internal motivation and goal clarity.

The results are also consistent with Self-Determination Theory (Deci & Ryan, 2000), which posits that autonomy, competence, and relatedness are fundamental psychological needs that drive motivation and interest. As second-year students become more autonomous and confident in navigating coursework, their sense of competence increases, fostering greater learning interest. Conversely, first-year students often experience adjustment stress and uncertainty, which can temporarily reduce motivation and engagement.

These findings align with previous studies that highlight the dynamic nature of learning interest as a function of academic adaptation and experience (Bye et al., 2007; van der Veen et al., 2005). The results also corroborate evidence from Shofwan et al. (2021) and Aisyah et al. (2024), who found that learning interest correlates with students' ability to manage attention, persistence, and emotional satisfaction in learning.

From an educational perspective, the findings emphasize the importance of targeted instructional strategies that correspond to students' academic stage. For first-year students, structured guidance, collaborative learning, and active mentoring can help maintain engagement during the critical adjustment period. For second-year students, providing autonomy-supportive learning environments—such as project-based tasks or research activities—can enhance intrinsic motivation and sustain long-term interest.

Moreover, universities should consider differentiated learning interventions to address the varying psychological and motivational needs of students at different stages. Academic advisors can play a key role in designing developmental programs that support students' transition from external motivation to intrinsic interest.

In summary, this study provides empirical evidence that learning interest is not static but evolves as students progress academically. The progression reflects both psychological adaptation and environmental influences, confirming that effective educational design must consider students' developmental stages to nurture sustained engagement and motivation.

5. Conclusion

The present study investigated the differences in learning interest between first-year and second-year undergraduate students at Ma'soem University. The results demonstrated a statistically significant difference, with second-year students showing higher levels of learning interest. This finding suggests that students' motivation and engagement tend to increase as they progress through their academic experience and adapt to the learning environment.

From a theoretical perspective, the results support the notion that learning interest develops over time through repeated exposure, self-regulated learning, and emotional reinforcement, as proposed in contemporary motivational theories. It also highlights that academic adaptation plays an important role in shaping students' internal motivation and sustained engagement in learning activities.

Practically, the findings emphasize the need for higher education institutions to implement stage-appropriate learning strategies. For first-year students, structured academic mentoring, collaborative learning environments, and active guidance from lecturers can help strengthen initial engagement and reduce adjustment anxiety. For second-year students, autonomy-supportive teaching and project-based learning are recommended to maintain and deepen intrinsic motivation.

This study contributes to the growing body of research on student learning motivation by providing empirical evidence of the developmental pattern of learning interest among university students. Future studies are encouraged to expand the sample to other universities, explore additional psychological factors such as self-efficacy or academic resilience, and employ longitudinal designs to better capture the evolution of learning interest over time.

References

- Ainley, M. (2006). Connecting with learning: Motivation, affect, and cognition in interest processes. *Educational Psychology Review*, 18(4), 391–405. <https://doi.org/10.1007/s10648-006-9033-0>
- Aisyah, R., Handayani, D., & Setiawan, A. (2024). The influence of learning motivation and interest on academic achievement among university students. *Journal of Educational Research and Innovation*, 15(2), 87–95.
- Allen, J., & Robbins, S. B. (2008). Prediction of college major persistence based on vocational interests and first-year academic performance. *Research in Higher Education*, 49(1), 62–79. <https://doi.org/10.1007/s11162-007-9064-5>
- Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>

- Bye, D., Pushkar, D., & Conway, M. (2007). Motivation, interest, and positive affect in traditional and nontraditional undergraduate students. *Adult Education Quarterly*, 57(2), 141–158. <https://doi.org/10.1177/0741713606294235>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109–132. <https://doi.org/10.1146/annurev.psych.53.100901.135153>
- Harackiewicz, J. M., Smith, J. L., & Priniski, S. J. (2016). Interest matters: The importance of promoting interest in education. *Policy Insights from the Behavioral and Brain Sciences*, 3(2), 220–227. <https://doi.org/10.1177/2372732216655542>
- Hidi, S. (1990). Interest and its contribution as a mental resource for learning. *Review of Educational Research*, 60(4), 549–571. <https://doi.org/10.3102/00346543060004549>
- Hidi, S., & Renninger, K. A. (2006). The four-phase model of interest development. *Educational Psychologist*, 41(2), 111–127. https://doi.org/10.1207/s15326985ep4102_4
- JASP Team. (2023). JASP (Version 0.18.1) [Computer software]. <https://jasp-stats.org>
- Kahu, E. R., & Nelson, K. (2016). Student engagement in the educational interface: Understanding the mechanisms of student success. *Higher Education Research & Development*, 37(1), 58–71. <https://doi.org/10.1080/07294360.2017.1344197>
- Krapp, A. (2002). Structural and dynamic aspects of interest development: Theoretical considerations from an ontogenetic perspective. *Learning and Instruction*, 12(4), 383–409. [https://doi.org/10.1016/S0959-4752\(01\)00011-1](https://doi.org/10.1016/S0959-4752(01)00011-1)
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Puspita, D., Ristianti, D., & Soviyah, S. (2022). The decline of student engagement during the first year of higher education: A case study in Indonesia. *Journal of Educational Development Studies*, 8(3), 101–110.
- Renninger, K. A., & Hidi, S. (2016). *The power of interest for motivation and engagement*. Routledge. <https://doi.org/10.4324/9781315771045>
- Sansone, C., & Thoman, D. B. (2005). Interest as the missing motivator in self-regulation. *European Psychologist*, 10(3), 175–186. <https://doi.org/10.1027/1016-9040.10.3.175>
- Schiefele, U. (1991). Interest, learning, and motivation. *Educational Psychologist*, 26(3–4), 299–323. https://doi.org/10.1207/s15326985ep2603&4_5
- Schneider, M., & Preckel, F. (2017). Variables associated with achievement in higher education: A systematic review of meta-analyses. *Psychological Bulletin*, 143(6), 565–600. <https://doi.org/10.1037/bul0000098>
- Setiana, D., Kusumaningrum, A., & Purwoko, R. (2021). Academic transition and student motivation in Indonesian higher education. *Journal of Learning and Motivation*, 9(2), 56–67.
- Shofwan, A., Rahman, R., & Putri, E. (2021). Relationship between students’ learning interest and academic achievement in online learning. *Indonesian Journal of Educational Research*, 12(1), 45–53.
- van der Veen, I., Peetsma, T. T. D., & Volman, M. (2005). Changes in students’ attitudes towards learning during transition from primary to secondary school. *Educational Studies*, 31(2), 135–154. <https://doi.org/10.1080/03055690500095553>
- Wigfield, A., & Eccles, J. S. (2000). Expectancy–value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68–81. <https://doi.org/10.1006/ceps.1999.1015>
- Wu, J., Chen, L., & Zhang, X. (2024). Enhancing situational interest and engagement through autonomy-supportive teaching in higher education. *Frontiers in Psychology*, 15, 136–148. <https://doi.org/10.3389/fpsyg.2024.1397412>