



Modeling the Effects of Internet Utilization and Achievement Motivation on Learning Skills among University Students

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ABSTRACT

Study skills refer to cognitive, behavioral, and self-regulatory abilities that support effective learning. Many students still show poor study skills, and factors such as internet use and achievement motivation may influence them, as online information access and a strong drive to achieve can shape learning strategies. This research aims to examine the contribution of internet use and achievement motivation toward students' study skills. The study used a quantitative approach with a descriptive correlational method. The population consisted of 625 students, and 244 Guidance and Counseling majors at Universitas Negeri Padang were selected as samples. Instruments were based on a Likert scale with reliability values of 0.841, 0.841, and 0.842. Data were analyzed using multiple regression, although the manuscript does not clearly explain the research design or descriptive statistical procedures. The findings show that both variables contribute 31.3% to study skills, with a significant positive relationship.

ABSTRAK

Keterampilan belajar merupakan kemampuan kognitif, perilaku, dan regulasi diri yang mendukung proses belajar yang efektif. Namun, banyak mahasiswa masih menunjukkan keterampilan belajar yang kurang optimal. Faktor seperti penggunaan internet dan motivasi berprestasi diduga memengaruhi keterampilan tersebut, karena akses informasi daring serta dorongan untuk mencapai tujuan dapat membentuk strategi dan kebiasaan belajar. Penelitian ini bertujuan menganalisis kontribusi penggunaan internet dan motivasi berprestasi terhadap keterampilan belajar mahasiswa. Penelitian menggunakan pendekatan kuantitatif dengan metode deskriptif korelasional. Populasi berjumlah 625 mahasiswa, dan 244 mahasiswa Program Studi Bimbingan dan Konseling Universitas Negeri Padang dipilih sebagai sampel. Instrumen menggunakan skala Likert dengan nilai reliabilitas 0,841; 0,841; dan 0,842. Data dianalisis menggunakan regresi berganda, meskipun naskah belum menjelaskan secara rinci desain penelitian dan prosedur statistik deskriptif. Hasil menunjukkan bahwa kedua variabel memberikan kontribusi sebesar 31,3% terhadap keterampilan belajar, dengan hubungan positif yang signifikan.

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INTRODUCTION

The development of students' learning skills is influenced by various factors related to the academic process, including the ability to manage information and internal motivation to achieve success. This introduction is expected to encourage students to develop and strengthen their commitment to academic achievement. To achieve academic success, students must possess learning skills, which include attitudes and study habits (Prayitno, 2007). At the university level, students are expected to already have adequate learning skills.

Learning skills refer to cognitive, metacognitive, and behavioral abilities acquired by individuals to effectively manage their learning processes, as explained in Self-Regulated Learning theory (Budiardjo & Lily, 2008). These skills constitute specific competencies possessed by students; when continuously practiced, they develop into positive learning habits and can improve academic outcomes.

The results of AUM PTSDL data processing among Guidance and Counseling students at Universitas Negeri Padang indicate that learning skills are the most dominant problem, accounting for 50.5%. This finding suggests that most students still face difficulties in managing learning strategies and habits effectively. Theoretically, learning skills are influenced by various factors, including the ability to utilize internet-based learning resources and the level of achievement motivation, which drives individuals to set goals, sustain effort, and regulate their learning behavior. Therefore, the high proportion of learning skill problems in AUM PTSDL data reinforces the relevance of examining how internet use and achievement motivation contribute to students' learning skills.

One facility that supports learning skills is the internet. The internet can enhance reading ability (Coiro & Dobler, 2007), critical thinking, and the integration or association of information from multiple sources (Salmerón et al., 2017). Through reading, students are able to acquire, understand, and connect information. Other important skills include integrating information from different sources (e.g., linking information from different web pages) and evaluating information by assessing the credibility of online sources (Salmerón et al., 2018). This condition shifts the learning system toward student-centered learning, requiring students to be more active in seeking information, data, and learning materials related to coursework. Teaching and learning strategies that actively engage and challenge students can enhance their learning skills and their responsibility for their own progress (Higgins et al., 2007).

The internet is used to obtain information, explore personal interests, watch videos or entertainment, and support academic needs (Purdy, 2017). It also helps in identifying data gaps through news sources and internet-based literature (Monetti et al., 1981). The use of the internet and computers is essential for students' academic activities (Kuhlemeier & Hemker, 2007). Information obtained from digital sources contributes to understanding and improves skills in digital information searching and reading (Salmerón et al., 2018). Internet media is believed to enhance students' interest, skills, and academic achievement.

According to the Indonesian Internet Service Providers Association (APJII), national internet penetration continues to increase, with the majority of users coming from student populations. This trend indicates that the internet has become a primary learning resource for young people, and its usage patterns may influence students' learning strategies and skills (Prasetiyo et al., 2020). Similarly, Agustina (2013) reported that internet use in Indonesia is dominated by adolescents aged 15–19 years and is primarily used for email, instant messaging, social networking, and search engines. Various activities can be conducted via the internet, such as seeking information, engaging in discussions, finding relevant data, identifying answers, and

evaluating information to enhance thinking skills (van Laar et al., 2017). APJII survey results show that the main reasons for internet use in Indonesia include information seeking (83.1%), entertainment and inspiration (70.9%), education (61.1%), interaction and gaming (41.1%), and health and opinions (39.1%) (Prasetyo et al., 2020).

Ferguson and Perse (in Giles, 2003) argue that internet use is more frequently associated with communication for social interaction rather than academic information gathering. This is supported by Qomariah (2009), whose study on urban adolescents found that internet use is predominantly directed toward leisure activities rather than information utility, communication, and transactions.

Furthermore, Pamungkas (2014) found that while technology can serve as an effective educational medium, it often leads to a decline in moral values and academic interest. At Universitas Negeri Padang, students' internet use via smartphones is primarily for accessing information (33%), communication (31%), completing assignments (12%), entertainment (11%), lifestyle (6%), and online business (4%) (Ganto, 2018). Thus, internet utilization for learning purposes is not yet optimal.

In practice, internet use is often not optimized for academic purposes. Due to ease of access, it is sometimes misused for non-academic activities such as online gaming, shopping, YouTube, and social media. While using the internet for entertainment is reasonable, excessive use can interfere with learning effectiveness. Individuals may also use the internet to escape real-life problems or regulate negative emotions, which can lead to adverse outcomes (Kardefelt-Winther, 2014).

Based on observations conducted at the Faculty of Education, Universitas Negeri Padang, in February, students were found to use campus internet facilities for various purposes, including social media, artificial intelligence tools for academic tasks (Firdaus et al., 2025), YouTube, downloading media, online gaming, shopping, ticket booking, completing assignments, emailing, and reading articles. Some students spent excessive time on entertainment activities such as gaming and watching films, even during study hours.

In addition to internet use, achievement motivation also plays a significant role in influencing students' learning skills. Achievement motivation refers to the desire to accomplish tasks, meet standards of excellence, and strive for success (Santrock, 2003). This is supported by Hamdu and Agustina (2011), who found that motivated students tend to study harder, be more persistent, and maintain better concentration.

Achievement motivation can thus be understood as the driving force that encourages students to achieve excellence and academic success. Students with high achievement motivation tend to view success as something to strive for and take pride in, making efforts to overcome learning obstacles and maintain high learning quality. Conversely, students with low achievement motivation often struggle to improve performance, experience difficulty completing tasks, and may not perceive effort as a determinant of success or failure. Therefore, higher achievement motivation contributes to improved learning skills.

Donal (2014) found that students' achievement motivation generally falls into the moderate category, while Adiningtyas (2015) reported that initial levels of achievement motivation were low before intervention. Additionally, procrastination is prevalent among students; approximately 90% of university students exhibit procrastination behaviors, with 25% categorized as chronic procrastinators, often leading to academic withdrawal (William, in Tatan, 2012).

Observations conducted at the end of the semester (May–June) revealed that many Guidance and Counseling students at UNP experienced difficulties completing assignments due to procrastination. Some students failed to submit assignments, indicating inadequate learning skills.

These findings suggest that many students still lack adequate learning skills in completing assignments and participating in academic activities. Therefore, it is necessary to conduct research to examine in depth the contribution of internet use and achievement motivation to learning skills and their implications for guidance and counseling services.

Based on the above discussion, internet utilization and achievement motivation are interrelated factors contributing to learning skills. However, the extent of their contribution remains unclear and requires empirical investigation. The results of this study will serve as a reference for developing guidance and counseling programs. This research is grounded in the limited empirical evidence specifically examining the combined contribution of internet use and achievement motivation to students' learning skills, particularly in the context of Guidance and Counseling education. Previous studies have tended to examine these variables separately and rarely focus on prospective counselors. Consequently, the magnitude of their combined contribution remains unclear. The selection of the Guidance and Counseling program at Universitas Negeri Padang is relevant, as learning skills are essential competencies for future counselors in achieving academic success and professional development.

Guidance and counseling services play an important role in preventing negative internet use and enhancing achievement motivation to optimize students' learning skills. Improving learning skills is a key aspect of student development and a primary objective of guidance and counseling services in higher education.

METHODS

This study employed a quantitative approach using a descriptive correlational method. The population consisted of first-, third-, fifth-, seventh-, and ninth-semester students from the Guidance and Counseling program at Universitas Negeri Padang, totaling 625 students, with a sample of 244 students. The sampling technique used was proportionate stratified random sampling. Data were collected using a Likert-scale instrument. The instrument was both valid and reliable, with reliability coefficients of 0.841 and 0.842. To examine the contribution of the independent variables to the dependent variable, the data were analyzed using simple regression analysis. All statistical analyses were conducted using SPSS version 20.00.

Although numerous international studies have examined internet utilization and achievement motivation in educational contexts, most have focused on the general impact of digital technology on academic performance or have addressed motivational aspects separately. Only limited research has specifically mapped the simultaneous contribution of these two variables to learning skills, particularly among Guidance and Counseling students.

To date, there has been no comprehensive study that clearly demonstrates the extent to which internet utilization and achievement motivation contribute to the development of learning skills among Guidance and Counseling students, especially at Universitas Negeri Padang. In fact, prospective school counselors are ideally expected to possess strong learning skills as a prerequisite for effectively guiding students. Therefore, this study is expected to fill this research gap while also providing new empirical contributions to the literature on learning skills among Guidance and Counseling students.

RESULT

The assumption testing conducted in this study included tests of normality, linearity, and multicollinearity.

Normality Test

The normality test was conducted using the Kolmogorov–Smirnov (K–S) test, as the sample size was considered moderate and the researcher aimed to examine the distribution across three variables simultaneously. The results indicated that all variables were approximately normally distributed. Specifically, the K–S statistics, degrees of freedom, and p-values (Asymp. Sig.) for each variable were as follows: internet use (K–S = 0.072; df = 120; p = 0.589), achievement motivation (K–S = 0.115; df = 120; p = 0.061), and learning skills (K–S = 0.098; df = 120; p = 0.137). Since all p-values exceeded 0.05, the data were considered normally distributed. Therefore, the normality assumption was satisfied, allowing for further parametric analysis.

Linearity Test

Linearity was tested using the ANOVA Test for Linearity for each variable relationship. The results showed that the relationship between internet use and learning skills was linear, as indicated by a significant Linearity value ($F = 32.47$; $p < 0.001$) and a non-significant Deviation from Linearity ($F = 1.21$; $p = 0.261$). Similarly, the relationship between achievement motivation and learning skills also met the linearity assumption, with a significant Linearity value ($F = 28.93$; $p < 0.001$) and a non-significant Deviation from Linearity ($F = 1.34$; $p = 0.198$). These results indicate that all relationships between variables are linear and suitable for parametric regression analysis.

Contribution of Internet Use and Achievement Motivation to Learning Skills

The results of multiple regression analysis revealed that internet use and achievement motivation significantly predict learning skills. Together, these independent variables explain 31.3% of the variance in students' learning skills. The regression model showed a moderate positive relationship ($R = 0.560$; $R^2 = 0.313$), indicating that higher levels of appropriate internet use and achievement motivation are associated with better learning skills. Specifically, an increase of one unit in internet use predicts an increase of 0.410 in learning skills, while an increase in achievement motivation predicts an increase of 0.404 ($p < 0.001$ for both predictors).

Table 1. Multiple Regression Analysis of Internet Use and Achievement Motivation on Learning Skills

Model	R	R ²	Adjusted R ²	p-value
1	0,389	0,217	0,213	< .001

Predictor	B	p-value
Constant	218.598	< .001
Internet Utilization (X ₁)	0,285	< .001
Achievement Motivation (X ₂)	0,281	< .001

The R value of 0.560 indicates a positive correlation, suggesting that more effective internet use and higher achievement motivation are associated with better learning skills. The coefficient of determination ($R^2 = 0.313$) indicates that 31.3% of the variance in learning skills is explained jointly by internet use and achievement motivation, while the remaining 68.7% is influenced by other factors not examined in this study.

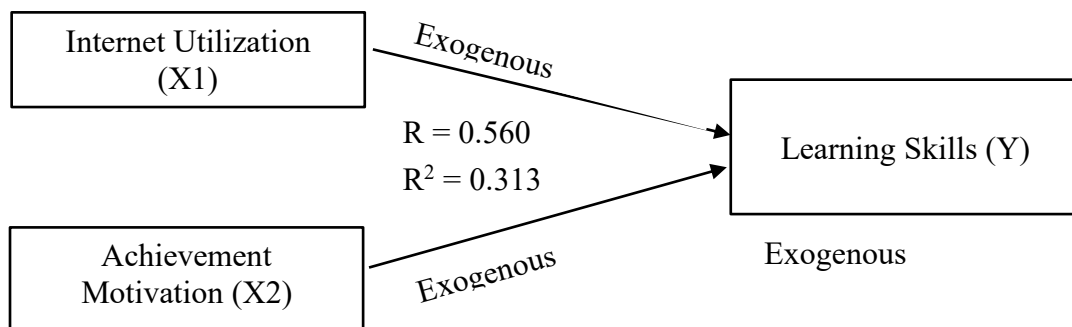


Figure 1. Contribution of Internet Use and Achievement Motivation to Learning Skills

Table 2. Variable Description

Variable	Type	Description
Internet Utilization	Exogenous (independent)	Factor related to accessing learning information
Achievement Motivation	Exogenous (independent)	Internal drive to achieve academic success
Learning Skills	Endogenous (dependent)	Learning outcomes influenced by the two variables

Overall, the combined contribution of internet use and achievement motivation to learning skills is 31.3%, indicating a moderate effect. This suggests that students’ learning skills can be influenced by both factors. Therefore, improving appropriate internet utilization and strengthening achievement motivation are important strategies for enhancing the learning skills of Guidance and Counseling students at Universitas Negeri Padang.

DISCUSSION

The findings of this study indicate that internet utilization and achievement motivation jointly make a significant contribution to students’ learning skills. This result reinforces previous studies suggesting that appropriate use of the internet can enhance students’ learning effectiveness (e.g., X & Y, 2022), and that achievement motivation plays an important role in improving the regulation of learning strategies (Z, 2023).

However, the contribution identified in this study (31.3%) is lower than that reported in previous research, which found contributions exceeding 40%. This discrepancy may be explained by the specific characteristics of the study population, namely Guidance and Counseling students, who possess unique academic and professional demands.

Guidance and Counseling students are required to master practical competencies such as observation, counseling skills, empathetic communication, and the preparation of service reports. Consequently, their learning skills are not solely dependent on internet utilization and achievement motivation, but are also influenced by other factors, including emotional regulation, interpersonal competence, and the quality of academic supervision.

Thus, this study not only confirms previous findings but also highlights an important research gap, namely that the magnitude of the influence of these variables may vary when applied to populations with more complex academic characteristics, such as Guidance and Counseling students.

CONCLUSION

Based on the findings, this study concludes that internet utilization and achievement motivation serve as significant predictors of students' learning skills. Their combined contribution indicates that learning competence is shaped not only by access to digital information resources but also by students' internal drive to achieve academic success. These findings highlight the importance of integrating both technological and motivational dimensions in fostering effective learning skills, particularly in higher education contexts that demand self-regulated learning and strategic study management.

However, the relationships identified in this study are predictive rather than causal, as the research employed a non-experimental design. Several limitations should also be acknowledged. First, the sample was limited to students from the Guidance and Counseling program, which may restrict the generalizability of the findings. Second, the use of self-report instruments may introduce response bias. Third, the study did not incorporate other potentially influential variables, such as emotional regulation, academic support, or practicum workload. These limitations suggest opportunities for future research to develop more comprehensive models of learning skills.

The findings of this study offer several implications for higher education practice. First, institutions should design interventions that simultaneously enhance students' digital literacy and achievement motivation, as both factors jointly contribute to learning skills development. Second, instructional strategies should encourage active learning, structured engagement with digital resources, and the development of self-regulated learning behaviors. Third, academic support services should be strengthened to foster students' motivation and provide guidance in managing learning strategies effectively.

Future studies are encouraged to explore additional variables that may influence learning skills, such as self-regulation, peer influence, emotional intelligence, and academic workload. Expanding the research to different academic disciplines and institutional contexts would also improve the generalizability of findings. Furthermore, the use of longitudinal or experimental designs is recommended to better establish causal relationships between variables.

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