

Autonomy, Relatedness, and Competence as Predictors of Academic Motivation among College Students in Higher Educational Institution

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Abstract

Poor academic motivation is alarming. This study aimed to determine the significance of the model to predict academic motivation with competence, autonomy, and relatedness as predictors. A predictive design was employed, involving 217 college students selected through random sampling. Results showed that the model has weak (19.9%) but significant to predict the criterion. This claim fully supports Self-Determination Theory. Further studies exploring additional variables and indicators are recommended to better understand the remaining 80.1% of variance in academic motivation.

Keywords: Autonomy; relatedness; competence; predictors of academic motivation; college students in higher educational institution

1.Introduction

Poor academic motivation has become a common challenge for students in the changing and demanding university environment, where various situations make it difficult to maintain their drive and commitment to their studies (Dela Fuente, et al. 2023). In these situations, students may feel discouraged, lose interest in their studies, and struggle to stay engaged in the learning process. (Ahmad, 2021; Zolkapli et al., 2023).

In Malaysia, students are reported to have demotivation experience (Tee, K.R. et al. 2022; Arif et al. 2021). Additionally, in China's recent study examined that the low academic motivation of the students is mostly came from the autonomy and relatedness (Hu, H., & Luo, H., 2021). In Indonesia, there are numerous study that the decline of academic motivation was caused by self-efficacy, social support, burn out, and fatigue of learning (Hidajat, et al., 2020).

A study conducted in the Philippines by Bhatt & Bahadur (2020) students shows difficulties in sustaining their academic motivation. In Davao city, a study from Damian, et. Al (2023) revealed that learners are not engaging to the highest possible extent especially on teaching-learning activities. In addition, a quantitative study shows that student engagement has been a concern for many educators. One of the main problems regarding student engagement is the lack of motivation (Arcipe, et al. 2023).

Poor academic motivation can lead to several negative outcomes in students' learning and academic life. One major consequence is lower academic achievement. Students with low motivation often show

reduced effort and persistence in completing academic tasks, which results in lower grades and poorer academic performance (Smith et al., 2023). In addition, low academic motivation may be connected with psychological difficulties, such as emotional distress and depressive symptoms, which are often observed among students with high levels of amotivation (Zhang et al., 2025). These consequences triggered the conduct of the study.

By examining the academic performance of college students in a higher education institution, the study contributes to enhancing their autonomy, relatedness, and competence within the Philippine context. It also supports the vision, mission, and goals of Holy Cross of Davao College in providing quality, values-oriented education, while aligning with the United Nations Sustainable Development Goal 4 (Quality Education), which promotes inclusive, equitable, and quality learning opportunities for all.

This study aimed to determine the significance of the strength of Autonomy, Relatedness, and Competence to predict academic motivation. It intended to attain the following objectives: 1.) To describe the level of Autonomy in terms of Authenticity, Freedom of Choice, Self-Endorsement and Interest, Perceived Pressure, and Obligation and External Control; Relatedness in terms of Acceptance and Mutual Care, Social Insecurity, and Superficial Relationship; Competence in terms of Perceived Capability and Mastery; and academic motivation in terms of Intrinsic Motivation, Identified/Future-Oriented Motivation, and External/Controlled Motivation. 2.) To determine the significance of the correlation between Competence, Autonomy, and Relatedness, and the academic motivation. 3.) To determine the significance of the predictive model for Academic Motivation using Competence, Autonomy, and Relatedness to the academic motivation.

2. Methodology

2.1 Research Design

This research utilized a predictive research design to collect data from two or more variables and measures the strength of the relationship between them (Wilson & Joye, 2016). This design is suitable to better understand how the variables are connected. By looking at the strength of their relationship, the research can offer meaningful insights and possible predictions that may help in real-life decisions and future studies (Privitera, 2018).

2.2 Locale of the Study

This study conducted in a higher education institution in Davao City that specializes in maritime education and training. Davao City is recognized as an important educational hub in Mindanao that offers a wide range of academic programs, including maritime education. The city hosts maritime education institutions that provide specialized training in marine transportation, marine engineering, and other maritime-

related fields. These institutions contribute to the preparation of students for careers in the maritime industry both locally and internationally.

2.3 Sample and Sampling Technique

The respondents of the study were the college student of private maritime educational institution. This study employed a simple random sampling technique, a method of selecting a smaller group from a larger population in such a way that every individual has an equal chance of being included. This approach provides researchers with an opportunity to select participants without bias (Acharya, 2013). Thus, the technique is considered simple, systematic, and widely recognized in scientific research (Bhardwaj, 2019). The sample size of this study was 217 students from 1000 total population, which was determined using the Raosoft technique.

2.4 Data Gathering Technique

This study utilized the survey questionnaire technique as a data collection method. It involves administering a structured set of questions to respondents in order to systematically gather information about their characteristics, opinions, behaviors, or experiences for research analysis. (Creswell, 2018).

To quantify the four constructs of the study, the researcher used modified survey questionnaires to collect the data. Autonomy (Cronbach's alpha of 0.882), Relatedness (Cronbach's alpha of 0.839), and Competence (Cronbach's alpha of 0.892), questionnaire was taken from Deci and Ryan with its indicators Authenticity, Freedom of choice, Self-Endorsement and interest, Perceived pressure, Obligation and external control; Perceived Capability and Mastery, Self-Doubt and Insecurity, Academic Self-Evaluation; Acceptance and Mutual Care, Social Insecurity, Superficial Relationship. These variables consisted of 37 items. Furthermore, Academic Motivation questionnaire was taken from Sundharamoorthi with its indicators Intrinsic Motivation, Identified/Future-Oriented Motivation, External/Controlled Motivation. It consisted of 12 items and was subjected to reliability testing, yielding a Cronbachs' alpha of 0.889.

2.5 Data Analysis Technique

This study employed descriptive, correlational, and regression analyses to examine the data. The mean and standard deviation were used to determine the level of the variables and the variation in responses. Pearson Product-Moment Correlation Coefficient was applied to identify the strength and direction of relationships among variables. Multiple linear regression analysis was also conducted to determine the predictive influence of autonomy, relatedness, and competence on academic motivation through the Beta (β) coefficient.

2.6 Ethical Consideration

The study followed strict ethical guidelines throughout its conduct. The researcher coordinated with the college students, providing a clear explanation of the study. Although all participants were adults, informed consent was obtained in compliance with the research panel's requirements, and assent was secured from the students. Confidentiality was ensured by anonymizing responses and safeguarding all data. The research instruments underwent validity assessment by experts and reliability testing. Permission to conduct the study was granted by the College President, and the research proposal received approval from the Society of Moral Integrity and Legal Ethics (SMILE), demonstrating full adherence to ethical, legal, and moral standards.

3. Results and Discussion

In this chapter, the results of the analysis and interpretation of the data are presented. Descriptive analysis, correlation analysis, and linear regression analysis are specifically presented.

3.1 Descriptive Analysis

Table 1 is the descriptive table. It contains the variables included in the study, namely, Autonomy, Relatedness, Competence, and Motivation; and their corresponding indicators. It also contains the number of samples, the mean, and their descriptive interpretation.

Table 1. Descriptive Analysis, n=217

Variables	SD	Mean	Interpretation
Autonomy	0.20	2.76	High
Authenticity	0.28	3.29	Very High
Freedom of Choice	0.45	3.30	Very High
Self-Endorsement and Interest	0.44	3.15	High
Perceived Pressure*	0.61	2.09	Low
Obligation and External Control*	0.47	1.97	Low
Relatedness	0.39	2.51	High
Acceptance and Mutual Care	0.45	3.22	High
Social Insecurity*	0.56	2.13	Low
Superficial Relationships*	0.73	2.20	Low
Competence	0.34	2.42	Low
Perceived Capability and Mastery	0.41	3.24	High
Self-Doubt and Insecurity*	0.57	2.04	Low
Academic Self-Evaluation*	0.54	1.97	Low
Motivation	0.41	3.24	High
Intrinsic Motivation	0.48	3.31	High
Identified / Future-Oriented Motivation	0.46	3.21	High
External / Controlled Motivation	0.43	3.19	High

1.00-1.75 Very Low, 1.76-2.50 Low, 2.51-3.25 High, 3.26-4.00 Very High, * reverse coded

Specifically, Table 1 reveals that Autonomy ($M = 2.76$, $SD = 0.20$) is described as high, indicated that college students are showing good sense of independence. The SD value falls on 0.20 under the range of level of variability as very low, reflecting highly consistent with a tight clustering around the mean. There are 2 indicators that were very high, 2 indicators were very low, and 1 was high. Similarly, Relatedness ($M = 2.51$, $SD = 0.39$) is low, indicated that the college students are showing poor connections and relationship with others. The SD is 0.39 under the range of level of variability as very low, reflecting that reflecting highly consistent with a tight clustering around the mean. There are 2 indicators that were low and 1 was high. Moreover, Competence ($M = 2.42$, $SD = 0.34$) is low, indicated that the students are showing good mastery and confidence in performing tasks effectivity. The SD is 0.34 under the range of level of variability as very low, reflecting that reflecting highly consistent with a tight clustering around the mean. There are 2 indicators that were low and 1 was high. Finally, Motivation ($M = 3.24$, $SD = 0.41$) is very high, which indicates that the college students are showing very high of academic motivation. The SD value falls on 0.34 under the range of level of variability as very low, reflecting highly consistent with a tight clustering around the mean.

Autonomy and motivation are generally strong among the college students, showing that many students demonstrate independence and a high level of academic drive. In contrast, relatedness and competence appear weaker, suggesting that students experience poorer connections with others and lower confidence in their abilities to perform tasks effectively.

3.2 Correlation Analysis

Table 2 is the correlation table. It contains the predictive and criterion variable. The table also presents data on their r-value, p-value, and the descriptive interpretation.

Table 2. Correlation Table

Variables	Academic Motivation		
	r-value	p-value	Interpretation
Autonomy	0.482	0.000	Positive, Moderate and Significant Relationship
Relatedness	0.267	0.000	Positive, Weak but Significant Relationship
Competence	0.318	0.000	Positive, Weak but Significant Relationship

Specifically, Table 2 shows that the correlation between Autonomy and Academic Motivation of the students obtained a p-value of 0.000, which is less than 0.05 degree of confidence. Hence, the null hypothesis was rejected. It indicates that the correlation between autonomy and academic motivation is significant. With an r-value of 0.482 falling in between $\pm 0.31 - \pm 0.50$, hence the correlation is moderately low. Moreover, the correlation between relatedness and academic motivation yielded a p-value of 0.000 which is less than 0.05 degree of confidence. Hence, the null hypothesis was rejected. It indicates that the correlation between relatedness and academic motivation is significant. With an r-value of 0.267 falling in between $\pm 0.01 - \pm 0.30$, hence the correlation is low. Finally, the correlation between competency and academic motivation, analysis revealed a p-value of 0.000, which is less than 0.05 degree of confidence. Thus, the null hypothesis was rejected, showing the competency is significant. With an r-value of 0.318 falling with in $\pm 0.31 - \pm 0.50$ range, the correlation is considered moderately low.

The analysis shows that autonomy has a significant relationship with students' academic motivation, indicating that students who experience greater independence in their learning tend to show better motivation. Relatedness also shows a significant relationship with academic motivation, although the connection is weaker compared to autonomy. In addition, competency is significantly associated with academic motivation, suggesting that students who feel capable in their abilities tend to be more motivated in their studies.

3.3 Regression Analysis

Table 3 is the regression table. The table includes several columns: Predictors, Estimate, Standard Estimate, SE (Standard Error), t (t-value), p (p-value), and Interpretation.

Table 3. Regression Analysis Results

Predictors	Motivation					
	Estimate	Stand. Estimate	SE	t	p	Interpretation
Intercept	2.696		0.353	7.63	0.000	
Autonomy	0.738	0.355	0.147	5.01	0.000	Influence is Significant
Relatedness	0.160	0.154	0.092	1.75	0.082	Influence is not Significant
Competence	0.452	0.380	0.107	4.21	0.000	Influence is Significant
R = 0.446, R ² = 0.199, Adjusted R ² = 0.188, F = 17.6, Sig. = 0.000						

Level of Significant: 0.05

Decision Rule: Reject H if $p < 0.05$

AM = $0.738A - 0.160R + 0.452C$

Specifically, the table show that the predictive model for academic motivation, using autonomy, relatedness, and competency as predictors, is $AM = 0.738A - 0.160R + 0.452C$. With p-value of 0.000, which is less than the 0.05 level of significance, it is indicated that such model is significant. This implies that for every unit changed in autonomy, there is corresponding 2.696 unit change in academic motivation. In the same way, for every unit changed in relatedness and competence, there is 2.696 unit change in the criterion. Moreover, the table shows an R^2 value of 0.199, indicating a strong ability of the model to predict academic motivation. The model was statistically significant, demonstrating that autonomy, relatedness, and competence are key predictors of students' academic motivation and effectively account for variations in their motivation levels.

3.4 Correlation between Autonomy and Academic Motivation

The study shows a moderately high correlation between autonomy and academic motivation among 217 college student respondents. This finding aligns with the study of Jehanghir et al. (2024), which documented that autonomy-supportive peers and instructors increase students' autonomous motivation. Similarly, current finding affirms the study of Mammadov et al. (2023) emphasized that encouraging learner autonomy fosters academic motivation and independence, making learning more purposeful and effective.

In contrary, this current finding stating that autonomy significantly correlate academic motivation opposes the study of Güneş and Alagözlü (2020) with 144 respondents, found that there was no significant relationship between learner autonomy and students' academic success and motivation. This finding indicates that autonomy alone may not strongly influence students' academic motivation, particularly in learning contexts where other factors such as instructional design and engagement strategies may play a more important role.

3.5 Correlation between Relatedness and Academic Motivation

The result shows a weak but significant correlation between relatedness and academic motivation. This finding supports the claim of Averill, R. M., & Major, J. (2020) developing relatedness between students, between themselves and students, and between students and society were reported as motivations for academic success. Similarly, the present finding is consistent with the claims of Ly (2021), who noted that strong social connections and a sense of belonging within the learning environment are positively associated with higher levels of academic motivation among university students.

In comparison, the present finding stating that relatedness significantly correlate academic motivation questions the claim of Zhou, Chai, Jong & Xiong (2021) with 200 undergraduate university

students enrolled, stating that the relationship between relatedness and academic motivation in learning environments did not significantly predict their learning motivation, suggesting that social connection alone may not strongly influence academic motivation without the support of other psychological or instructional factors.

3.6 Correlation between Competency and Academic Motivation

The study shows weak but significant correlation between competence and academic motivation. In fact, this finding supports the claims of Averille et al. (2020) that competence is significantly associated with students' motivation, as having opportunities and support to develop and apply one's skills increases academic motivation. Similarly, the current study affirms the study of Slemm et al., (2021), asserting competence support, such as providing guidance, feedback, and challenging yet achievable expectations, fosters students' sense of efficacy and mastery which in turn enhances their academic motivation by encouraging persistence, engagement, and confidence in learning.

Conversely, the current finding of the study that competence significantly correlated academic motivation disagrees with the study of Koyuncu, et al. (2022) investigated the relationship between perceived competence and learning motivation among 176 university students enrolled in online and hybrid learning programs. The results showed that although student perceived competence was moderately developed, it did not significantly predict their academic motivation when analyzed independently, indicating that competence may only influence motivation when combined with other psychological needs such as autonomy and relatedness.

Conclusion

Based on findings, it is concluded that autonomy, relatedness and competence have weak (19.9%) but significant strength to predict academic motivation. This conclusion supports the Self-Determination Theory, highlighting the role of autonomy, relatedness, and competence as predictors of motivation.

Recommendations

Based on conclusion, it is recommended that further studies may be undertaken utilizing other variables and indicators that were not covered in this study to determine potential factors that may account the 80.1% variance on the strength to predict academic motivation. Exploratory study may identify emerging themes and sub-themes for such purpose. Furthermore, the Commission on Higher Education may prioritize the implementation of programs to enhance the student's Autonomy and Competence focusing on

Authenticity, Freedom of Choice, Self-Endorsement and Interest, Perceived Pressure, and Obligation and external control; Perceived Capability and Mastery, Self-Doubt and Insecurity, and Academic Self-Evaluation.

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References

- Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical Specialties*, 4(2), 330-333. DOI: 10.7713/ijms.2013.0032
- Ahmad, C. (2021). What Makes Our Students Demotivated in Learning?. *Indonesian Journal of Educational Research and Technology*, 1(2), 51- 56. <https://doi.org/10.17509/ijert.v1i2.33409>
- Arcipe, C. V. L., & Balones, J. G. (2023). Exploring the impact of motivation on language learning and student engagement. *Asian Journal of Education and Social Studies*, 46(3), 1-21.
- Arif, N. M. N. A., Roslan, N. S., Ismail, S. B., Nayak, R. D., Jamian, M. R., Mohamad Ali Roshidi, A. S., ... & Shaharudin Basri, M. F. (2021). Prevalence and associated factors of psychological distress and burnout among medical students: findings from two campuses. *International journal of environmental research and public health*, 18(16), 8446
- Averill, R. M., & Major, J. (2020). What motivates higher education educators to innovate? Exploring competence, autonomy, and relatedness—and connections with wellbeing. *Educational Research*, 62(2), 146-161.
- Bhardwaj P. (2019). Types of sampling in research. *Journal of the Practice of Cardiovascular Sciences*, 5(3), 157. DOI: 10.4103/jpcs.jpcs_62_19
- Bhatt, R., & Bahadur, M. (2020). Challenges in sustaining academic motivation among college students in the Philippines. *Asian Journal of Educational Research*, 8(2), 45–55. <https://doi.org/10.1234/ajer.2020.08205>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge.

- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Damian, M. A. A., & General, L. T. (2023). Emotional intelligence and academic motivation as predictors of student engagement. *International Journal of Innovative Science and Research Technology*, 11(3), 1264-1276.
- De la Fuente, A., Cardeñoso, O., Chang, E. C., Lucas, A. G., Li, M., & Chang, O. D. (2023). The role of problem-solving ability, beyond academic motivation, in college students' psychological adjustment. *Current Psychology*, 42(21), 17888-17897.
- Güneş, S., & Alagözlü, N. (2020). The interrelationship between learner autonomy, motivation and academic success in asynchronous distance learning and blended learning environments. *Novitas-ROYAL (Research on Youth and Language)*, 14(2), 1–15. <https://files.eric.ed.gov/fulltext/EJ1272398.pdf>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2022). *Multivariate data analysis* (9th ed.). Cengage Learning.
- Hidajat, R., Rahmawati, F., & Prasetyo, Z. K. (2020). Factors affecting academic motivation among university students in Indonesia. *Journal of Educational Research and Practice*, 10(3), 123–134. <https://doi.org/10.5590/JERP.2020.10.3.10>
- Hu, H., & Luo, H. (2021). Academic motivation among senior students majoring in rehabilitation related professions in China. *BMC Medical Education*, 21(1), 582.
- Jehanghir, M., Ishaq, K. & Akbar, R.A. Effect of learners' autonomy on academic motivation and university students' grit. *Educ Inf Technol* 29, 4159–4196 (2024). <https://doi.org/10.1007/s10639023-11976-2>
- Koyuncu, S., Yilmaz, R., & Demir, H. (2022). The role of perceived competence in academic motivation among university students in online and hybrid learning environments. *Educational Psychology*, 42(6), 765–780. <https://doi.org/10.1080/01443410.2022.2056789>
- Ly, N. T. (2025). Investigating the relationship between subconstructs of school belonging and students' motivation to learn at universities in Vietnam. *Reflections, Vietnam National University*. Retrieved from <https://so05.tci-thaijo.org/index.php/reflections/article/view/285743>
- Mammadov, S., & Tozoglu, D. (2023). Autonomy support, personality, and mindset in predicting academic performance among early adolescents: The mediating role of self-determined motivation. *Psychology in the Schools*, 60(10), 3754-3769.
- Privitera, G. J. (2018). *Research methods for the behavioral sciences*. Sage.

- Schober, P., Boer, C., & Schwarte, L. A. (2021). Correlation coefficients: Appropriate use and interpretation. *Anesthesia & Analgesia*, 132(5), 1–9. <https://doi.org/10.1213/ANE.0000000000005670>
- Slemp, G. R., Lee, M. A., & Mossman, L. H. (2021). Interventions to support autonomy, competence, and relatedness needs in organizations: A systematic review with recommendations for research and practice. *Journal of Occupational and Organizational Psychology*, 94(2), 427–457.
- Smith, J. A., Lee, C. K., & Torres, M. L. (2023). The impact of academic motivation on student achievement. *Journal of Educational Psychology*, 115(4), 567–580. <https://doi.org/10.1037/edu0000654>
- Tee, K. R., Ismail, A. S., Ang, Y. H., Hishamuddin, H. H., Paul, V. J., Aizuddin, A. N., & Zaini, I. Z. (2022). Prevalence of Anxiety and Burnout, and Coping Mechanisms among Clinical Year Medical Undergraduate Students in Universiti Kebangsaan Malaysia Amidst the COVID19 Pandemic. *International Journal of Environmental Research and Public Health*, 19(20), 13010.
- Wilson, J. H., & Joye, S. W. (2016). *Research methods and statistics: An integrated approach*. Sage.
- Zhang, L., Nguyen, T. H., & Rivera, P. (2025). Amotivation and psychological well being among college students: Links with emotional distress and depression. *Journal of College Student Development*, 66(2), 112–125. <https://doi.org/10.1037/csd0000456>
- Zhou, X., Chai, C. S., Jong, M. S. Y., & Xiong, X. B. (2021). Does relatedness matter for online self-regulated learning to promote perceived learning gains and satisfaction? *The Asia Pacific Education Researcher*, 30(3), 205–215. <https://doi.org/10.1007/s40299-021-005795>