

Assessing How Hybrid Learning Shapes Academic Achievement: Evidence of Communication-Mediated Effects in Higher Education

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Abstract

This research explores the effect of hybrid learning on students' Grade Point Average (GPA) in the Management Study Program at Makassar State University, with interpersonal communication as an intervening variable. The Covid-19 pandemic has forced educational institutions to adapt to new learning methods, combining face-to-face and online learning. This research aims to evaluate the effectiveness of the hybrid learning model in increasing GPA and identify the role of interpersonal communication in this process. Through a quantitative approach with descriptive methods, data were collected using a questionnaire distributed to active students from the 2021 to 2024 classes. The research results show that hybrid learning significantly increases students' GPA, and the effectiveness of interpersonal communication is proven to mediate the relationship between hybrid learning and increasing GPA. These findings emphasize the importance of clear and responsive communication in supporting the learning process, as well as encouraging the development of better communication strategies to achieve optimal academic results.

Keywords: Hybrid Learning, Cumulative Achievement Index, Interpersonal Communication, Education.

1. Introduction

The COVID-19 pandemic in Indonesia has had a significant impact on various sectors of society, including education. This situation forced the government to find solutions to emerging crises. Firtrirah (2020) notes that the pandemic brought numerous new challenges to the education sector. Before the pandemic, learning activities were conducted face-to-face, but these activities had to be halted due to the widespread transmission of COVID-19 in Indonesia and across the globe. As a solution, digital media connected to the internet became an important innovation in learning. Students at all levels of education were required to adapt to remote learning from home.

To address these challenges, the Ministry of Education and Culture issued guidelines regarding the implementation of face-to-face learning for the 2020/2021 academic year. These guidelines recommend variations in learning approaches according to the transmission risk levels in each region. Areas with moderate to high transmission risk were instructed to continue online learning, while low-risk areas were permitted to conduct face-to-face learning with government approval. Hybrid learning emerged as an alternative solution, combining face-to-face instruction with online learning.



Over time, remote learning developed in a way that improved interaction and communication between teachers and students. According to Dwiryogo in Prasetyo (2022), hybrid learning is a combination of face-to-face and distance learning conducted simultaneously. Its implementation addressed complaints regarding poor internet connectivity in several regions, allowing students to attend face-to-face classes when internet access was insufficient.

Similarly, the Management Study Program at Makassar State University began implementing hybrid learning as a result of the COVID-19 pandemic. Learning activities experienced ongoing adjustments aligned with the progression of COVID-19 cases. From 2020 until recently, the Management Study Program implemented online learning as a preventative measure to reduce virus transmission on campus. Online learning utilized e-learning platforms such as Google Meet, Zoom, Google Classroom, and other supporting tools. As time passed and the region entered the new normal era, COVID-19 cases in Makassar began to decline. Therefore, starting in mid-March 2022, the Management Study Program adopted a hybrid learning model. This model is expected to enhance learning effectiveness and ultimately have a positive impact on students' Grade Point Average (GPA). GPA is an academic performance indicator reflecting students' ability to absorb and understand the material taught.

However, despite the potential for GPA improvement through hybrid learning, challenges arise regarding the effectiveness of communication between lecturers and students. Effective communication is crucial to ensuring that information is delivered clearly and well understood by students. Students' active engagement in the learning process is strongly influenced by the quality of interaction. Poor communication can lead to misunderstandings, reduced learning motivation, and ultimately lower academic achievement.

The phenomenon observed in the Management Study Program at Makassar State University shows variations in student learning outcomes even after hybrid learning was implemented. Some students experienced significant GPA improvement, while others struggled to understand the material. This disparity may stem from differences in the effectiveness of communication between lecturers and students, as well as among students themselves. Ineffective communication can confuse, a lack of motivation, and have negative impacts on academic performance.

Based on this situation, the researcher aims to examine the extent to which communication effectiveness in hybrid learning influences the academic performance (GPA) of Management Study Program students at Makassar State University. The hybrid learning model is considered highly relevant for the current era.

Based on the background and phenomena described, the research questions are as follows:

- (1) How does hybrid learning influence the improvement of students' GPA in the Management Study Program at Makassar State University?
- (2) To what extent does interpersonal communication mediate the effect of hybrid learning on students' GPA improvement?
- (3) What factors influence communication effectiveness between lecturers and students in the context of hybrid learning in the Management Study Program at Makassar State University?

2. Literature Review

2.1. Hybrid Learning

Hybrid learning is an instructional model that combines face-to-face learning and online learning, offering an innovative solution in education, particularly in today's digital era. According to Dwiryogo in Prasetyo (2022), hybrid learning is a simultaneous combination of traditional classroom instruction and distance learning. This approach enables students to gain a more interactive and engaging learning experience by integrating the strengths of both methods.

From the description above, it can be concluded that hybrid learning is a blend of various learning methods that allows students to adopt concepts more flexibly. The purpose of this system is to facilitate effective interaction between lecturers and students during the teaching–learning process. Traditional classroom learning is often perceived as less engaging due to its one-way communication pattern, which limits opportunities for students to be creative and innovative, especially in developing knowledge and skills. According to Prasetyo (2022), one of the indicators is that students have flexibility in choosing the time, place, and method of learning according to their needs and constraints.

2.2. Interpersonal Communication

Communication in learning is the process of delivering messages, information, or knowledge from educators (teachers or lecturers) to students. Mortensen (2020) states that communication is the process of sending and receiving messages between individuals or groups through symbols understood by both parties.

Based on this statement, interpersonal communication in learning is a crucial process involving the transfer of messages, information, or knowledge from instructors to learners. This communication is not one-directional but requires mutual understanding and feedback through shared symbols. Effective communication in learning requires active participation from both parties to achieve optimal comprehension. According to Mortensen (2020), one of the indicators is that the symbols used in communication—such as language, images, or gestures—must be mutually understood.

2.3. Cumulative Grade Point Average (GPA)

GPA is a numerical measure that reflects the average academic performance of a student throughout their studies in higher education. Husna (2020) states that GPA is an important indicator used to evaluate students' academic achievement. The higher the GPA, the better the academic performance, indicating stronger learning abilities and comprehension of the material taught.

From the explanation above, it can be concluded that the Cumulative Grade Point Average (GPA) represents a student's overall academic achievement during their university studies. This shows that GPA reflects not only a student's learning ability but also their level of understanding of the course material. Therefore, GPA is a relevant metric for assessing academic success at the university level. According to Husna (2020), the higher the GPA, the better the student's academic performance, demonstrating strong learning capability and comprehension.

2.4. Research Hypotheses

H1: Hybrid learning has a significant effect on improving the Cumulative Grade Point Average (GPA) of students in the Management Study Program at Makassar State University.

H2: Interpersonal communication effectiveness has a significant effect on improving the GPA of students in the Management Study Program at Makassar State University.

H3: Interpersonal communication significantly mediates the relationship between hybrid learning and GPA improvement among students in the Management Study Program at Makassar State University.

3. Methods

In this study, the researcher employed a quantitative approach with a descriptive method based on primary data. The research was conducted in the Management Study Program at Makassar State University, specifically within the Department of Management, from early September to the end of October 2024. The population consisted of all active Management students from the 2021 to 2024 cohorts. The sampling technique used was purposive sampling, aimed at obtaining relevant data regarding consumer perceptions, their influence on purchasing decisions, and the needs of the study.

Purposive Sampling Formula

$$n = \frac{N}{1 + N(e)^2}$$

Where:

- n = desired sample size
- N = population size (1800)
- e = margin of error (10% or 0.1)

Using this formula, with a 10% margin of error, the recommended sample size for a population of 1,800 is approximately 95 respondents. This means that at least 95 participants are needed to ensure the desired level of accuracy in the study.

The type of data used in this research is quantitative, employing causal testing. The primary data source was a questionnaire, consisting of written statements designed to collect responses from participants. A Likert scale ranging from 1 to 5 was used in the questionnaire. The data obtained from the primary source were tabulated using Microsoft Excel and subsequently processed using SPSS (Statistical Program for Social Science) version 13.0.

The variable items analyzed using SPSS included: validity test, reliability test, t-test (partial test), F-test (simultaneous test), multicollinearity test, coefficient of determination, and heteroscedasticity test.

4. Results and Discussion

Table 1. Respondent Characteristics by Gender

Gender	Frequency	Percentage
Male	30	30%
Female	70	70%
Total	100	100%

Source: Primary data processed using MS Excel, 2024.

Table 1 shows that the majority of respondents are female, totaling 70 individuals or 70% of all respondents, while male respondents amount to 30 individuals or 30%. This indicates that female participation in this study is more dominant than male participation.

Table 2. Respondent Characteristics by Cohort Year

Cohort Year	Frequency	Percentage
2021	5	5%
2022	38	38%
2023	32	32%
2024	25	25%
Total	100	100%

Source: Primary data processed using MS Excel, 2024.

Table 2 shows the distribution of respondents from the Management Study Program at Universitas Negeri Makassar across cohort years 2021–2024. Students from the 2022 cohort represent the largest proportion at 38%, followed by the 2023 cohort at 32%. The 2024 cohort contributes 25%, while the 2021 cohort has the smallest proportion at only 5%.

Table 3. Validity Test Results

Variable	Item	r-count	r-table	Description
Hybrid Learning (X)	X1	0.519	0.195	Valid
	X2	0.435	0.195	Valid
	X3	0.577	0.195	Valid
	X4	0.476	0.195	Valid
GPA (Y)	Y1	0.352	0.195	Valid
	Y2	0.751	0.195	Valid
	Y3	0.352	0.195	Valid
	Y4	0.288	0.195	Valid
Interpersonal Communication (Z)	Z1	0.610	0.195	Valid
	Z2	0.577	0.195	Valid
	Z3	0.651	0.195	Valid
	Z4	0.279	0.195	Valid

Source: Primary data processed using SPSS version 13.0, 2024.

Table 3 indicates that all measured items for Hybrid Learning (X), GPA (Y), and Interpersonal Communication (Z) have r-count values greater than the r-table value (0.195). This means all items are valid and can be used as measurement indicators in the study.

Table 4. Reliability Test

Variable	Cronbach's Alpha	Description
Hybrid Learning (X)	0.168	Reliable
GPA (Y)	0.022	Reliable
Interpersonal Communication (Z)	0.404	Reliable

Source: Primary data processed using SPSS version 13.0, 2024.

Table 4 shows that all variables meet the minimum criteria to be considered reliable. The highest reliability is found in the Interpersonal Communication variable (Z) with a Cronbach's Alpha of 0.404, followed by Hybrid Learning (X) and GPA (Y).

Table 5. Partial Test (t-test)

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
Constant	2.394	1.156	—	2.071	.041
HL	.384	.096	.344	3.981	.000
KI	.325	.072	.389	4.496	.000

Dependent Variable: GPA

Source: Primary data processed using SPSS version 13.0, 2024.

Table 5 demonstrates that Hybrid Learning (HL) and Interpersonal Communication (KI) significantly influence GPA, with Sig < 0.05. This means both variables contribute significantly to improving students' academic achievement.

Table 6. Simultaneous Test (F-test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	145.456	2	72.728	18.432	.000
Residual	382.734	97	3.946		
Total	528.190	99			

Predictors: (Constant), GPA, Hybrid Learning *Dependent Variable: Interpersonal Communication*

Table 6 shows that the simultaneous effect test yields an F-value of 18.432 with Sig = 0.000, indicating that Hybrid Learning (X) and GPA (Y) jointly have a significant effect on Interpersonal Communication (Z).

Table 7. Multicollinearity Test

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.	Tolerance	VIF
Constant	2.394	1.156	—	2.071	.041	—	—
HL	.384	.096	.344	3.981	.000	1.000	1.000
KI	.325	.072	.389	4.496	.000	1.000	1.000

Dependent Variable: Interpersonal Communication

Source: Primary data processed using SPSS version 13.0, 2024.

Table 7 indicates no multicollinearity issues, as both the Tolerance and VIF values fall at ideal levels (Tolerance = 1.000; VIF = 1.000). Thus, the independent variables do not exhibit problematic correlations.

Table 8. Coefficient of Determination (R²)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.525	.275	.260	1.986

Predictors: (Constant), Interpersonal Communication, Hybrid Learning
Source: Primary data processed using SPSS version 13.0, 2024.

Table 8 shows an R Square value of 0.275, indicating that Hybrid Learning (X) and GPA (Y) explain 27.5% of the variance in Interpersonal Communication (Z). This suggests that the model is moderately effective in explaining the variability of the dependent variable, although other influencing factors remain outside the model.

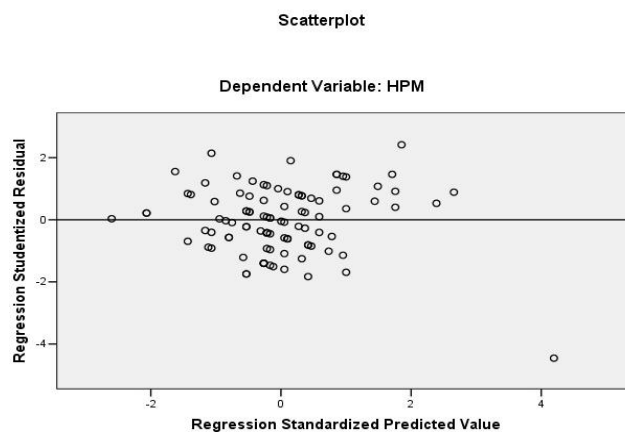


Figure 1. Heteroscedasticity Test

The scatterplot shows that the residual points are randomly distributed around the horizontal zero line without forming any distinct pattern. This indicates that the model does not exhibit heteroscedasticity, as the variance of residuals remains constant across predicted values. Therefore, the assumption of homoscedasticity is met, supporting the model's credibility and accuracy in generating regression estimates.

4.1. The Influence of Hybrid Learning on Grade Point Average (GPA)

This study shows that hybrid learning has a significant effect on improving students' GPA in the Management Study Program at Universitas Negeri Makassar. Based on the partial test (t-test), the Hybrid Learning (HL) variable obtained a significance value below 0.05, indicating that hybrid learning significantly influences students' GPA. Syawaluddin et al. (2024) found that hybrid learning models enhance student engagement in the teaching–learning process. By combining face-to-face and online interactions, hybrid learning enables students to be more actively involved, thereby increasing their motivation and comprehension of the course material. This heightened engagement directly contributes to improvements in GPA.

4.2. The Influence of Interpersonal Communication Effectiveness on GPA

The study demonstrates that the effectiveness of interpersonal communication significantly affects GPA improvement. Clear and responsive communication between lecturers and students is essential in the learning process, as it facilitates better understanding and reduces potential misunderstandings. As stated by Hargreaves (2021), clear and responsive communication between lecturers and students is crucial for fostering a positive learning environment. When lecturers are able to communicate effectively, students tend to feel more engaged and motivated.

4.3. The Mediating Role of Interpersonal Communication Between Hybrid Learning and Student GPA

The study also indicates that interpersonal communication mediates the relationship between hybrid learning and GPA improvement, producing significant results. This suggests that although the hybrid model provides flexibility and convenience in learning, its success heavily depends on the quality of communication among all parties involved. Thus, the study highlights the importance of enhancing communication strategies and maximizing the use of technology in the learning process to achieve optimal academic outcomes. Gamage et al. (2022) state that effective interpersonal communication strongly influences student engagement in the

learning process. In the context of hybrid learning, strong communication between instructors and students helps create a supportive learning environment, which in turn enhances material comprehension and academic performance.

5. Conclusion

This study shows that the hybrid learning model has a significant effect on improving the Grade Point Average (GPA) of students in the Management Study Program at Universitas Negeri Makassar. The effectiveness of interpersonal communication plays an important mediating role in this relationship. Active student engagement and clear communication between lecturers and students contribute substantially to improved understanding of the material and better academic outcomes. Therefore, the development of effective communication strategies and the optimization of technology use in hybrid learning are essential to achieving stronger academic performance.

In addition to hybrid learning and interpersonal communication, several other factors influence students' GPAs. First, the quality of teaching materials delivered by lecturers has a strong impact; well-structured and relevant learning materials enhance students' comprehension. Second, students' learning motivation is a key determinant—those with higher motivation tend to be more active and engaged in the learning process. Third, learning support facilities, such as stable internet access and user-friendly e-learning platforms, affect the effectiveness of online learning. Furthermore, the social environment surrounding students, including peer and family support, can influence their enthusiasm for learning and their engagement in academic activities. By considering all these factors, educational institutions can create a more conducive environment for achieving optimal academic outcomes.

6. References

- Arifirna, A. M. A., & Anisa Setya. (2020). *Interpersonal Communication: A Teaching Book*. Mungkid City, Magelang, Central Java.
- Bonaraja Purba, D., et al. (2020). *Communication Science: An Introduction* (Edited by Janner Simarmata). Medan: Yayasan Kita Menulis.
- Girlang. (2020). *Implementation of Online Learning in the Covid-19 Era* (1st ed.). Banyumas, Central Java: Lutfi Girlang.
- Hatmawan, S. R., & Aglis Andhita. (2020). *Quantitative Research Methods*. Yogyakarta: Deepublish.
- Hendri, E. (2019). *Persuasive Communication: Approaches and Strategies* (Edited by Anwar Holid). Bandung: Remaja Rosdakarya.
- Hutahaeran, P. W. (2021). *Application of Gamification Concepts in E-Learning* (Edited by Ndari Pangesti). Malang: Ahlimedia Press.
- Gamage, K. A. A., Gamage, A., & Dehideniya, S. C. P. (2022). Online and hybrid teaching and learning: Enhance effective student engagement and experience. *Education Sciences*, 12(10). <https://doi.org/10.3390/educsci12100651>
- Suwandi, S., Luju, E., Melinda, M., Mulyadi, Y. E., Akadiati, V. A. P., Yulianti, M. L., Purwati, A. S. M., & Abdurohim, A. (2022). Measuring firm value: Causality tests on institutional ownership and debt policy. *Akuntansi*, 1(3), 188–208. <https://doi.org/10.55606/jurnalrisetilmuakuntansi.v1i3.62>