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# The Mediating Role of Collaborative Skills on The Students' Business Correspondence Learning Outcomes Based on The Contructivism Theory

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**ABSTRACT**:

This research aims to enhance students' correspondence skills by investigating the impact of collaborative skills, engagement, and interpersonal communication on learning outcomes for office administration students. This quantitative study analyzed data from 118 students using SEM-PLS and found that collaborative skills had the most significant influence, followed by engagement and interpersonal communication. The findings indicate that collaborative learning activities are an effective way to enhance communication skills and engagement in learning outcomes. Additionally, the study revealed that collaborative skills successfully mediate between interpersonal communication and engagement in correspondence learning outcomes. These insights are valuable as they demonstrate how collaborative skills, engagement, and interpersonal communication impact learning outcomes for office administration students. By highlighting the significance of collaborative learning activities, the positive correlation between engagement and academic success, and the mediating role of collaborative skills in interpersonal communication, educators can tailor curricula to better prepare students for the complexities of modern workplaces.



## INTRODUCTION

Practical business correspondence skills are crucial for success in the professional world (ŽivkoviĿ, 2016). Uni office administration students often struggle with these skills, which can

hinder their communication ability in a professional setting. To enhance the business correspondence skills of students, it is essential to comprehend the elements that impact their learning results.

Learning outcomes stem from the educational journey, serving as indicators of meeting learning goals. These outcomes are derived through various assessments conducted by educators, including tests covering previously covered material (I Nyoman Suwandi, 2023). They serve as a yardstick for the maximum achievement students reach during their learning journey and are instrumental in gauging students' abilities and attributes post-learning engagement. The attainment of learning outcomes serves as a measure of the success of education, providing educators insight into the depth of student's grasp of the material presented earlier (Wahyuningsih, 2020).

However, many students, particularly those pursuing degrees in Office Administration at the University, still fall below average or fail to meet the Minimum Completion Criteria (MMC) in the Correspondence subject. This situation affects students' performance during learning activities and compromises the overall quality of the educational process. Ideally, students should achieve the predetermined minimum completion criteria and benchmarks for assessing learning outcomes (Wilson, 2015). For instance, based on the mid-test results of the Business Correspondence subject, many students have yet to meet the MMC requirements, indicating a pressing need for improvement in learning outcomes.

As a learning theory, Constructivism posits that students actively construct their understanding of the world rather than passively receiving knowledge (Fernando & Marikar, 2017). This theory suggests that learning is not simply about memorizing facts or receiving information from an authority figure; instead, it involves the active engagement of learners in making sense of new experiences and information. In constructivist classrooms, students are seen as active participants in their learning process, where they are encouraged to explore, question, and discover knowledge through hands-on activities, collaborative projects, and reflective practices (Kumar Shah, 2019).

Central to the constructivist perspective is learning as a social and cognitive process (Kalpana, 2014). Students learn through individual exploration and interactions with their peers, teachers, and the broader environment. Collaborative learning experiences, such as group discussions, problem-solving tasks, and cooperative projects, allow students to exchange ideas, challenge each other's thinking, and co-construct knowledge. By engaging in dialogue and negotiation with others, learners can refine their understanding, gain new perspectives, and

develop critical thinking skills.

Constructivism also emphasizes the importance of authentic learning experiences that are relevant and meaningful to students' lives. Educators can increase students' motivation and engagement by connecting learning to real-world contexts and addressing authentic problems and challenges (Bada & Olusegun, 2015). Whether through project-based learning, simulations, or field trips, these authentic experiences provide opportunities for students to apply their knowledge and skills in meaningful ways, reinforcing their understanding and preparing them for the complexities of the real world.

Based on the Constructivism theory, a critical factor that can potentially impact learning outcomes is the level of collaboration among students (Pramana et al., 2024). Collaborative activities allow students to practice and apply their skills in a real-world setting, receive feedback from peers, and learn from each other. (Tusyanah et al., 2023) stated that collaborative skills should be practiced because it is one of the dimensions of Indonesian students. Indonesian students should collaborate with various people from various backgrounds. When they collaborate, they can open up to improve themselves. The degree of collaboration among students is a pivotal factor that could significantly influence learning outcomes (Efendi & Sholeh, 2023). Engaging in collaborative activities allows students to practice and employ their skills in real-life scenarios and facilitates peer feedback and mutual learning. Proficiency in collaborative skills encompasses the capability to collaborate effectively, exchange ideas, and partake in constructive communication and teamwork.

Based on research, (Ode et al., 2017) stated that collaborative learning positively and significantly improves student learning outcomes. Apart from that, research conducted by (Primadiati & Djukri, 2017) shows that collaborative learning positively and significantly influences learning outcomes. Based on the explanation above, this research aims to investigate the influence of interpersonal communication and learning engagement on Correspondence learning outcomes, with collaborative skills serving as the mediating variable. By analyzing these variables and their interactions, the research aims to provide insights into the role of collaborative skills in enhancing the relationship between interpersonal communication, learning engagement, and Correspondence learning outcomes.

## METHOD

There were 118 students from university students majoring in Office Administration at the Faculty of Economics and Business, Universitas Negeri Semarang, who have undertaken

the Business Correspondence subject. The sample comprised female and male students. This study employed a cross-sectional survey approach conducted using an anonymous online questionnaire. In the first stage, participants voluntarily completed an informed consent from indicating their willingness to participate. In the second stage, participants completed the research questionnaire, which took approximately 20 minutes.

Table 1. The Operational Definitions of the Variables

| No | Variables | Definitions | Indicators |
|---|---|---|---|
| 1 | Correspondence Learning Outcomes (Y) | As the terminology suggests, learning outcomes are statements of desired learning results expressed in words that clarify how measurement can be achieved. Therefore, learning outcomes provide a basis for measuring and reporting on student achievement (Nusche, 2008). | Cognitive<br>Psychomotor<br><br>Bloom in (Sudjana, 2009:22) |
| 2 | Collaborative Skills (X1) | Collaboration skills are the ability to work together to do something with one goal (Sunbanu et al., 2019). | Productive work<br>Show respect<br>Compromise<br>Collaborative<br>Responsibility<br><br>(Greenstein, 2012) |
| 3 | Interpersonal communication (X1) | Interpersonal communication, in general, is communication between people face to face; each person involved in the communication influences each other's perceptions of their communication partner. This particular form of interpersonal communication is dyadic communication. DeVito believes that interpersonal communication is communication that occurs between two people who have a clear relationship who are connected in some way (Ibrahim et al., 2022). | Openness<br>Empathy<br>Support<br>Positive attitude<br>Equality<br><br>(Devito, 2013) |
| 4 | Engagement (X2) | Learning engagement involves the student's cognitive and emotional energy to accomplish a learning task (Halverson & Graham, 2019). Learning engagement refers to individuals' active participation, enthusiasm, and commitment in a learning process. More than just being physically present, participants who truly participate have a high curiosity and desire to explore and learn. | Attention<br>Effort and persistence<br>Time on task<br>Cognitive strategy use<br>Absorption<br>Curiosity<br><br>(Halverson & Graham, 2019) |

Data were tabulated and analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS).

## RESULTS AND DISCUSSIONS

### Outer Model

When using Smart PLS for Structural Equation Modeling (SEM) analysis, it is essential to evaluate the outer model based on three critical criteria: convergent validity, discriminant validity, and reliability testing (Wong, 2013).

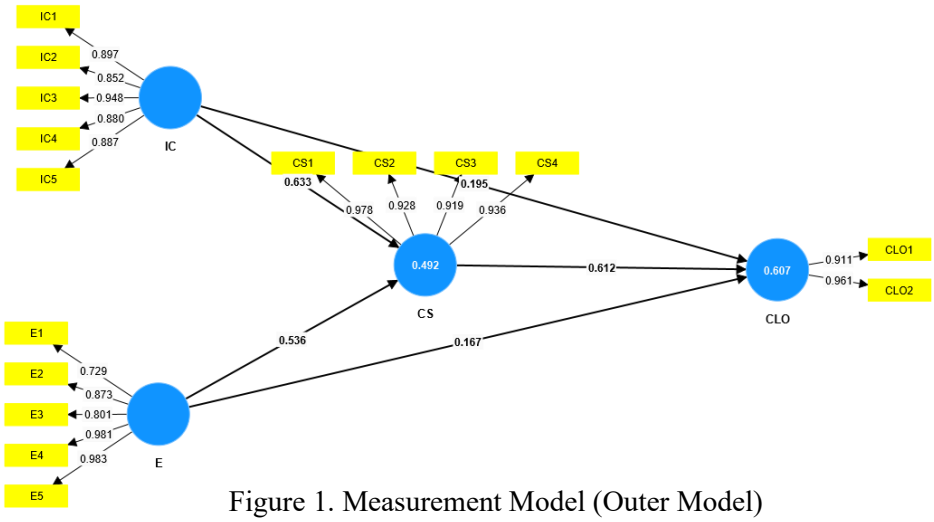


Figure 1. Measurement Model (Outer Model)

### Convergent Validity

To assess outer loading and Average Variance Extracted (AVE) values, we conducted evaluations for convergent validity. As per (Ghozali, 2014:68) observation, an indicator with an inner loading of 0.7 or above is considered high quality. A higher outer loading value indicates a more substantial impact of the factor loading in explaining the matrix factors. Table 2 shows that the outer loading for each variable related to learning outcomes, collaborative skills, learning engagement, and interpersonal communication exceeds the threshold of 0.7. It indicates that the indicators within the research construct are considered valid, demonstrating convergent validity and enabling accurate measurement of the research variables.

Table 2. Outer loading per indicators of variable

| No | Variables | Indicators | Outer loadings | Taraf of Convergent Validity | Notes |
|---|---|---|---|---|---|
| 1 | Correspondence Learning Outcomes | CLO1 <- CLO | 0,911 | 0,7 | Valid |
| | | CLO2 <- CLO | 0,961 | 0,7 | Valid |
| 2 | Collaborative Skills | CS1 <- CS | 0,978 | 0,7 | Valid |
| | | CS2 <- CS | 0,928 | 0,7 | Valid |
| | | CS3 <- CS | 0,919 | 0,7 | Valid |
| | | CS4 <- CS | 0,936 | 0,7 | Valid |
| 3 | Learning Engagement | E1 <- E | 0,729 | 0,7 | Valid |
| | | E2 <- E | 0,873 | 0,7 | Valid |
| | | E3 <- E | 0,801 | 0,7 | Valid |
| | | E4 <- E | 0,981 | 0,7 | Valid |
| | | E5 <- E | 0,983 | 0,7 | Valid |
| | | E6 <- E | 0,897 | 0,7 | Invalid |
| 4 | Interpersonal Communication | IC1 <- IC | 0,852 | 0,7 | Valid |
| | | IC2 <- IC | 0,948 | 0,7 | Valid |
| | | IC3 <- IC | 0,880 | 0,7 | Valid |
| | | IC4 <- IC | 0,887 | 0,7 | Valid |
| | | IC5 <- IC | 0,911 | 0,7 | Valid |

Moreover, an assessment of convergent validity can also be conducted by examining the Average Variance Extracted (AVE) value for each research variable (Hair et al., 2017), as presented in Table 3.

Table 3. Average Variance Extracted (AVE) Values for Research Variables

| No | Variables | (AVE) | Taraf AVE | Notes |
|---|---|---|---|---|
| 1 | Correspondence Learning Outcomes (Y) | 0,876 | 0,5 | Valid |
| 2 | Collaborative Skills (M) | 0,884 | 0,5 | Valid |
| 3 | Engagement (X1) | 0,773 | 0,5 | Valid |
| 4 | Interpersonal Communication (X2) | 0,798 | 0,5 | Valid |

In Table 3. it can be seen that the Average Variance Extracted (AVE) value in each research variable meets the rule of thumb, namely, the Average Variance Extracted (AVE) value > 0.5. Thus, the variables in this research can become suitable research constructs.

**Discriminant Validity**

To ensure that an indicator accurately measures a construct, discriminant validity testing is utilized. It involves determining whether each indicator is highly correlated with the construct. To determine whether the indicator has discriminant validity, we must examine its cross-loading value. If the cross-loading value of the indicator in the variable is more significant than 0.5, it is considered valid, according to (Hamid et al., 2017). For this study, a minimum limit of 0.5 is used as a reference to determine the validity of the cross-loading value.

See Table 4 below for the cross-loading indicator results for each research variable.

Table 4. Cross Loading Results of Indicators for Each Research Variable

| | CLO | CS | E | IC | Notes |
|---|---|---|---|---|---|
| CLO1 | 0,911 | 0,702 | 0,291 | 0,387 | Valid |
| CLO2 | 0,961 | 0,728 | 0,319 | 0,435 | Valid |
| CS1 | 0,740 | 0,978 | 0,355 | 0,468 | Valid |
| CS2 | 0,712 | 0,928 | 0,286 | 0,474 | Valid |
| CS3 | 0,711 | 0,919 | 0,329 | 0,424 | Valid |
| CS4 | 0,710 | 0,936 | 0,356 | 0,432 | Valid |
| E1 | 0,232 | 0,263 | 0,729 | -0,326 | Valid |
| E2 | 0,253 | 0,336 | 0,873 | -0,201 | Valid |
| E3 | 0,301 | 0,248 | 0,801 | -0,293 | Valid |
| E4 | 0,291 | 0,372 | 0,981 | -0,217 | Valid |
| E5 | 0,350 | 0,320 | 0,983 | -0,261 | Valid |
| IC1 | 0,376 | 0,445 | -0,313 | 0,897 | Valid |
| IC2 | 0,394 | 0,389 | -0,284 | 0,852 | Valid |
| IC3 | 0,431 | 0,441 | -0,180 | 0,948 | Valid |
| IC4 | 0,389 | 0,419 | -0,254 | 0,880 | Valid |
| IC5 | 0,372 | 0,441 | -0,266 | 0,887 | Valid |

Table 4 shows that there is a correlation value for each construct with its measurement items that is greater than the size of the other constructs. It can be seen in the correlation of the Correspondence learning outcome indicator, which has a value of 0.967 and 0,970 compared to the correlation between Y and other variables in the other blocks.

**Reliability Test**

Structural Equation Modeling (SEM) also requires reliability assumptions to measure the internal consistency of indicators that will be used as a measuring tool for research variables (Haryono & Wardoyo, 2012). When conducting reliability testing in SmartPLS 4.0, one of the key methods used are calculating Cronbach's alpha. This statistical measure evaluates the internal consistency of a scale or set of variables by assessing the lower limit construct reliability values. It helps to gauge the extent to which the items in the scale are correlated with each other, providing insights into the overall reliability and consistency of the measurement scale, and the table 5 shows that the Cronbach's alpha value for each variable is > 0.7.

Table 5. Cronbach's Alpha Results of Research Variables

| Variable | Cronbach's alpha | Taraf Cronbach's Alpha | Notes |
|---|---|---|---|
| Correspondence Learning Outcomes (Y) | 0,933 | 0,7 | Reliable |
| Collaborative Skills (M) | 0,968 | 0,7 | Reliable |
| Engagement (X1) | 0,946 | 0,7 | Reliable |
| Interpersonal Communication (X2) | 0,952 | 0,7 | Reliable |

## Inner Model Test (Structural Model)

The inner model or structural model test is a statistical method used to assess how a specific construct affects a given system. This test involves the analysis of different metrics such as R-square and t-test to ascertain the statistical significance of the obtained results. By evaluating these metrics, researchers can gain insights into the impact of the construct on the system under study.

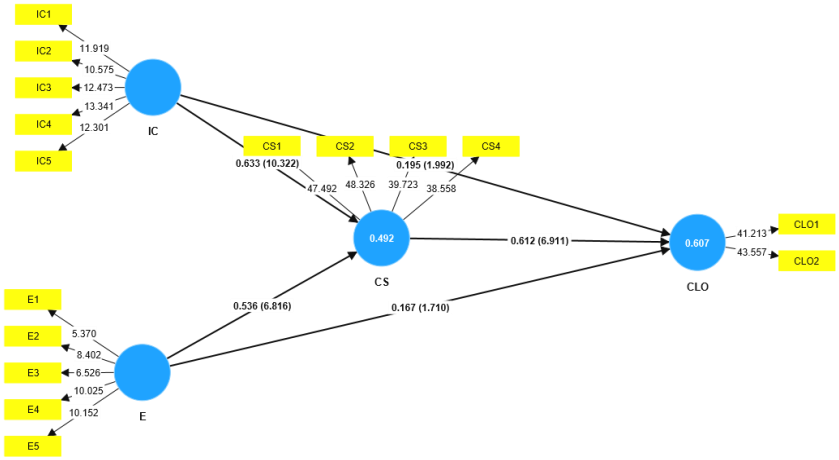


Figure 2. Structural Model (Inner Model)

## The R-Square

Test measures how much the endogenous variables change in response to changes in the exogenous variables. It shows the relationship between latent variables and the theory evaluated by the dependent construct. The higher the R-Square (R2) value, the better the construct. According to Ghozali (2014: 71), the model is firm and good if the R-squared value is over 0.67. If it is between 0.33 and 0.67, the model is in the sufficient or moderate category. Table 6 shows the R-Square (R2) results.

Table 6. R-Square Test Results (R2)

| Variables | R-square | Adjusted R-square | Notes |
|---|---|---|---|
| Correspondence's Learning Outcomes | 0,607 | 0,597 | Moderate |
| Collaborative Skills | 0,492 | 0,483 | Moderate |

Based on Table 6, it can be seen that the R-Square (R2) of learning outcomes is 0.597. Furthermore, the R-Square (R2) of collaborative skills is 0.483. The R-Square (R2) value is considered moderate because it has an R-Square (R2) value > 0.33 < 0.67.

## Hypotheses Testing

Hypotheses testing in this research can be seen based on p-value or t-statistics and total

effect to know the impact of a variable (Kock, 2016).

Table 7. Path Coefficient

| Variables | Original Sample(O) | T-statistics | P-values | Hypotheses | Notes |
|---|---|---|---|---|---|
| CS -> CLO | 0,612 | 7,642 | 0,000 | H1 | Accepted |
| E -> CLO | 0,167 | 2,033 | 0,042 | H2 | Accepted |
| E -> CS | 0,536 | 6,743 | 0,000 | H3 | Accepted |
| IC -> CLO | 0,195 | 2,270 | 0,023 | H4 | Accepted |
| IC -> CS | 0,633 | 10,261 | 0,000 | H5 | Accepted |
| E -> CS -> CLO | 0,328 | 4,745 | 0,000 | H6 | Accepted |
| IC -> CS -> CLO | 0,387 | 6,233 | 0,000 | H7 | Accepted |

The research aims to investigate the effect of the construct on learning outcomes of business correspondence. It is a critical topic to study as practical business correspondence skills are crucial for success in various professional settings, especially for office administration students. Business correspondence involves communicating important information, ideas, and messages within and between organizations (Pratiwi & Juniel, 2019).

The R-Square value of 0.597 indicates that approximately 59.7% of the variance in learning outcomes can be accounted for by the research model. This suggests that there is a strong and significant relationship between the variables being studied and the actual observed outcomes. This level of explanation suggests that the research model is a robust predictor of learning outcomes.

After confirming the acceptance of all seven hypotheses, the research model has effectively showcased its robust validity and reliability in encapsulating the intricacies of business correspondence learning. These compelling results emphasize the model's efficacy in elucidating the multifaceted relationship between collaborative skills, engagement, and interpersonal communication, and their impact on shaping learning outcomes.

As indicated in Table 7, the order of the three constructs - collaborative skills, engagement, and interpersonal communication - has a direct impact on the learning outcomes of business correspondence. Collaborative skills have the most significant effect at 61%, followed by interpersonal communication at 19.5%, and engagement at 16.7%.

The importance of communication skills, collaborative abilities, and engagement in shaping business correspondence learning outcomes is consistent with prior studies (Musheke & Phiri, 2021). Business correspondence is a critical aspect of professional communication, involving the use of email and letters to convey information and conduct business. These written communications are typically formal and purposeful, addressing various aspects of business operations such as inquiries, proposals, orders, and complaints. Proficiency in written

communication is essential for office professionals as they are required to utilize these skills in the real-world business environment.

The study suggests that emphasis should be placed on collaborative learning and group projects to enhance interpersonal and communication skills in business correspondence education (Moradi et al., 2018). Collaborative learning, which involves students working together on tasks in a group, has been shown to have a significant positive impact on the development of business correspondence skills. This approach allows students to share ideas, perspectives, and feedback, fostering a more comprehensive understanding of effective communication in a business context. The study result is consistent with the previous study by (Sukmawati et al., 2019), which found that collaborative skills can significantly enhance learning outcomes in various contexts. The findings of this research highlight the importance of incorporating collaborative learning activities in the curriculum for office administration students.

Interpersonal communication skills play a crucial role in enriching business correspondence, as highlighted by (Barkley et al., 2014) in their study. This form of communication encompasses the effective expression of ideas, the sharing of pertinent information, and the cultivation of strong and lasting relationships with colleagues, clients, and other stakeholders, as emphasized by (Aslan, 2023).

Finally, it is imperative to acknowledge that engagement profoundly influences the enhancement of business correspondence skills. Learning engagement denotes that students are actively involved and driven in their learning endeavors. This can be attained through interactive and participatory activities such as group discussions, practical projects, and role-playing.

Based on the observation, the lecturers gave projects to groups of students to create business letters, such as inquiry letters/emails, sales letters/emails, order letters/emails, and complaint letters/emails. Active participation allows students to engage in practical application and develop their business correspondence skills. The study results are aligned with previous research by (Sammel et al., 2014) that highlights the positive impact of student engagement on learning outcomes. Overall, the study provides valuable insights into the critical factors influencing business correspondence learning, underscoring the importance of collaborative skills, interpersonal communication, and learner engagement.

Table 8. The Magnitude of Direct and Indirect Influence on Correspondence Learning Outcomes through Collaborative Skills as a Mediating Variable

| The effects on variable | The magnitude of the direct effect | The magnitude of the indirect effect | The change |
|---|---|---|---|
| Interpersonal Communication -> Correspondence's Learning Outcomes | 19.5% | 38.7% | Went up |
| Learning Engagement -> Correspondence's Learning Outcomes | 16.7% | 32.8% | Went up |

The impact of interpersonal communication on learning outcomes in business correspondence increased from 19.5% to 38.7% when considering the mediating variable of collaborative skills, demonstrating that the mediating variable enhances the connection between interpersonal communication skills and learning outcomes. The impact of learning engagement is also evident through the development of collaborative skills and their influence on the outcomes of the learning process. This influence increases from 16.7% to 32.8%, highlighting the significance of learning engagement in driving positive educational outcomes. The importance of collaborative skills in the relationship between learning engagement and the outcomes of business correspondence learning cannot be overstated. Research has shown that collaborative skills not only mediate but also amplify the effects of both interpersonal communication and learning engagement on business correspondence learning (Mursidi & Murdani, 2023). This highlights the significant role that collaborative skills play in fostering effective business correspondence learning outcomes.

Based on the Constructivism theory, students construct their skills or knowledge (Barkley et al., 2014). Students must actively participate in the learning process by selecting, filtering, giving meaning, and testing the truth of the information they receive. As the proposed research model, three constructs influence learning outcomes: interpersonal communication, engagement, and collaborative skills. The results showed that those constructs represent students' engagement in learning and positively correlate with successful business correspondence outcomes (Zouaq et al., 2017).

Uni office administration students must improve their collaborative skills since effective business correspondence often involves teamwork and collaboration. The study proves empirically that the Constructivism theory can explain the positive impact of interpersonal communication, engagement, and collaborative skills on learning outcomes of business correspondence. To implement this finding, universities could provide more opportunities for collaborative projects, group discussions, and role-playing activities in the office

administration curriculum.

By focusing on developing these skills, university office administration students can enhance their ability to communicate and collaborate effectively in a business setting. Emphasizing these constructs in the educational curriculum can better prepare students for the demands of real-world business correspondence. As a result, integrating the Constructivism theory into educational practices can significantly improve the overall quality of business correspondence skills among university office administration students.

## CONCLUSION

In conclusion, this research has elucidated the significant influence of collaborative skills, engagement, and interpersonal communication on the learning outcomes of business correspondence among university office administration students. The study found that collaborative skills have the most substantial direct impact on enhancing these skills, followed closely by interpersonal communication and engagement. Furthermore, the analysis revealed that collaborative skills act as mediators, strengthening the relationship between interpersonal communication and engagement and learning outcomes. The results demonstrate the value of incorporating collaborative, interactive, and engaged learning activities in the curriculum to cultivate well-rounded business communication competencies in office administration students.

Integrating more collaborative learning activities into the curriculum is recommended, fostering teamwork and problem-solving. Lecturers should employ engaging teaching methods like interactive discussions and role-playing to stimulate active participation. Workshops focusing on interpersonal communication should also be organized to refine students' ability to convey ideas effectively. Embracing the Constructivism theory in teaching practices can empower students to take ownership of their learning process. Continuous assessment and feedback mechanisms should be in place to monitor progress and tailor interventions accordingly, ensuring students are well-prepared for real-world business communication demands.

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