The Effect Of Using Teleprompter Applications On The Public Speaking Skills Of Office Administration Students

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Abstract. This study investigates the influence of teleprompter application usage on public speaking abilities among Office Administration Education students. The research employed a quantitative associative approach using survey design with 131 respondents from Universitas Negeri Jakarta cohorts 2021-2024. Data collection utilized a closed-ended questionnaire with 5-point Likert scale, measuring teleprompter usage through eight indicators including usage frequency, ease of use, and presentation support effectiveness, while public speaking ability was assessed through articulation clarity, delivery structure, eye contact, and audience interaction. Data analysis employed Structural Equation Modeling using SmartPLS 4 with Partial Least Squares techniques. Results demonstrated a significant positive relationship between teleprompter application usage and public speaking ability ($\beta = 0.522$, $t = 7.354$, $p < 0.001$) with large effect size ($f^2 = 0.374$). The model explained 27.2% variance in public speaking ability, indicating moderate explanatory power. Measurement model showed satisfactory validity and reliability with Composite Reliability exceeding 0.920 and Average Variance Extracted above 0.590 for both constructs. The findings support Theory of Planned Behavior framework, suggesting that teleprompter technology enhances perceived behavioral control and reduces cognitive load, allowing students to focus on delivery aspects rather than content memorization. Educational institutions should integrate teleprompter applications into communication curricula while maintaining comprehensive public speaking training approaches.

Keywords: Teleprompter Application, Public Speaking Ability, Educational Technology, Communication Skills

Introduction

In the contemporary educational landscape, the development of effective communication skills has become increasingly crucial for achieving sustainable development goals, particularly in preparing competent human resources who can contribute meaningfully to society (SDG 4: Quality Education). Public speaking ability represents one of the fundamental skills that must be mastered by students, especially those in Office Administration Education programs who will serve as teachers and professional personnel in administration and office management sectors. In the context of the modern working world, the ability to communicate in front of the public has become a highly needed competency to support career advancement and work productivity (Jaizul & Sandi, 2024).

Recent developments in educational technology have opened new opportunities to support learning processes, including the development of public speaking skills. The integration of digital technology in public speaking education aligns with SDG 9 (Industry, Innovation, and Infrastructure) by promoting inclusive and sustainable technological advancement in educational settings. Several studies have demonstrated the effectiveness of technology integration in enhancing students' communication and speaking abilities. Cherner et al. (2023) found that the use of technology in public speaking learning proved effective in improving students' communication and speaking skills. Similarly, Rosida (2021) investigated the effectiveness of BIGVU media in journalism learning and discovered that technology utilization could enhance students' newscaster skills. Melania & Savitri (2022) also showed that the use of video recording in public speaking classes could increase students' learning autonomy.

The state of the art in public speaking education research reveals various technological approaches that have been implemented. Bylkova et al. (2021) emphasized that public speaking serves as an important tool for developing students' communication and speaking skills through systematic learning approaches. Amelia et al. (2022) demonstrated that regular and guided speech practice could effectively improve students' public speaking abilities. Furthermore, Jaizul & Sandi (2024) identified that the combination of communication skills and self-confidence represents the key to success in public speaking.

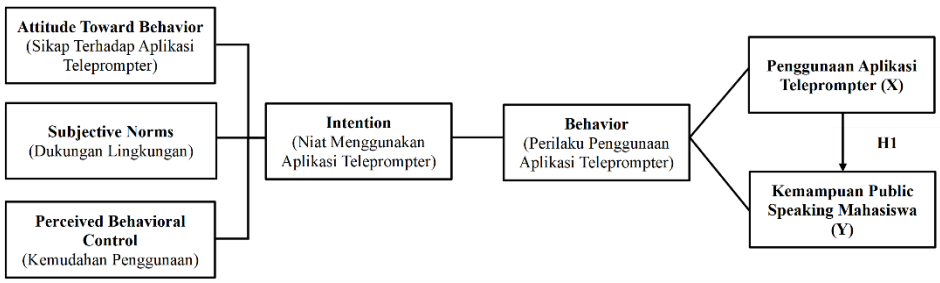
Despite the various studies conducted regarding technology use in public speaking learning, significant research gaps still exist. While previous research has focused on AI-based presentation platforms (Cherner et al., 2023), BIGVU media for journalism learning (Rosida, 2021), and video recording usage (Melania & Savitri, 2022), there has been no specific research examining the influence of teleprompter applications on students' public speaking abilities, particularly in the context of Office Administration Education students in Indonesia. One technological innovation with great potential for utilization is the teleprompter application. This application allows speakers to read text automatically while maintaining eye contact with the audience, potentially reducing students' cognitive load in memorizing material so they can focus more on delivery aspects and audience interaction. The implementation of such technology contributes to SDG 4 by ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

To address this research gap, this study employs a quantitative approach with experimental design to empirically test the influence of teleprompter application usage on students' public speaking abilities using the Theory of Planned Behavior framework. The quantitative approach was chosen because it can provide objective and measurable results regarding the effectiveness of technology use in learning, while the experimental method will allow researchers to control variables that may affect research results and provide strong causal evidence regarding the influence of teleprompter applications on public speaking abilities.

Therefore, this research aims to empirically analyze the influence of teleprompter application usage on the public speaking abilities of Office Administration Education students. The study's findings are expected to contribute to both theoretical and practical aspects of technology-based public speaking learning development, ultimately supporting the achievement of sustainable development goals through improved educational quality and innovation.

Methods

Figure 1. Theoritical Framework



Source: Data processed by Researchers

This study employed a quantitative associative approach using a survey design to examine the causal relationship between teleprompter application usage (independent variable) and public speaking ability (dependent variable). The research was grounded in the Theory of Planned Behavior (TPB), which provides a comprehensive framework for understanding factors that drive students to use teleprompter applications and how such usage affects their public speaking capabilities (Putra et al., 2024).

Participants

The study population comprised 383 students from the Office Administration Education Program at the Faculty of Economics and Business, Universitas Negeri Jakarta, spanning cohorts from 2021 to 2024. These cohorts were selected based on the assumption that students had gained experience in presentations and public speaking activities during their coursework. Using purposive sampling, participants were selected based on specific criteria: students who had used or were familiar with teleprompter applications. Following Hair et al.(2019) approach of 5-10 times the number of indicators, and with 16 total indicators across both

variables (8 indicators for teleprompter usage and 8 for public speaking ability), the required sample size was determined to be 128 respondents using an 8× multiplier.

Instrument

Data collection utilized a closed-ended questionnaire developed based on relevant theories and concepts for each variable. The instrument employed a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire consisted of two main sections: demographic data and measurement of teleprompter usage and public speaking ability constructs.

Teleprompter application usage was operationally defined through students' perceptions of usage frequency, ease of use, comfort, and benefits in supporting material delivery during presentations. This variable was measured through eight indicators: usage frequency, ease of use, text display suitability, text speed control capability, presentation support effectiveness, anxiety reduction, preparation time efficiency, and usage dependency.

Public speaking ability was operationally defined based on students' perceptions of their competence in delivering material systematically, expressively, and engaging audiences. This variable was assessed through eight indicators: articulation clarity, delivery structure, eye contact, body language, material mastery, voice intonation and volume control, nervousness management ability, and audience interaction.

Procedure

The research was conducted from March to June 2025, encompassing instrument development, validity and reliability testing, data collection, data analysis, and final report preparation. Data collection was performed online through Google Forms to expand respondent reach and enhance time efficiency. The questionnaire was distributed via various digital communication channels including WhatsApp groups, email, and internal campus social media platforms. Before questionnaire distribution, researchers communicated the research purpose and benefits while ensuring respondent identity confidentiality.

Prior to widespread distribution, the questionnaire underwent content validity testing through expert judgment and construct validity and reliability testing using SmartPLS 4 software. Construct validity measured the extent to which indicators reflected the measured variables, while reliability tested consistency among items within one construct (Subhaktiyasa, 2024).

Data Analysis

Data analysis employed Structural Equation Modeling (SEM) using SmartPLS 4 , which utilizes Partial Least Squares (PLS-SEM) techniques (Subhaktiyasa, 2024). This method was chosen for its capability to analyze structural models involving multiple latent constructs with interrelated indicators.

The analysis process included three main stages: (1) Descriptive data analysis covering respondent characteristics and descriptive statistics for each item score; (2) Outer model evaluation examining convergent validity through loading factors (≥ 0.70) and Average Variance Extracted (AVE ≥ 0.50), and reliability through Composite Reliability (CR ≥ 0.70) and Cronbach's Alpha (≥ 0.60); and (3) Inner model evaluation testing causal relationships among latent variables through path coefficients, R^2 values, and f^2 effect sizes. Significance testing of inter-variable relationships utilized t-statistics and p-values through bootstrapping (5,000 resampling), with relationships considered significant when t-statistic ≥ 1.96 and p-value ≤ 0.05 (Hair et al., 2019).

Result and Discussion

Respondent Characteristics

A total of 131 respondents from the Office Administration Education Study Program at Jakarta State University participated in this study, representing students from the 2021-2024 cohorts. The distribution showed that 55.38% were from the 2024 cohort, 37.69% from 2023, 3.85% from 2021, and 3.08% from 2022. This distribution pattern reflects the accessibility and willingness of newer students to participate in technology-related research.

Descriptive Analysis

The teleprompter application usage variable (X) achieved a score of 74.35% from the established criteria (3896 out of 5240 maximum score), indicating that students perceive moderate to high utility in teleprompter applications. Meanwhile, the public speaking ability variable (Y) scored 77.90% (4082 out of 5240 maximum score), suggesting that students generally rate their public speaking abilities as above average.

Measurement Model Evaluation

The measurement model demonstrated satisfactory validity and reliability. For the Teleprompter Application Usage construct, outer loadings ranged from 0.655 to 0.834, with Cronbach's Alpha of 0.901, Composite Reliability of 0.920, and AVE of 0.592. The Public Speaking Ability construct showed outer loadings between 0.709 and 0.857, with Cronbach's Alpha of 0.912, Composite Reliability of 0.928, and AVE of 0.617. All values exceeded the recommended thresholds, confirming convergent validity and internal consistency.

The Heterotrait-Monotrait Ratio (HTMT) value of 0.534 between constructs indicated good discriminant validity, being well below the 0.85 threshold. Variance Inflation Factor (VIF) values ranged from 1.877 to 2.870, all below 3.3, confirming no multicollinearity issues.

Hypothesis Testing Results

Table 1. Hypothesis Test

	Path Coefficient	T statistics	P values	Decision
X -> Y	0,522	7,354	0,000	Accepted

Source: Data processed by Researchers

The structural model analysis revealed a significant positive relationship between teleprompter application usage and public speaking ability ($\beta = 0.522$, $t = 7.354$, $p < 0.001$). This result supports the hypothesis that increased teleprompter usage enhances students' public speaking capabilities. The effect size ($f^2 = 0.374$) indicates a large practical significance according to Cohen's criteria, suggesting that teleprompter applications provide substantial benefits for public speaking performance.

Table 2. R Square Test

	R-square	R-square adjusted
Y	0,272	0,267

Source: Data processed by Researchers

The model explained 27.2% of the variance in public speaking ability ($R^2 = 0.272$), with an adjusted R^2 of 0.267. While this indicates a moderate explanatory power, it confirms that teleprompter usage contributes meaningfully to public speaking competence, though other factors account for the remaining variance.

Discussion of Findings

The significant positive relationship between teleprompter usage and public speaking ability aligns with the Theory of Planned Behavior, where technological assistance enhances perceived behavioral control. Students who utilize teleprompter applications demonstrate improved confidence and performance in public speaking contexts. The technology appears to reduce anxiety and cognitive load, allowing speakers to focus on delivery rather than content recall.

The moderate R^2 value suggests that while teleprompter applications are beneficial, public speaking ability is multifaceted, influenced by factors such as individual confidence, prior experience, content mastery, and environmental support. This finding emphasizes that technology should complement, rather than replace, comprehensive public speaking training.

The large effect size indicates practical significance beyond statistical significance, suggesting that educational institutions should consider integrating teleprompter technology into communication curricula. However, the remaining unexplained variance highlights the need for holistic approaches that address multiple dimensions of public speaking competence.

These results have important implications for educational practice, suggesting that digital tools can effectively support skill development in communication-intensive disciplines. The findings support the integration of assistive technologies in academic settings while acknowledging the complexity of communication competence development.

Conclusion

This study concludes that teleprompter applications have a positive and significant effect on students' public speaking abilities with a path coefficient of 0.522 and large effect size ($f^2 = 0.374$). The application explains 27.2% of the variation in public speaking abilities, indicating other factors also contribute to this skill. The

findings support the Theory of Planned Behavior, particularly in improving perceived behavioral control through teleprompter technology.

Educational institutions should integrate teleprompter applications into communication curricula and provide supporting technological facilities. Students are recommended to use teleprompter applications as practice aids while continuing to develop unassisted speaking skills. Future research should include additional variables such as self-efficacy and communication anxiety, employ experimental designs, and expand samples across different programs to enhance generalizability and develop more comprehensive models.

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