

# The Mediating Effect of Word of Mouth on the Relationship between Student Satisfaction, Motivation, and Loyalty in Higher Education

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**ABSTRACT:** This study examines the mediating role of word of mouth (WOM) in the relationship between student satisfaction, motivation, and loyalty, at Polytechnic of Education and Professional Development Institute of Indonesia, Cirebon Campus. Using purposive sampling, 237 students were selected from a population of 584. A structured questionnaire served as the primary data collection instrument, and the responses were examined using path analysis with the aid of SPSS 20.0. Results show that satisfaction and motivation significantly affect WOM ( $F = 49.496 > F_{\text{critical}} = 2.727$ ,  $p < 0.01$ ), explaining 29.1% of its variance. Additionally, satisfaction and motivation, through WOM, significantly enhance loyalty ( $F = 62.423 > F_{\text{critical}} = 2.727$ ,  $p < 0.01$ ), with an  $R^2$  of 0.438. The total determination coefficient ( $R^2$ ) of 0.842 the findings reveal that satisfaction, motivation, and word of mouth collectively account for 84.2% of the variance observed in loyalty, while 15.8% is influenced by other factors. The evidence points to the importance of cultivating student satisfaction and motivation to strengthen loyalty through positive WOM in educational institutions.

**KEYWORDS:** student satisfaction, student motivation, word of mouth, loyalty

## 1. INTRODUCTION

Student loyalty has emerged as a critical factor for higher education institutions aiming to preserve competitive advantage, enhance reputation, and ensure sustainable growth. Loyal students not only continue their enrollment but also act as informal ambassadors, using positive word-of-mouth (WOM) to support institutional marketing and engagement efforts. Previous research in student satisfaction, loyalty, and motivation as observed from the service quality that student satisfaction affects student loyalty and student motivation (Subandi & Hamid, 2021).

Student satisfaction denotes the level to which students perceive that the institution meets or exceeds their expectations for academic quality, administrative support, and institutional services are met or exceeded. High levels of satisfaction encourage engagement, retention, and advocacy behaviors, while dissatisfaction may lead to withdrawal, negative WOM, or disengagement. Satisfaction is widely recognized as a direct predictor of loyalty, reflecting both cognitive and affective evaluations of the institution (Oliver, 1999).

Motivation, encompassing both intrinsic and extrinsic dimensions, also plays a pivotal role in shaping student behavior. Intrinsic motivation includes personal growth, curiosity, and the desire for competence, while extrinsic motivation involves career prospects, recognition, and social rewards. Motivated students are more likely to engage actively in learning, participate in institutional activities, and recommend the institution to others, thereby contributing to both WOM and loyalty (Ryan & Deci, 2000).

Word of Mouth (WOM) acts as a behavioral mechanism that links satisfaction and motivation to loyalty. Positive WOM occurs when students voluntarily share favorable experiences with peers, families, or social networks. Studies suggest that WOM not only reflects underlying satisfaction and motivation but also reinforces loyalty by shaping perceptions, attitudes, and intentions toward the institution (Hennig-Thurau, Gwinner, Gremler, & D., 2002). In educational settings, fostering positive WOM is particularly important because peer recommendations strongly influence prospective student enrollment decisions.

Despite its importance, empirical research examining the simultaneous effects of satisfaction, motivation, and WOM on student loyalty in Indonesian higher education remains limited. This study addresses this gap by investigating the influence of student satisfaction and motivation on loyalty, with WOM as a mediating variable, among students at Polytechnic of Education and Professional Development Institute of Indonesia, Cirebon Campus. The objectives of the study are: (1) to examine the simultaneous effect of student satisfaction and motivation on WOM, and (2) to investigate the combined effect of satisfaction, motivation, and WOM on student

loyalty. Understanding these relationships can generate valuable implications for higher education institutions in fostering greater student engagement, foster advocacy, and strengthen long-term loyalty.

## 2. LITERATURE REVIEW

**Student Satisfaction and Loyalty** The level of student satisfaction plays a strategic role in fostering continued loyalty toward higher education institutions. High levels of satisfaction encourage students to persist in their studies, provide positive recommendations, and develop emotional attachment to the university. This not only contributes to student retention but also strengthens the institution's reputation among the public and stakeholders. Here's a paraphrased version suitable for international journal standards: Student loyalty significantly enhances satisfaction, while satisfaction, in turn, strongly and positively affects loyalty, indicating a reciprocal relationship between the two constructs (Appuhamilage & Torii, 2019). High levels of satisfaction not only encourage customers to make repeat purchases, but also strengthen long-term relationships, Increase positive word-of-mouth referrals and decrease the risk of customers shifting their loyalty to alternative providers.

**Student Motivation and Loyalty** Consumer motivation is a key factor in the formation and maintenance of brand loyalty. Strong motivation, whether intrinsic or extrinsic, drives consumers to make repeat purchases, strengthens emotional attachment, and enhances perceived value toward products or services. Motivated consumers tend to remain loyal even when faced with cheaper or newer alternatives and are more likely to act as promoters through positive word-of-mouth. Therefore, understanding and managing consumer motivation is a crucial strategy for sustaining long-term loyalty. Recognizing the variety of motivational factors that influence consumer engagement with sports club social media is essential for fostering stronger fan interaction and long-term loyalty (Trkulja, Dinco, & Martincevic, 2024).

**Word of Mouth as a Mediator** Word of mouth (WOM) represents the voluntary and informal sharing of perceptions, recommendations, and experiences related to products, services, or institutions among people. In the context of marketing and service management, WOM is recognized as a powerful behavioral outcome of customer satisfaction and motivation, which can significantly influence loyalty. According to (Ngoma & Ntale, 2019) A strong and positive relationship was found between word of mouth and customer loyalty, indicating that improvements in word of mouth are associated with increases in loyalty. When customers share favorable opinions about a company and its products or services, they are more inclined to remain loyal to the organization.

Empirical studies suggest that WOM not only results from satisfaction and motivation but also serves as a critical pathway through which these factors enhance loyalty. For example, satisfied students are more inclined to recommend their institution, which in turn strengthens institutional reputation and fosters loyalty among both current and prospective students. Similarly, motivated students often communicate their enthusiasm, inspiring others and reinforcing their own loyalty.

**Synthesis and Research Gap** Previous research has established the direct effects of satisfaction and motivation on loyalty, as well as their influence on WOM. However, there is limited empirical evidence examining WOM as a mediating variable in the higher education context, especially in developing countries. This study addresses this gap by investigating the impact of student satisfaction and motivation on loyalty as mediated by word of mouth (WOM), offering theoretical insights and practical implications for student retention strategies.

## 3. METHODS

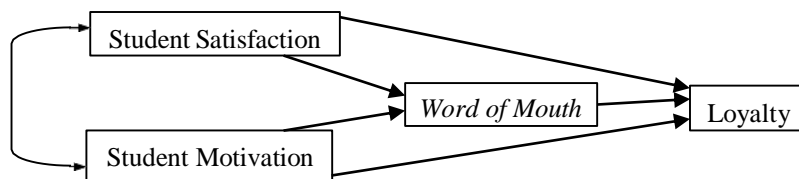
### Research Design

This study adopted a quantitative explanatory research design to examine the causal relationships between student satisfaction, motivation, word of mouth (WOM), and loyalty. The explanatory design was chosen to test both direct and indirect effects using a mediation framework.

### Research Framework

The conceptual framework was developed based on relationship marketing theory and prior empirical findings in educational services. The framework hypothesizes that:

1. Student satisfaction positively influences WOM.
2. Student motivation positively influences WOM.
3. WOM mediates the relationship between satisfaction, motivation, and loyalty.



**Figure 1. Illustrates the Research Framework**

### Population and Sample

The target population comprised all active students at Polytechnic of Education and Professional Development Institute of Indonesia, Cirebon Campus during 2020-2025, totaling 584 students. The purposive sampling method was used, with inclusion criteria:

1. Students have completed at least one academic year.
2. Students have experienced academic and administrative services at Polytechnic of Education and Professional Development Institute of Indonesia, Cirebon Campus.

Using these criteria, 237 students were selected as respondents. The sample size met the requirement for path analysis, which recommends a minimum of five times the number of parameters estimated.

**Table 1. Variables and Operational Definitions**

Variabel	Definition	Indicators	Scale
Student Satisfaction	The degree to which students feel fulfilled by academic, administrative, and service experiences at Polytechnic of Education and Professional Development Institute of Indonesia, Cirebon Campus.	Service quality, academic support, facilities, administrative responsiveness.	Likert 1-5
Student Motivation	The internal and external drives influencing students' engagement with academic activities.	Intrinsic motivation (interest in learning, self-improvement), extrinsic motivation (career goals, recognition)	Likert 1-5
Word of Mouth (WOM)	The extent to which students share positive recommendations about Polytechnic of Education and Professional Development Institute of Indonesia, Cirebon Campus with others.	Positive recommendations, willingness to promote, sharing experiences.	Likert 1-5
Loyalty	The intention to maintain enrollment, recommend the institution, and show commitment.	Continuance intention, advocacy, emotional attachment	Likert 1-5

All constructs were measured using multi-item scales adapted from validated higher education service quality and loyalty studies. Items were translated, pre-tested, and refined to ensure clarity.

### Data Collection

Information was gathered via a structured questionnaire filled out independently by participants available in both paper and online versions. The instrument underwent:

1. Content validity testing by two higher education marketing experts.
2. Pilot testing with 30 students, resulting in minor revisions for clarity.
3. Reliability testing using Cronbach's alpha, yielding  $\alpha \geq 0.70$  for all variables.

### Data Analysis

The analysis proceeded in the following stages:

1. Descriptive statistics for demographic characteristics and variable means.
2. Reliability and validity testing (Cronbach's alpha, KMO, Bartlett's test).
3. Path analysis to test the hypothesized causal model.
4. F-test and t-test to assess significance of relationships ( $p < 0.01$ ).
5. Coefficient of determination ( $R^2$ ) to determine the explanatory power of the model.
6. Total Determination Coefficient ( $R^2m$ ) to evaluate the combined explanatory strength of all variables.

Statistical analysis was conducted using SPSS 20.0.

### Ethical Considerations

The research followed ethical principles in educational research. Participants were fully informed about the objectives of the study, guaranteed anonymity. No personal identifiers were collected. Data were stored securely and used solely for research purposes.

## 4. RESULTS

### Simultaneous Effect of Student Satisfaction and Motivation on Word of Mouth

The simultaneous effect of student satisfaction and motivation on Word of Mouth (WOM) was examined using multiple regression analysis. Table 2 presents the ANOVA results, while Table 3 provides the coefficient of determination for the model.

**Table 2. ANOVA for the Effect of Student Satisfaction and Motivation on WOM**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1409,336	2	704,668	49,496	,000**
Residual	3331,457	234	14,237		
Total	4740,793	236			

The regression model was statistically significant,  $F(2, 234) = 49.496$ ,  $p < .001$ , indicating that the combined effects of student satisfaction and motivation significantly impact word of mouth (WOM). The F-value substantially exceeds the critical value ( $F_{\text{critical}} = 2.727$ ), confirming the robustness of the model.

**Table 3. Model Summary for the implications of student satisfaction and Motivation on WOM**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	,545 <sup>a</sup>	,297	,291	3,77319

The model shows a moderate positive relationship ( $R = .545$ ) between the predictors and WOM. Approximately 29.7% of the variance in WOM is explained by student satisfaction and motivation ( $R^2 = .297$ ), while the Adjusted  $R^2$  value of .291 confirms the stability of the model when adjusted for sample size and number of predictors. The standard error of 3.773 indicates relatively low prediction error.

### Simultaneous Effect of Student Satisfaction, Motivation, and WOM on Loyalty

To examine the combined influence of student satisfaction, motivation, and WOM on loyalty, a multiple regression analysis was performed. The results are shown in Tables 5 and 6.

**Table 4. ANOVA for the Effect of Student Satisfaction, Motivation, and WOM on Loyalty**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2086,849	3	695,616	62,423	,000**
Residual	2596,467	233	11,144		
Total	4683,316	236			

The model was statistically significant,  $F(3, 233) = 62.423$ ,  $p < .001$ , indicating that the three predictors jointly have a substantial effect on loyalty. The F-value is well above the critical threshold ( $F_{\text{critical}} = 2.639$ ), suggesting the model's strong explanatory capacity.

**Table 5. Model Summary for the Effect of Student Satisfaction, Motivation, and WOM on Loyalty**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	,668 <sup>a</sup>	,446	,438	3,33821

The model shows a strong positive relationship ( $R = .668$ ) between the predictors and loyalty. The  $R^2$  value of .446 indicates that approximately 44.6% of the variance in loyalty is explained by the model, while the Adjusted  $R^2$  value of .438 shows that this explanatory power remains stable after adjusting for predictor count and sample size.

The standard error of 3.338 indicates a relatively small average deviation between predicted and observed loyalty scores.

### Summary of Findings:

The results demonstrate that:

1. Student satisfaction and motivation significantly predict WOM, explaining about 29.7% of its variance.
2. Student satisfaction, motivation, and WOM jointly predict loyalty, explaining about 44.6% of its variance.

These findings underscore the importance of fostering both satisfaction and motivation among students to enhance positive WOM, which in turn contributes to stronger loyalty.

## 5. DISCUSSION

The present study provides empirical evidence that student satisfaction and motivation significantly influence Word of Mouth (WOM) behavior, and that these factors, together with WOM, play a critical role in shaping student loyalty.

First, the finding that student satisfaction and motivation explain approximately 29.7% of the variance in WOM supports the theoretical premise of the theoretical framework of relationship marketing and the expectancy-disconfirmation model. These frameworks suggest that when students' expectations regarding educational services are met or exceeded, they demonstrate a greater propensity to share favorable experiences with others. Consistent with previous studies in higher education marketing (Helgesen & Nasset, 2007) and (Sultan & Wong, 2019), satisfied students act as voluntary promoters of their institutions, thereby enhancing institutional reputation through informal channels. Motivation, both intrinsic and extrinsic, further amplifies this effect by encouraging active engagement and advocacy behavior.

Second, the combined influence of satisfaction, motivation, and WOM on loyalty—accounting for 44.6% of the variance—demonstrates the mediating role of WOM in the loyalty formation process. This aligns with word-of-mouth advocacy models (Hennig-Thurau, Gwinner, Gremler, & D., 2002), which posit that WOM is not merely a byproduct of satisfaction, but an active mechanism through which loyalty is reinforced. The significant increase in explained variance when WOM is included in the model indicates that WOM functions as a behavioral bridge between internal evaluations (satisfaction and motivation) and long-term commitment (loyalty).

Third, the results corroborate findings from prior research in both education and service industries, which highlight that loyalty is a multi-dimensional construct influenced by emotional, cognitive, and behavioral factors (Oliver, 1999). In the educational context, loyalty extends beyond continued enrollment; it encompasses advocacy, alumni engagement, and positive reputation building. By demonstrating the direct and indirect pathways through which satisfaction and motivation shape loyalty, this study reinforces the strategic importance of student-centered service delivery.

From a managerial perspective, the implications are clear. Educational institutions seeking to enhance student loyalty should invest in initiatives that boost both satisfaction and motivation. This includes improving academic quality, providing responsive administrative services, and creating environments that foster both intrinsic (personal growth, self-efficacy) and extrinsic (career prospects, recognition) motivations. Furthermore, institutions should actively facilitate WOM by providing platforms for students to share positive experiences—both offline and through digital media—thereby leveraging peer influence to attract and retain students.

Finally, while the explained variance for WOM and loyalty is substantial, the findings also indicate that other factors—accounting for 70.3% of WOM variance and 55.4% of loyalty variance—remain unexplored in this study. Future research could incorporate variables such as perceived value, trust, and emotional attachment to capture a more comprehensive picture of loyalty formation in higher education.

## 6. CONCLUSION AND IMPLICATIONS

### Conclusion

This study examined the influence of student satisfaction and motivation on loyalty, with Word of Mouth (WOM) as a mediating variable, among students at Polytechnic of Education and Professional Development Institute of Indonesia, Cirebon Campus. The findings can be summarized as follows:

1. Student Satisfaction and Motivation on WOM: Both student satisfaction and motivation have a significant simultaneous effect on WOM, explaining approximately 29.7% of its variance. Students who are satisfied and motivated are more likely to share positive experiences about the institution.
2. Combined Effect on Loyalty: Student satisfaction, motivation, and WOM jointly have a significant impact on



loyalty, accounting for 44.6% of its variance. WOM serves as an important mediator, reinforcing the pathway from internal evaluations (satisfaction and motivation) to long-term commitment (loyalty).

3. Practical Implications: Enhancing satisfaction and motivation not only improves students' immediate experience but also promotes voluntary advocacy (WOM), which in turn strengthens loyalty. These results highlight the importance of a comprehensive approach to student engagement, including academic, administrative, and motivational strategies.

### Implications for Practice

Based on the findings, several managerial and policy implications can be drawn for higher education institutions:

1. Enhance Student Satisfaction: Institutions should focus on service quality, academic support, and responsive administration to meet and exceed student expectations.
2. Foster Motivation: Both intrinsic and extrinsic motivation should be cultivated. Programs that encourage personal growth, skill development, and career preparation can strengthen students' engagement.
3. Leverage Word of Mouth: Institutions can facilitate platforms and channels—such as online forums, alumni networks, and student ambassador programs—to encourage positive sharing of experiences.
4. Strategic Focus on Loyalty: By integrating satisfaction, motivation, and WOM strategies, institutions can build long-term loyalty, which contributes to student retention, positive reputation, and sustainable growth.

### Recommendations for Future Research

Future studies should explore additional factors influencing loyalty, such as perceived value, trust, and emotional attachment. Longitudinal designs could also provide insight into how satisfaction, motivation, and WOM influence loyalty over time. Furthermore, cross-institutional comparisons could help generalize findings to diverse educational contexts.

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