An International Journal

Indonesian Journal of Economics, Business, Accounting, and Management

E-ISSN: 2988-0211 | Vol. 02, No. 04, 2024, pp. 1-10

Journal Homepage: https://journal.seb.co.id/ijebam/index

Marketing Optimization in Higher Education: Increasing Student Satisfaction through Social Media with Student and Lecturer Involvement

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ARTICLE INFORMATION

Section
Research Articles

Article History
Article Submitted: 20/02/2024
Accepted: 23/02/2024
Available online: 28/04/2024

Keywords
marketing in higher education
collaborative active learning
engagement
social media use
student satisfaction

ABSTRACT

This research aims to analyze marketing in higher education by considering the independent variables interactivity with peers, interactivity with lecturers, active collaborative learning. Meanwhile, the dependent variables studied involve the variables engagement, social media use, student satisfaction. 157 research respondents were involved in this research. Data processing is carried out using the SmartPLS method. As a result, this research shows that all indicators in the dependent and independent variables produce positive and valid values. These findings contribute to a deeper understanding of the dynamics of marketing in higher education, particularly in the context of interactivity, active collaborative learning and the use of social media, all of which have the potential to increase student satisfaction. This study contributes to enriching the marketing literature in higher education.

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INTRODUCTION

The Technology Acceptance Model (TAM) was proposed by Davis in 1989 (Baig, Shuib and Yadegaridehkordi, 2021). TAM is one of the frequently cited theories for predicting technology acceptance and has been well accepted in various theoretical studies (Vanduhe, Nat and Hasan, 2020). The Technology Acceptance Model (TAM) has become a significant framework in supporting research to identify and explain the elements that influence how users accept technology (Alassafi, 2022). TAM describes how internal principles are influenced by external factors. In addition, this shows that the real usefulness of a system comes from the sequential relationship between beliefs, attitudes and behavioral intentions. User acceptance of a new

information system is crucial to achieving the system's success. TAM is an adequate framework for investigating how users receive technology. TAM attempts to detail behavior from user intentions, which are explained as the result of attitudes and then these intentions influence behavior (Qashou, 2021). Universities cannot be separated from management in terms of marketing. Marketing is important, especially to increase accreditation in higher education. Not infrequently, nowadays students are looking for the best place to continue their studies in college in order to continue their education. The phenomenon of students always placing emphasis on university decisions. This gives rise to marketing management in higher education which must continue to be updated regularly.

Creating new markets in education is a very complex challenge that requires building significant expertise, networks and relationships. Marketing institutions include entities involved in actions and cognitive processes that must be understood as heterogeneous socio-technical arrangements that collectively participate in market formation (Williamson, 2021). Currently, the trend of shifting from traditional teaching to student-centered teaching is increasing with the active participation of students (Tuma, 2021). Active learning spaces support student-centered teaching that generates interactivity. Students serve as a source of learning for each other, namely by talking to each other, observing other people's work and making collective decisions (Qureshi *et al.*, 2023).

In learning contexts, some educators combine social media and mobile technology to improve their teaching and learning (Alturki and Aldraiweesh, 2022). However, in online learning there are common barriers to effective collaboration. This includes social laziness, non-interactive group dynamics, lack of appreciation for values, lack of challenging assignments or scripts, lack of social skills (Saqr *et al.*, 2018). So, student satisfaction is a need. Basic psychology, behavioral engagement and academic success form a complex and dynamic system. This shows that satisfaction is influenced by the presence of a large number of interactions (Murillo-Zamorano, López Sánchez and Godoy-Caballero, 2019).

There is still relatively little research on marketing in higher education to increase student satisfaction with social media through engagement between students and teaching staff. The novelty obtained from this research compared to previous studies lies in the context of interactivity, active collaborative learning and the use of social media as a learning system tool that involves active interaction between students and lecturers, all of which have the potential to increase student satisfaction. Therefore, the author is interested in filling this knowledge gap by conducting related research.

LITERATURE REVIEW AND HYPOTHESIS

The Relationship between the Effects of Interactivity with Peers on Engagement

Previous research has exposed the significant influence of peer interactivity on engagement. According to research conducted Dao (2020) exploring the effect of interaction strategy instructions on learner involvement in interactions with peers, this research shows that providing instructions regarding interaction strategies with peers can increase learner engagement. This is because the more intensively students practice or study a particular subject, the more knowledge they usually gain about that subject (Spruit and Joosten, 2019). This is supported by research conducted Maccabe and Fonseca (2021) where students who become teaching assistants and student participants can share knowledge bases or cognitive compatibility, thereby allowing students to have more freedom in explaining concepts and interacting, which in turn will support the learning process.

H_1: *Interactivity with Peers has a positive effect on engagement.*

The Relationship between the Influence of Interactivity with Lecturers on Engagement

Previous research saw that the majority of students agreed or strongly agreed that communicating with lecturers (interactivity with lectures) via social media provided benefits to their learning process and was able to increase their involvement in learning (Alalwan *et al.*, 2019). Zhampeiis *et al.*, (2022) concluded the importance of adopting lecture mode as a new approach to teaching in the classroom. Thus it can be concluded that interactive learning highlights several key characteristics, namely the active involvement of both teachers and students. However, most educators emphasize traditional formal approaches over interactive approaches, perhaps because they do not consider changes in teaching styles. Furthermore, according to research conducted by Megahutami and Sisi (2022) in history learning, the diverse characteristics of students and lack of enthusiasm in learning can have a negative impact on learning discipline and understanding of the material during the learning process. As a solution, educators implement an interactive lecture mode that involves question and answer techniques, discussions and lectures to avoid monotonous learning. In its implementation, educators directly select students to answer questions, encourage them to look for answers and be active in the learning process. The opportunity to ask questions provides space for students to express their curiosity about history. Even though not all students actively ask questions, the interactive lecture method has been proven to increase student enthusiasm and involvement in understanding history.

H_2: *Interactivity with Lecturers has a positive effect on engagement.*

The Relationship between the Influence of Active Collaborative Learning on Engagement

Research conducted Manickam, Selvam and Ahrumugam (2020) shows that the results of the research show that the existence of collaborative learning in the use of social media, especially Facebook, has a significant impact on students' learning experiences. Students become more active in the process to achieve positive achievements. These findings are evidence that collaborative learning via Facebook has a positive impact on student academic performance. Collaborative learning can bring positive results for students' involvement in participation and interaction in a group environment, managing their relationships and contributing to development (Qureshi *et al.*, 2023). Participation in collaborative studies has a tendency to strengthen students' self-confidence and leadership abilities, allowing them to learn about how to lead in a group context (Hina, Dominic and Zaidi, 2020).

H_3: *Active collaborative learning has a positive effect on engagement.*

The Relationship between the Influence of Engagement and Student Satisfaction

Previous research Thanh Thuy (2021) conducted research at a state university in Ho Chi Minh City, Vietnam, showing the importance of explaining and providing involvement in the role of sustainability activities of higher education institutions from a student perspective. Universities are now increasingly focused on providing students with quality and specialized programs related to sustainable development. As a result, initiatives towards sustainable development are slowly being implemented. As a result, student satisfaction with the curriculum increases when they perceive the faculty to be knowledgeable, responsive to their requests and instill a sense of self-confidence in students. Furthermore, Hwang and Choi (2019) research was conducted at a private university in Seoul, South Korea, students majoring in business to analyze the relationship between student engagement and satisfaction. Forms of engagement can vary, including students' interactions with faculty or their perceptions of a supportive learning

environment. Engagement is viewed as a concept involving elements such as allocation of time to tasks, social and academic integration, and teaching practices, all of which have links to student satisfaction and achievement. In addition, online interaction research conducted by Sharif Nia *et al.* (2023) states that online interaction has a significant impact on the effectiveness of student learning. The findings show that data from nine different countries shows a similar pattern, there is a positive relationship in student engagement in the relationship between online teaching, online interaction and student satisfaction.

H_4: *Engagement has a positive effect on student satisfaction*

The Relationship between the Effect of Social Media Use on Student Satisfaction

Research by Sobaih, Hasanein and Abu Elnasr (2020) shows the importance of using social media for student engagement and influencing positive student learning experiences. Social media has changed the way people, including students and most female students, communicate, interact and socialize through their learning process in educational institutions. Students now have the opportunity to participate in social discussions by sharing pictures and images, posting their comments, spreading ideas, and so on. Today, social media in general has an impact on the daily lives of young people and students in particular. Furthermore, findings from research Rahman, Ramakrishnan and Ngamassi (2020) show that the use of social media for learning purposes can increase student satisfaction. When students view social media as a useful tool for learning, their tendency is to use social media for learning purposes. The use of social media in collaborative learning and involving students can have a positive impact on academic achievement and increase student satisfaction (Alismaiel, Cifuentes-Faura and Al-Rahmi, 2022).

H_5: *Social media use has a positive effect on student satisfaction*

RESEARCH METHODS

In collecting data for this research, the method that will be used is through preparing a questionnaire. The samples taken were students from the class of 2023 at the Islamic University of Indonesia. The sampling used in this research used non-probability sampling with the convenience sampling method. In this case, the calculation of the sample size is based on the number of indicators plus the number of latent variables, then multiplied by five to reach the minimum sample target and multiplied by ten to reach the maximum sample target obtained (Mafruchah, 2023). This research has 22 question indicators and 6 latent variables (*a=28*).

$$N = (5 \times a)$$

Thus, the determination of the minimum sample size is calculated based on the following formula:

$$N = (5 \times a) = 5 \times 28 = 140$$

Meanwhile, determining the maximum sample size is calculated based on the following formula:

$$N = (10 \times a) = 10 \times 28 = 280$$

Based on these calculations, this research must obtain a minimum number of 140 respondents and a maximum target of 280 respondents.

Table 1. Descriptive Analysis of Demographic Variables

Respondent Characteristics	(N)	(%)
Gender		
Man	93	59,2%
Woman	64	40,8%
Age		
15-20	157	100%
Average monthly income		
Rp500.000 - < Rp1.000.000/month	4	2,5%
Rp1.000.000 - < Rp2.000.000/month	17	10,8%
Rp2.000.000 - < Rp3.000.000/month	71	45,2%
Rp3.000.000 - < Rp4.000.000/month	38	24,4%
Rp4.000.000 - < Rp5.000.000/month	22	14%
>Rp5.000.000/month	5	3,2%
Study Program		
Management	125	79,5%
Development economics	7	4,5%
Islamic economics	15	9,5%
Civil engineering	10	6,4%

Source: Primary Data (2024)

ANALYSIS RESULT

Path Coefficient Test Results (Path Coefficient)

This research carried out a structural model test or also called an inner model which is used to determine the relationship between variables. Testing the structural model is carried out by analyzing the value of R-square (R2) for the dependent variable. As for the independent variable, we test the path coefficient. The path coefficient is a step to test the hypothesis results which are calculated using the SmartPLS application using the bootstrapping technique.

Table 2. Hypothesis Test Results

Hypothesis	Original Sample (0)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic (|O/STDEV|)	P Values	Result
IN-P - EN	0,218	0,220	0,075	2,893	0,004	H1 Valid
IN-L - EN	0,459	0,463	0,070	6,545	0,000	H2 Valid
ACL - EN	0,247	0,244	0,072	3,432	0,001	H3 Valid
EN – SS	0,259	0,262	0,099	2,623	0,009	H4 Valid
SMU - SS	0,633	0,633	0,081	7,785	0,000	H5 Valid

Source: Primary data processed (2024)

That all hypotheses (H1-H5) are supported. This is because it is in line with the principle, which that the T-statistic value must be more than 1.96, and the P-value must be less than 0.05. Therefore, the results of all hypotheses in this study are supported.

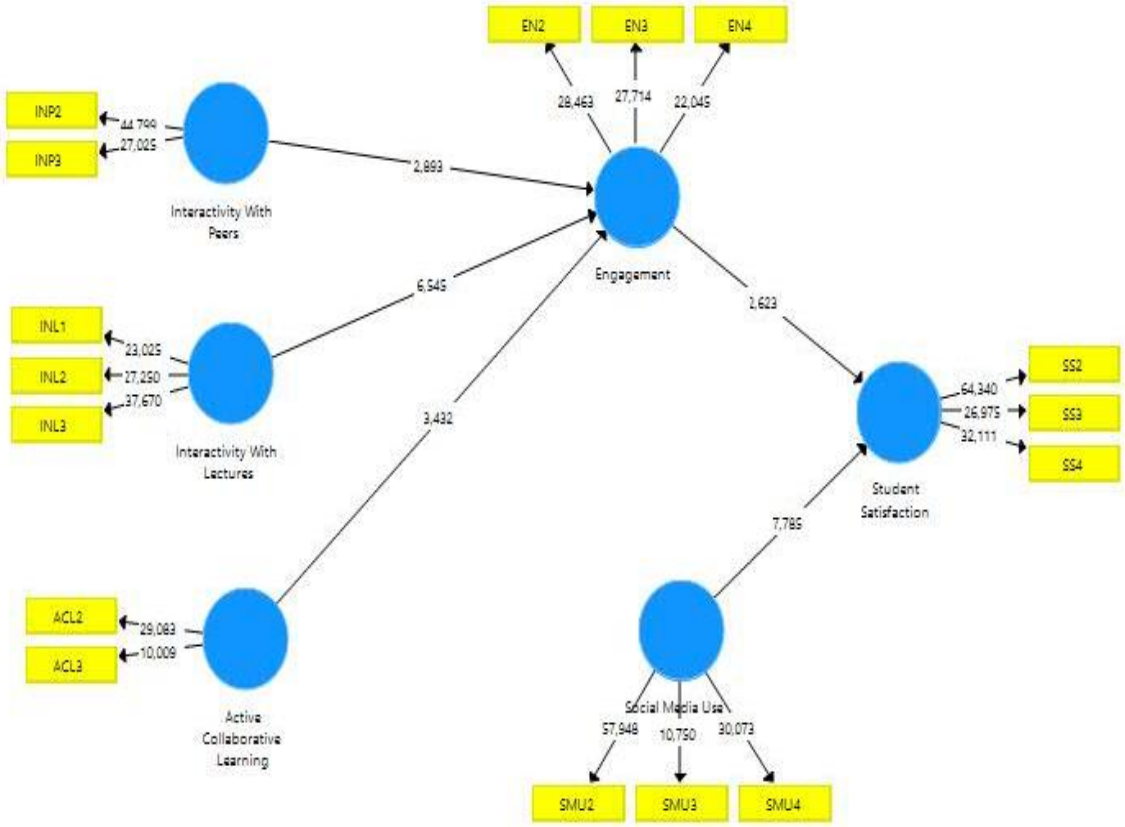

Figure 2. Bootstrapping on Path Coefficient Test Results (Path Coefficient)

Source: Primary data processed (2024)

Discussion

This research examines the influence of several important factors related to marketing in higher education from 157 respondents in the research sample. In general, the results of this study are believed to have a good influence on marketing in higher education.

The Effect of Interactivity with Friends on Engagement

These results are in line with previous research conducted by Dao (2020). That if we refer to the respondent profile, the majority of respondents in this study were dominated by students. Interaction strategies can increase learning engagement in interacting with friends in college. Qureshi *et al.*, (2023) said similarly that involvement in interacting with friends can increase students' enthusiasm and interest, help them explore more deeply various diverse ideas and improve learning outcomes. If this continues, interaction strategies will have a positive impact for universities.

Furthermore, according to research conducted in a medical school environment (Tuma, 2021). Activities such as lectures and group learning sessions are common practices for various aspects of medical education in technology integration. Technological advances, aimed at facilitating communication and encouraging interaction, offer additional potential for increasing interactivity in lectures.

The Effect of Interactivity with Lecturers on Engagement

These results are in line with research conducted by Alalwan *et al.*, (2019) that the majority of students significantly agree that communicating with lecturers (interactivity with lectures) via social media provides benefits in their learning process and can increase engagement in learning. Zhampeiis *et al.*, (2022) highlighted the significance of adopting a lecture mode as a novel teaching approach within the classroom. Consequently, it can be inferred that interactive learning emphasizes several pivotal traits, notably the active engagement of both educators and learners. Nevertheless, many educators prioritize traditional formal methodologies over interactive ones, possibly due to a lack of consideration for shifts in teaching paradigms.

Additionally, as indicated by research conducted by Megahutami and Sisi, (2022) in history education, the varied attributes of students and their lack of enthusiasm for learning can adversely affect disciplinary adherence and comprehension of subject matter during the instructional process. To address this, educators implement an interactive lecture mode, incorporating techniques such as questioning, discussions, and lectures to mitigate monotony in learning. In its application, instructors directly engage students in answering questions, prompting them to seek solutions and actively participate in the learning experience.

The Effect of Active Collaborative Learning on Engagement

These results are in line with research conducted by Manickam, Selvam and Ahrumugam, (2020) that research findings show that collaborative learning through the use of social media, especially Facebook, has a significant impact on students' learning experiences. Students become more participating in the learning process, which ultimately contributes to positive achievement.Participation in collaborative studies tends to increase students self-confidence and leadership skills, facilitating learning about leadership abilities in a group environment (Hina, Dominic and Zaidi, 2020). According to Qureshi *et al.*, (2023), collaborative learning can yield favorable outcomes for student engagement in group participation and interaction, facilitating the management of relationships, and fostering contributions to development.

The Effect of Engagement on Student Satisfaction

These results are in line with research conducted by Hwang and Choi, (2019) that research conducted at a private university in Seoul, South Korea, aims to analyze the relationship between engagement and satisfaction of students majoring in business. Forms of engagement can vary, including student interactions with faculty or their perception of a supportive learning environment.

A study conducted by Thanh Thuy, (2021) at a state university in Ho Chi Minh City, Vietnam, underscores the significance of elucidating and involving students in the sustainability efforts of higher education institutions. There is a growing emphasis on universities providing students with high-quality and specialized programs pertaining to sustainable development.

Consequently, initiatives towards sustainable development are gradually being introduced. This leads to an elevation in student satisfaction with the curriculum, as they perceive faculty members to be knowledgeable, responsive to their needs, and fostering a sense of self-assurance among students. Furthermore, according to research on online interaction conducted by Sharif Nia *et al.*, (2023), it is noted that online interaction greatly influences the efficacy of student learning. Their findings reveal a consistent trend across data from nine diverse countries, indicating a positive correlation between student engagement and the interplay between online teaching, online interaction, and student satisfaction.

The Effect of Social Media Use on Student Satisfaction

The use of social media has the potential to increase students' interactions with faculty and their peers. The use of social media in this context refers to students' views regarding the use of these platforms in classroom learning activities. Assessing students' perceptions of social media use is important, because it influences their assessment of the quality of the education they receive (Rahman, Ramakrishnan and Ngamassi, 2020).

Alismaiel, Cifuentes-Faura and Al-Rahmi, (2022) suggest that incorporating social media into collaborative learning and student involvement may yield beneficial outcomes such as enhanced academic performance and heightened student contentment. The study conducted by Sobaih, Hasanein and Abu Elnasr, (2020) highlights the significance of employing social media platforms to foster student engagement and foster positive learning encounters. The utilization of social media has transformed the communication, interaction, and socialization patterns of individuals, including students, and notably among female students, throughout their educational journey in academic institutions.

CONCLUSION

Based on the research results described previously, it can be concluded that interactivity with peers has a positive effect on engagement. This shows that interactivity with peers is a strong activity in forming student engagement relationships in higher education. So that it can build a positive response as a result of student involvement in higher education. Likewise, the relationship with research results related to interactivity with lecturers can strengthen the relationship between student enagement in higher education. So that it can strengthen the positive response resulting from student involvement in higher education.

On the other hand, active collaborative learning towards engagement indicates that there are several factors that can influence such as students actively responding to each other towards learning involvement in higher education. So that there is a two-way dialogue in the engagement of active collaborative learning activities. In this case, the research results show that engagement has a positive effect on student satisfaction.

Student engagement in higher education can strengthen individual students' sense of satisfaction with higher education. Students will feel more trusted by universities. So as to foster a sense of satisfaction in higher education. Students also have satisfaction in using social media in the learning process. This shows that students are currently active in using social media, they are taking an active role in learning involvement using social media. The majority of students feel that social media does not affect their mentality in the learning process. So it can be concluded that students have satisfaction when using social media in learning activities.

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