

# Potential Relationship between Students' Satisfaction on University Attributes and Positive or Negative Word-of-Mouth (WOM) and Its Correlation with Their Recommendations

Imelda Junita<sup>a</sup>, Fanny Kristine<sup>b</sup>, Sherlywati<sup>c</sup> and Rizki Muhammad Sidik<sup>d</sup>  
*Department of Management, Maranatha Christian University, Suria Sumantri 65, Bandung, Indonesia*

**Keyword:** Attributes of Students' Satisfaction, Positive and Negative Word-of-Mouth, Students' Perception, Recommendation.

**Abstract:** Prospective students willing to further their education are expected to gather adequate information, compare and evaluate the benefits and disadvantages of various universities in a competitive academic atmosphere. One of the numerous ways of gathering information is through Word-of-Mouth (WOM) from family members, relatives and friends. Positive or negative WOM is generally formed from university students' experiences. The purpose of this study is to investigate specific attributes likely to enhance students' satisfaction regarding a university through Word-of-Mouth (WOM). This is a quantitative and qualitative research with data obtained from 57 students of a private university in Bandung, Indonesia, from a questionnaire and Focus Group Discussion (FGD). The results showed that students were most satisfied with the campus facilities and least satisfied with financial policy. Meanwhile, the results of correlation analysis indicated that 14 attributes had positive correlation significantly, 7 attributes had negative correlation significantly, and another 7 were not related. Furthermore, FGD was used to extract information on students' perceptions, opinions, attitudes towards the experiences gained at the university. The results showed a significant positive correlation between positive WOM and recommendations by students to others, with no negative WOM. Based on the study, implications for the university are discussed, and suggestion for future research is provided.

## 1 INTRODUCTION

Nowadays, the level of competition among universities in Indonesia, with dominance in those owned by private organizations, is significantly increasing. According to Digdowiseiso (2020) in 2018, Indonesia had 345 (88,24%) private universities and 46 (11,76%) public universities. High school graduates are now becoming more discerning in selecting universities to further their education due to the expenses associated with the process. However, by gaining admission into a university, students are able to choose an occupation that is suitable for their skills, which in turn provides financial stability and personal satisfaction.

Furthermore, it is one of the most important steps toward social and economic welfare in students' lives because it shapes their career. Therefore, universities have to attract prospective students while ensuring the old ones are properly retained. The universities have to ascertain their services satisfy students' expectations.

Generally, universities engaged in service industry, whereby the output cannot be evaluated before consumption. Expectations on services are not as apparent as those of tangible products (Özdemir et al., 2016). Students tend to gather information regarding the services provided by universities from their surroundings, such as family members, relatives, friends and social media. The informal

<sup>a</sup> <https://orcid.org/0000-0001-7932-6932>

<sup>b</sup> <https://orcid.org/0000-0002-5974-7606>

<sup>c</sup> <https://orcid.org/0000-0002-6429-3549>

<sup>d</sup> <https://orcid.org/0000-0001-7058-8928>

comment or impression on the services by someone to others forms Word-of-Mouth (WOM) communication. This is defined as a strategy used to share opinions, feelings or experiences that influence others' evaluation and intentions. The messages are either positive or negative, depending on their individual opinions (Harahap, Hurriyati, Gaffar, Wibowo, et al., 2018). Therefore, WOM communication has become an important source in the service industry that is capable of positively or negatively impacting people's behaviour and decision-making effectively.

Universities usually use various promotional instruments to fascinate prospective students. Nevertheless, some of these instruments are unable to convince prospective students to register to the universities, particularly in the final decision-making phase. WOM communication plays a significant role in affecting students' decision-making process in selecting a university. In the Asia Pacific, especially in Indonesia, people mostly rely on third-party recommendation (Khraim, 2011). WOM communication is a powerful tool because it is usually trusted by information recipients (Chen, 2016). Furthermore, suggestions from family members, relatives and friends are much more effective than advertisements and publications. Normally, people tend to trust others' opinion because they feel it is proposed independently without force or encouragement (Khraim, 2011). During the search phase, prospective students gather information on universities from the internet or social media. However, in the selection phase, they prefer to obtain a tremendous part of off-the-record information from informal sources, such as from family members, relatives, friends, etc. Here, WOM communication plays an essential role in the prospective students' decision-making processes to choose a university (Lehmann, 2017).

There are positive and negative impacts associated with this means of gathering information. Positive WOM communication influence prospective students to select a university, while negative WOM creates antipathetic impacts. Negative WOM communication has the ability to destroy the university's reputation and discourage prospective students from registering.

Many previous studies have discussed the effects of WOM communication on students' preferences and how it influences their decision-making behaviours.

Özdemir et al. (2016) carried out a research to determine the effect of WOM communication on prospective university students in Turkey, especially

on emerging needs, collecting information and evaluating preferences. WOM communication also influenced students' decision-making behaviours, particularly after examining satisfaction, disappointment and complaints.

The study carried out by Harahap et al., Hurriyati, Gaffar, and Amanah (2018) stated that WOM communication positively influenced students' decision in selecting a university in Indonesia. This is in accordance with the research carried out by Lehman (2017), which stated that traditional WOM communication had a more substantial impact on prospective students' preferences than e-WOM. This is because e-WOM usually has a more substantial impact during the search phase than the selection.

Chloe (2019) found a positive relationship between the overall satisfaction of international students and social experiences in Malaysia through WOM communication.

Other studies also discussed predictor variables affecting WOM communication, such as service quality, students' satisfaction, reputations and brand image of a university.

Dora (2016) stated that the service quality of private universities is needed to provide students satisfaction. WOM communication is the implication of service quality mediated by students' satisfaction.

A study by Chen (2016) on students and graduates of universities in Taiwan found that brand image, satisfaction and loyalty of students significantly and positively influenced the sharing of pleasant experiences and referencing the university to others.

Ong (2017) proved that students' satisfaction had an influence on WOM and switching behaviour directly and significantly. This role as a mediating variable has also indirectly increased the effect of reputation on WOM and switching behaviour.

The other studies indicated that service quality increases students' satisfaction and encourage them to carry out WOM communication with others (Mestrovic, 2018; Handayanto, 2018).

Khraim (2011) examined students' willingness to deliver positive WOM communication in Jordan. The research found that satisfaction, experience and source, positively influenced WOM communication directly. Yet, incentives provided by the universities have not influenced the students to propagate positive WOM significantly. When students are satisfied, they tend to spread positive WOM and more likely to make a recommendation.

Therefore, it is obvious that WOM is powerful, more relevant and comprehensive because of its independent trait. WOM communication has distinctive credibility. In university, positive or

negative WOM is influenced by many factors, which positively or negatively impacts students' behaviour.

## 2 METHODS

The research questions are identified as follows:

- Which specific attributes of students' satisfaction influence positive or negative WOM communication regarding the university?
- How are students' experiences likely to enhance their satisfaction and their perceptions of those experiences?
- Is there any significant relationship between positive or negative WOM communication with students' recommendation on the university to others?

The research aims to verify the potential relationship between students' satisfaction with each university attribute and their positive and negative WOM communication and to verify the correlation between positive or negative WOM communication with students' recommendations. This research also aims to explore students' experiences and perceptions in accordance with their satisfaction.

The combination of both quantitative and qualitative research methods are used in this study to provide a better understanding of research problems.

For quantitative analysis, an online questionnaire with the Likert Scale was developed. In Part I, participants were asked to rate their satisfaction levels with 14 attributes of university experiences (1=very dissatisfied, 7=very satisfied), such as satisfaction with the lecturers, curriculum, academic advice, etc. In Part II, participants were asked to rate the levels they are likely to communicate positive or negative WOM to others on the attributes of university experiences (1=very unlikely, 7=very likely). In Part III, participants were asked to rate the levels of recommendation, such as recommending a university to family members, relatives and friends, as the first choice in the master program (1=very unlikely, 7=very likely). Correlation analysis was used to analyse the relationships between levels of students' satisfaction and positive WOM, levels of students' satisfaction and negative WOM, positive or negative WOM and recommendations. This online questionnaire was administered to 57 undergraduate students of a private university in Bandung, Indonesia. Furthermore, qualitative analysis with focus group discussion was conducted to complement the quantitative analysis.

The validity test was conducted to determine the validity of the statements and the fidelity of the measurement. Pearson correlation analysis was used to test the validity. Pearson correlation coefficient is a number between -1 and +1 that indicates the level of linear dependency between variables. Pearson correlation coefficients of  $> 0.35$  are interpreted as strongly valid (Oktavia et al., 2018).

There are 14 attributes of university experiences to be analysed:

1. Lecturers
2. Curriculum
3. Academic Advising
4. Learning Process
5. Online Learning
6. Information Technology
7. Academic Policy
8. Financial Policy
9. Administration Staffs
10. Learning Facility
11. Campus Other Facility
12. Students' Activities
13. Social Interaction
14. Career Prospects

Tables 1-3 show the validity tests results for students' satisfaction on each attribute (S1-S14), Positive WOM on each attribute (PWOM) and Negative WOM on each attribute (NWOM).

Table 1: Validity Test for Students' Satisfaction Attributes.

| Students' Satisfaction on Attributes | Coefficient | Results |
|--------------------------------------|-------------|---------|
| S1                                   | 0.744       | valid   |
| S2                                   | 0.825       | valid   |
| S3                                   | 0.440       | valid   |
| S4                                   | 0.535       | valid   |
| S5                                   | 0.649       | valid   |
| S6                                   | 0.650       | valid   |
| S7                                   | 0.838       | valid   |
| S8                                   | 0.654       | valid   |
| S9                                   | 0.688       | valid   |
| S10                                  | 0.795       | valid   |
| S11                                  | 0.515       | valid   |
| S12                                  | 0.788       | valid   |
| S13                                  | 0.728       | valid   |
| S14                                  | 0.702       | valid   |

Table 1 shows the result of validity test on students' satisfaction with each attribute. As all the Pearson correlation coefficient  $>0.35$ , all variables of students' satisfaction can be interpreted as valid.

Table 2: Validity Test for Positive WOM.

| Positive WOM on Attributes | Coefficient | Results |
|----------------------------|-------------|---------|
| PWOM1                      | 0.648       | valid   |
| PWOM2                      | 0.825       | valid   |
| PWOM3                      | 0.717       | valid   |
| PWOM4                      | 0.778       | valid   |
| PWOM5                      | 0.793       | valid   |
| PWOM6                      | 0.823       | valid   |
| PWOM7                      | 0.797       | valid   |
| PWOM8                      | 0.691       | valid   |
| PWOM9                      | 0.770       | valid   |
| PWOM10                     | 0.806       | valid   |
| PWOM11                     | 0.612       | valid   |
| PWOM12                     | 0.746       | valid   |
| PWOM13                     | 0.803       | valid   |
| PWOM14                     | 0.867       | valid   |

Table 2 shows the result of validity test on positive WOM of each attribute. As all the Pearson correlation coefficient  $>0.35$ , all variables of positive WOM can be interpreted as valid.

Table 3: Validity Test for Negative WOM.

| Negative WOM on Attributes | Coefficient | Results |
|----------------------------|-------------|---------|
| NWOM1                      | 0.914       | valid   |
| NWOM2                      | 0.935       | valid   |
| NWOM3                      | 0.859       | valid   |
| NWOM4                      | 0.921       | valid   |
| NWOM5                      | 0.876       | valid   |
| NWOM6                      | 0.909       | valid   |
| NWOM7                      | 0.940       | valid   |
| NWOM8                      | 0.842       | valid   |
| NWOM9                      | 0.903       | valid   |
| NWOM10                     | 0.896       | valid   |
| NWOM11                     | 0.882       | valid   |
| NWOM12                     | 0.920       | valid   |
| NWOM13                     | 0.910       | valid   |
| NWOM14                     | 0.891       | valid   |

Table 3 shows the result of validity test on negative WOM of each attribute. As all the Pearson correlation coefficient  $>0.35$ , all variables of negative WOM can be interpreted as valid.

Table 4: Validity Test for Recommendation.

| Recommendation | Coefficient | Results |
|----------------|-------------|---------|
| R1             | 0.901       | valid   |
| R2             | 0.899       | valid   |
| R3             | 0.958       | valid   |
| R4             | 0.822       | valid   |

Table 4 shows the result of validity test on recommendation of each attribute. As all the Pearson correlation coefficient  $>0.35$ , all variables of recommendation can be interpreted as valid.

The next step is the reliability test, which indicates the consistency of the instrument in measuring a certain phenomenon (Ursachi et al., 2015). Cronbach's Alpha coefficients of the variables were calculated to determine the reliability of the instrument.

Table 5: Reliability Test.

| Variables | Cronbach's Alpha | Results  |
|-----------|------------------|----------|
| S         | 0.909            | reliable |
| PWOM      | 0.943            | reliable |
| NWOM      | 0.982            | reliable |
| R         | 0.901            | reliable |

In Table 5., the results indicated that all Cronbach's Alpha values were very good and ranged from 0.901 to 0.982. According to a commonly accepted theorem, Cronbach's alpha of 0.60-0.70 represents a reasonable degree of reliability, and when it is above 0.80, it is in the very good degree category (Ursachi et al., 2015). This means that all the variables were consistent or relatively homogenous in the questionnaire.

### 3 RESULTS AND DISCUSSION

Table 6 shows the descriptive statistics for students' satisfaction with attributes.

Table 6: Descriptive Statistics for Students' Satisfaction.

| Students' Satisfaction on Attributes | Mean | Standard Deviation |
|--------------------------------------|------|--------------------|
| Lecturers                            | 5.81 | 0.97               |
| Curriculum                           | 5.70 | 0.96               |
| Academic Advising                    | 6.14 | 1.20               |
| Learning Process                     | 5.91 | 1.01               |
| Online Learning                      | 5.25 | 1.39               |
| Information Technology               | 5.84 | 1.15               |
| Academic Policy                      | 5.65 | 1.19               |
| Financial Policy                     | 4.93 | 1.43               |
| Administration Staffs                | 5.72 | 1.13               |
| Learning Facility                    | 5.89 | 1.10               |
| Campus Other Facility                | 6.21 | 0.92               |
| Students' Activities                 | 5.63 | 1.29               |
| Social Interaction                   | 5.89 | 1.18               |
| Career Prospects                     | 5.75 | 0.93               |

Table 6 shows the levels of students' satisfaction with various attributes of university experiences

(1=very dissatisfied to 7=very satisfied). The table shows that students were most satisfied with campus and other facilities and least satisfied with financial policy.

To examine students' perception of each attribute, they were asked to share their experiences on the attributes that satisfied or dissatisfied them.

One of the students shared the following experience on campus other facilities as follows *"Other campus facility, such as food court, it is very extraordinary with lots of menu variations. Banks and healthcare are also very helpful. For instance, I suddenly got sick when I was studying on campus. I immediately went to the campus health clinic and was treated. I did not have to pay for it."* Another student stated that the parking space is quite spacious. Students also offered suggestions to improve other campus facilities. For instance, they stated that *"Every classroom needs to be equipped with an air conditioner, due to the hot weather."* and *"The Wi-Fi network needs to be extended, for students to be able to access the internet from anywhere."*

Few students share dissatisfactions with financial policy, such as in the following excerpt: *"In this pandemic situation, many students are in financial distress. University needs to raise tuition discount rates because students learn from home."* and *"Students have to pay the total amount of tuition fee as stated in the Integrated Administration System without knowing the details of financial bills."*

In correlations analysis between the levels of students' satisfaction on attributes and positive WOM, all the p-values are smaller than the alpha used, which is 0.05. This means there is a significant correlation between the students' satisfaction on attributes and positive WOM, as shown in Table 7. The correlation analysis results showed that the 14 attributes of satisfaction have positive relationships with WOM. The signs of all coefficients were positive, which means the more satisfied students with the university attributes, the higher their possibility to communicate positive WOM. These attributes are lecturers, curriculum, academic advising, learning process, online learning, information technology, academic policy, financial policy, administration staffs, learning facility, campus, students' activity, social interaction, and career prospects.

Regarding the degree of the Pearson correlation, values of 0 and 1 indicate no correlation and perfect correlation, respectively. The closer the Pearson correlation values to +1, the stronger the relationship between the satisfaction on each attribute with positive WOM. Meanwhile, when the Pearson

correlation value is closer to 0, it indicates that the relationship between satisfaction on each attribute and positive WOM is getting weaker. A correlation value  $> 0.5$  indicates a fairly strong relationship as a simple guideline, while a correlation value  $< 0.5$  indicates a weak relationship.

Students' satisfaction with strong relationship and positive WOM are lecturers, curriculum, online learning, information technology, academic policy, financial policy, administration staff, learning facility, students' activities, social interaction, and career prospects. Meanwhile, attributes of students' satisfaction that have a weak relationship with positive WOM are academic advising, learning process, and campus other facilities.

Table 7: Correlations between Students' Satisfaction on Attributes and Potential Positive WOM Communication.

| Attributes             | r    | p-value |
|------------------------|------|---------|
| Lecturers              | .607 | .000*   |
| Curriculum             | .687 | .000*   |
| Academic Advising      | .431 | .001*   |
| Learning Process       | .329 | .012*   |
| Online Learning        | .539 | .000*   |
| Information Technology | .545 | .000*   |
| Academic Policy        | .709 | .000*   |
| Financial Policy       | .605 | .000*   |
| Administration Staffs  | .569 | .000*   |
| Learning Facility      | .688 | .000*   |
| Campus Other Facility  | .373 | .004*   |
| Students' Activities   | .641 | .000*   |
| Social Interaction     | .615 | .000*   |
| Career Prospects       | .639 | .000*   |

The correlation analysis results also showed that the attribute most strongly related to positive WOM is academic policy, which is represented by the value of 0.709. Some students expressed their opinions on academic policy, as follows: *"So far, the academic policy is clearly informed, with adequately structured academic activities, hence I have no problem with academic policy."* Interestingly, students were most satisfied with campus other facilities, however, this attribute was related most weakly to positive WOM.

Meanwhile, the results of the correlation analysis between the level of students' satisfaction on attributes and negative WOM, as shown in Table 8, indicates that 7 of the 14 students' satisfaction on attributes significantly correlated with negative WOM. These attributes include lecturers, curriculum, learning process, academic policy, learning facility, students' activities and social interactions. The correlation results are all negative; therefore,

increasing students' satisfaction on attributes value decreases their possibility of communicating negative WOM. The closer the Pearson correlation values to -1, the stronger the relationship between the satisfaction on each attribute with negative WOM. Nevertheless, these 7 attributes of satisfaction have a weak relationship with negative WOM and significantly correlated with positive WOM (six attributes strongly correlated with positive WOM, including lecturers, curriculum, academic policy, learning facility, students' activity and social interaction). Therefore, students' dissatisfaction with these 6 attributes resulted in negative WOM weakly but students' satisfaction with these attributes resulted in positive WOM strongly.

The attribute that was related most strongly to negative WOM is lecturers. Few students shared their experiences about lecturers, such as *"I have both positive and negative impression on few lecturers. This is because some lecturers create a pleasant learning atmosphere. They arranged simulation and interactive discussion in the class for students to understand the learning course properly. Furthermore, students' efforts were also appreciated. However, some lecturers did not deliver the learning course properly."*

On the contrary, students' satisfaction on attributes including academic advising, online learning, information technology, financial policy, administration staffs, campus other facilities, and career prospects were only related to positive WOM. Hence, students' satisfaction with these attributes generated positive WOM but students' dissatisfaction with these attributes would not generate negative WOM.

Table 8: Correlations between Students' Satisfaction on Attributes and Potential Negative WOM Communication.

| Attributes             | r     | p-value |
|------------------------|-------|---------|
| Lecturers              | -.405 | .002*   |
| Curriculum             | -.397 | .002*   |
| Academic Advising      | -.081 | .549    |
| Learning Process       | -.292 | .027*   |
| Online Learning        | -.130 | .336    |
| Information Technology | -.243 | .068    |
| Academic Policy        | -.383 | .003*   |
| Financial Policy       | -.230 | .086    |
| Administration Staffs  | -.194 | .147    |
| Learning Facility      | -.351 | .007*   |
| Campus Other Facility  | -.210 | .117    |
| Students' Activities   | -.374 | .004*   |
| Social Interaction     | -.342 | .009*   |
| Career Prospects       | -.149 | .267    |

Table 9 shows the correlation between students' satisfaction on attributes and positive WOM with a sig-value of 0.000, which is smaller than the alpha used of 0.05. This means that there is a significant correlation between students' satisfaction on attributes and positive WOM. The relationship between students' satisfaction on attributes and positive WOM is also positive because the Pearson correlation value is 0.839. This means that the higher the levels of students' satisfaction on attributes, the greater the levels of possibility of positive WOM. Meanwhile, the sig value between students' satisfaction on attribute and negative WOM generally shows a sig-value of 0.003, which means there was a significant and negative correlation (Pearson correlation value of -0.391). Therefore, an increase in the level of students' satisfaction on attribute leads to a decrease in negative WOM from the students.

The correlation results between positive WOM and recommendation shows the sig-value of 0.000, smaller than alpha 0.05. This indicates a positive Pearson correlation value of 0.669, which means the higher the positive WOM, the greater the possibility of recommendations delivered by students to others. The correlation result between the negative WOM with recommendations shows the sig-value of 0.156, which is greater than alpha 0.05, which means that it does not show a significant correlation (Pearson correlation value of -0.190).

Table 9: Correlations between Variables.

|      | S.                  | PWOM    | NWOM   | R.      |        |
|------|---------------------|---------|--------|---------|--------|
| S    | Pearson Correlation | 1       | .839** | -.391** | .732** |
|      | Sig. (2-tailed)     |         | .000   | .003    | .000   |
|      | N                   | 57      | 57     | 57      | 57     |
| PWOM | Pearson Correlation | .839**  | 1      | -.283*  | .669** |
|      | Sig. (2-tailed)     | .000    |        | .033    | .000   |
|      | N                   | 57      | 57     | 57      | 57     |
| NWOM | Pearson Correlation | -.391** | -.283* | 1       | -.190  |
|      | Sig. (2-tailed)     | .003    | .033   |         | .156   |
|      | N                   | 57      | 57     | 57      | 57     |
| R    | Pearson Correlation | .732**  | .669** | -.190   | 1      |
|      | Sig. (2-tailed)     | .000    | .000   | .156    |        |
|      | N                   | 57      | 57     | 57      | 57     |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

## 4 CONCLUSIONS

In conclusion, this study showed a significant positive and negative correlation between students'

satisfaction on university attributes with WOM. It means the more satisfied students with the university attributes, the higher their possibility to communicate positive WOM. The correlation analysis results showed that the 14 attributes of satisfaction have positive relationships with WOM. Furthermore, 11 of these attributes, namely lecturers, curriculum, online learning, information technology, academic policy, financial policy, administration staffs, learning facility, students' activities, social interaction, and career prospect, have strong relationships with positive WOM. Meanwhile, 3 attributes, namely academic advising, learning process, and campus other facilities, have weak relationships with positive WOM. Seven attributes of satisfaction, including lecturers, curriculum, learning process, academic policy, learning facility, student activities and social interactions, also have a weak relationship with negative WOM. These results are in accordance with the research carried out by Palmer (2011), which stated that some university attributes were associated significantly with positive WOM but were not associated significantly with negative WOM, while some university attributes were associated significantly with positive and negative WOM.

The policymaker of the university does not have to improve other facilities because students are most satisfied with this attribute. However, the university needs to make a reasonable academic policy because it was most strongly related to positive WOM. The policymaker also needs to enhance the attribute of the lecturer and make sure to improve performance on this attribute because it tends to reduce negative WOM.

Future studies need to be carried out on additional attributes, such as campus scholarship, implementation of government policy on higher education, or WOM communication implications on brand image, reputation, etc.

## REFERENCES

- Chen, C.-T. (2016). The Investigation on Brand Image of University Education and Students' Word-of-Mouth Behavior. *Higher Education Studies*, 6(4), 23. <https://doi.org/10.5539/hes.v6n4p23>
- Chloe, T. W. S. (2019). *Investigating Key Factors Influencing International Students' Choice of Private Higher Education Institutions (HEIs) in Malaysia*. January, 1–304.
- Digdowiseiso, K. (2020). The development of higher education in Indonesia. *International Journal of Scientific and Technology Research*, 9(2), 1381–1385.
- Dora, Y. M. (2016). Word of Mouth Implications of Service Quality Mediated Student Satisfaction. *8th Widyatama International Seminar on Sustainability WORD*, 6.
- Handayanto, E. (2018). *Mediating Role of Satisfaction on Relationship between Service Quality and Word of Mouth in Islamic Private Universities in Indonesia*. 231(Amca), 530–534. <https://doi.org/10.2991/amca-18.2018.147>
- Harahap, D. A., Hurriyati, R., Gaffar, V., & Amanah, D. (2018). The impact of word of mouth and university reputation on student decision to study at university. *Management Science Letters*, 8(6), 649–658. <https://doi.org/10.5267/j.msl.2018.4.027>
- Harahap, D. A., Hurriyati, R., Gaffar, V., Wibowo, L. A., & Amanah, D. (2018). *Effect of Word of Mouth on Students Decision to Choose Studies in College*. 1<sup>st</sup> International Conference on Islamic Economics, Business and Philanthropy, 793–797. <https://doi.org/10.5220/0007090007930797>
- Khraim, H. S. (2011). The willingness to generate positive word of mouth marketing: The case of students in private universities in Jordan. *Pertanika Journal of Social Science and Humanities*, 19(2), 273–289.
- Lehmann, W. (2017). The Influence of Electronic Word-of-Mouth on College Search and Choice. *College and University*, 92(4), 2–11. [http://ezproxy.lib.uconn.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1162189&site=ehost-live%0Ahttp://www.aacrao.org/resources/publications/college-university-journal-\(c-u\)](http://ezproxy.lib.uconn.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1162189&site=ehost-live%0Ahttp://www.aacrao.org/resources/publications/college-university-journal-(c-u))
- Mestrovic, D. (2018). The Impact of Service Quality on Students' Satisfaction and the Word-of-Mouth: The Case of the University of Rijeka Departments. *SSRN Electronic Journal*, September, 440–445. <https://doi.org/10.2139/ssrn.3282466>
- Oktavia, R., Irwandi, I., Rajibussalim, T., Mentari, M., & Mulia, I. S. (2018). Assessing the validity and reliability of questionnaires on the implementation of Indonesian curriculum K-13 in STEM education. *Journal of Physics: Conference Series*, 1088. <https://doi.org/10.1088/1742-6596/1088/1/012014>
- Ong, L. (2017). Effects of Reputations and Satisfactions on Positive Word of Mouth Intentions and Switching Behaviors. *International Journal of Business Studies*, 1(1). <https://doi.org/10.32924/ijbs.v1i1.8>
- Özdemir, A., Tozlu, E., Şen, E., & Ateşoğlu, H. (2016). Analyses of Word-of-mouth Communication and its Effect on Students' University Preferences. *Procedia - Social and Behavioral Sciences*, 235(October), 22–35. <https://doi.org/10.1016/j.sbspro.2016.11.022>
- Palmer, J. (2011). *Predictors of Positive and Negative Word of Mouth of University Students: Strategic Implications for Institutions of Higher Education Level of student satisfaction with various attributes (IV) students Positive and negative WOM effects*. *International Journal of Business and Social Science*, 2(7), 59–63.
- Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How Reliable are Measurement Scales? External Factors with Indirect Influence on Reliability Estimators. *Procedia Economics and Finance*, 20(15), 679–686. [https://doi.org/10.1016/s2212-5671\(15\)00123-9](https://doi.org/10.1016/s2212-5671(15)00123-9)