

Student's Preferences for Lecturers with Conjoint Analysis

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Abstract: Lecturer is one of the most important factors in determining the quality of education and college graduates. This study aims to determine the factors of student's preference on the quality on lecturers at the Faculty of Education and Teacher Training Sulthan Thaha Saifuddin Jambi State Islamic University. The sample in this study is all active students in Faculty of Education and Teacher Training chosen by using proportionate stratified random sampling method. The data were collected by using questionnaires containing seven factors which were analyzed using conjoint analysis with full-profile approach. The result shows that the factors which become the preference of the students toward the lecturers are interactive, innovative, applicable, relaxed, motivated, timely and objective in assessing. Based on the relative importance value of the factors obtained in sequence, it results lecturer's personalities, assessment, discipline, learning method, material mastery, communication style and motivating ability.

1 INTRODUCTION

Lecturer is one of the most important components in a system of education in higher education. Lecturer is based as professionals with the main task of transforming, developing, and disseminating knowledge, technology and art through education, research and community service. The lecturer is a professional person who aims to implement the national education system and realize the goals of national education, namely the development of potential students to be human beings who believe and fear the God, have noble character, healthy, knowledgeable, capable, creative, independent, and become citizens who democratic and responsible (UUD RI No 14 tahun 2005). In their daily lives, sometimes there is a difference between the ideal character of lecturer and what is encountered by students in the campus.

The ideal characteristics of the lecturer in the educational process are: 1) Always showing a personality that is character, fearful of God and proud of his identity as a college lecturer, 2) Mastering in depth the fields of science that becomes his expertise and able to actualize in modern life and always oriented to the future, 3) Have extensive and deep scientific and intellectualism insight, adequate professionalism, and the right methodology, 4) Demonstrate

discipline, diligence, responsibility, integrity, critical, innovative, dynamic, open, respect the opinions of others, oriented to productivity, and noble and believes that work is worship, 5) Soul and at the same time apply as educators and mentors, have honesty, trustworthy, friendly, communicative, attention to science, have responsibility for the progress and success of students, emphasize problem solving, and make students have moral behavior, 6) Be proactive and feel ownership and responsibility for the success and progress of the institution where he works, 7) Oriented towards the future, always aware of improve personal knowledge and quality and upholding the lecturer's code of ethics and complying with all provisions regarding obligations as lecturers, 8) Avoid corruption, collusion and nepotism, 9) Upholds ukhuwah and togetherness, wisdom, full dedication and worship, and is able to make itself a role model for students in behavior and especially in the fields of taught disciplines, as well as an examples and role models for the whole community, 10) Must always try to be able to give a contributing of knowledge that is beneficial to humanity (Alba, 2011).

Tarbiyah and Teacher Training Faculty are the largest faculty in the State Islamic University of Sulthan Thaha Saifuddin Jambi which consist of several departments and have more than one hundred lecturers. The results of interviews with several students about lecturers showed that each

student had different preferences about the lecturers who had taught them so far. Fatrisia as Islamic Education Department said “there are lecturers who are disciplined, diligent, assignments and judgments are clear, skilled in teaching, responsible for their duties and having authority. But there is lecturer who rarely for come, give a lot of assignments and bad assessment”. Wahyu from Islamic Education management Department said, “there are lecturers who are disciplined and teach well, but there are also who are lazy to come and teach”. Based on the diversity of opinions, it is necessary to evaluate which aims to determine the student’s preferences in lecturers at Tarbiyah and Teacher Training Faculty of State Islamic University of Sulthan Thaha Saifuddin Jambi. One method that can be used to examine and analyze preferences is conjoint analysis.

Conjoin analysis is a multivariate analysis that can be used to obtain a combination or composition of factors in the form of attributes of a new or old product or service that is most preferred by consumers so that consumer’s preferences for a product or service can be known. In this study conjoint analysis is used to determine student’s preferences for lecturers at Tarbiyah and Teacher Training Faculty which are expected to increase learning motivation on students.

The previous researches related to student preferences in the field of education were discussed by several researchers. Cynthia (2013) use conjoint analysis to determine students' perception of lecturers. Fitri (2011) use conjoint analysis to examine student preferences for the quality of lecturers. Arief (2017) use conjoint analysis to examine student preferences towards lecturers. Rini (2017) use conjoint analysis to determine student preferences for mathematics statistics courses. Based on these studies, researchers are interested to determine the factors of student's preference for lecturers using conjoint analysis. The purpose of this research was to determine both student’s preference and relative importance value among the factors of student’s preference for lecturer at Tarbiyah and Teacher Training Faculty of State Islamic University of Sulthan Thaha Saifuddin Jambi.

2 METHODS

This research was conducted at Tarbiyah and Teacher Training Faculty of State Islamic University of Sulthan Thaha Saifuddin Jambi. This research was conducted in March and April 2018. The data in this study are primary data obtained from the distribution of questionnaires that have been given to

active students of 2015, 2016 and 2017 at Tarbiyah and Teacher Training Faculty of State Islamic University of Sulthan Thaha Saifuddin Jambi. The sample in this study was 2830 students at Tarbiyah and Teacher Training Faculty who were selected using proportionate stratified random sampling. This sampling technique is carried out by the requirement that the population consists of levels, layers, strata, or sub-groups (Tukiran, 2014). Using the Slovin formula obtained a sample size of 351 students which will then be divided in proportion based on the number of students in each department and class. The collected data will be analyzed using conjoint analysis.

2.1 Determination of Attributes and Levels

From some literature, theory and research obtained several lecturer criteria that were assessed by students when teaching in the classroom. The lecturer criteria are the attributes used in the study. These attributes are communication style, learning method, material mastery, lecturer’s personalities, motivation ability, discipline and assessment. Each attribute has two choice criteria called level which are usually equal levels or choices. The attributes and level of attributes in this study can be seen in Table 1.

Table 1: The attributes and level of attributes

Attributes	Level of Attributes
Communication Style	1. Communicative 2. Interactive
Learning Method	1. Conventional 2. Innovative
Material Mastery	1. Theoretical 2. Applicative
Lecturer’s Personalities	1. Relax 2. Serious
Motivation Ability	1. Motivator 2. Inspiratory
Discipline	1. Timely 2. Flexible
Assessment	1. Objective 2. Subjective

2.2 Designing a Combination of Stimuli

The design of the combination of attribute levels (stimuli) that have been used in this researched was compiled based on full profile approach. Because there are seven attributes, the cards formed are $2^7 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 128$. Because stimuli are formed too much and will make it difficult for

respondents to score, the stimuli are reduced by using factorial designs called orthogonal arrays, which make it possible to estimate all main effects. With minimum stimuli = Number of Levels - Number of Attributes + 1, the stimuli that have been evaluated by respondents are $14 - 7 + 1 = 8$ stimuli.

2.3 Data Collection

Data collection is done by distributing questionnaires to respondents. The questionnaire is in the form of a stimuli card which contain a combination of attributes that will be chosen by respondents using rating of 1 to 5 with the following conditions:

Score 1 = Very Dislike

Score 2 = Dislike

Score 3 = Quite Likes

Score 4 = likes

Score 5 = Very Likes

2.4 Data Analysis

The data obtained will be analyzed using descriptive analysis and conjoint analysis procedures to find out what attributes are the student's preferences for lecturers. Interpretation of results is seen from the total usefulness value and the important relative values found in the model produced in conjoint analysis.

3 RESULT AND DISCUSSION

This research uses primary data taken from the results of questionnaires to active students at Tarbiyah and Teacher Training Faculty at UIN Sulthan Thaha Saifuddin Jambi for 2017/2018 academic year. The questionnaire begins with filling in the student biodata which includes class, department, gender, GPA, Senior High School, major in Senior High School, origin of region and residence. From 351 students as respondents, 66 were students of 2015 class, 121 students in 2016, and 141 students in 2017.

Based on the department, from 351 samples there were 87 Islamic Education students, 21 Arabic Language Education students, 25 Islamic Education Management students, 45 Madrasah Ibtidaiyah Education students, 48 English Education students, 16 Physics Education students, 48 Biology Education students, 42 Mathematics Education students, and 19 Raudhatul Athfal Education students.

3.1 Combination of Attributes and Level of Attributes

This research uses a complete combination presentation method to display a combination of attributes with an attribute level (stimuli). In making stimuli with the complete combination presentation method, the number of attributes and a small level can be used a factorial design that uses all available combinations. If selected p attributes that have two levels, there will be as much as 2^p combination of attributes and level attributes that must be evaluated by the respondent. So, the number of stimuli that occur is $2^7 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 128$ stimuli.

If the 128 stimuli are used, it will be difficult for the respondent to score the stimuli. Respondents will find it difficult to provide consistent answers, other than that it requires a relatively long time. Then the combination will be reduced using fractional factorial design, orthogonal arrays. With this design, some of the combinations of stimuli are chosen which really affect the main effect. The stimuli taken are minimum stimuli = number of levels - number of attributes + 1 = $14 - 7 + 1 = 8$. So, the stimuli that respondents evaluated were 8 stimuli. Then the respondent was asked to give a score on the 8 stimuli with criteria: 1 = very dislike, 2 = dislike, 3 = quite like, 4 = like, and 5 = very like.

3.2 Research Sample Analysis

In this research, the research method that has been used was the metric method (score). Data for conjoint analysis were obtained from the scores given by respondents to each card in the research questionnaire. The data that has been obtained were analyzed individually. The estimation model used was an additive model. Based on the results of the individual analysis, of the 351 respondents' data obtained, there were 340 data that could be analyzed while 11 data were not; this was because the respondents gave the same score on all combinations of attributes and attribute levels (stimuli).

3.3 The Use Value in Each Level of Attributes

The student's preferences with conjoined analysis produced the use values that describe the student's assessment of each level of attributes with numbers. The positive value and the biggest shown the level of attributes that students like, and the negative value means dislike by students. Usability

values at each attribute level based on student preferences can be seen in Table 2.

Table 2: The use of values

Attributes	Level of Attributes	The use of value
Communication Style	Communicative	-0,012
	Interactive	0,012
Learning Method	Conventional	-0,074
	Innovative	0,074
Material Mastery	Theoretical	-0,069
	Applicative	0,069
Lecturer's Personalities	Relax	0,219
	Serious	-0,219
Motivation Ability	Motivator	0,032
	Inspiratory	-0,032
Discipline	Timely	0,036
	Flexible	-0,036
Assessment	Objective	0,211
	Subjective	-0,211
Constant		3,322

Table 2 show the use value in each attribute. It is known that in the attributes of communication style, students prefer interactive rather than communicative, this is indicated by a positive use value (0,012). In learning method, students prefer innovative rather than conventional, this is indicated by a positive use value (0,074). Attributes of material mastery, students prefer mastery of applicative rather than theoretical, this is indicated by a positive use value (0,069). In the attribute of lecturer's personalities, students prefer lecturer who are relaxed rather than serious lecturers, this is indicated by a positive use value (0,219). In motivation ability, students prefer motivator rather than inspiratory, this is indicated by a positive use value (0,032). In the discipline attributes, students prefer on time, this is showed by a positive use value (0,036). And assessment attributes, students prefer lecturers who give objective values, this is mean by a positive use value (0.211).

3.4 Relative Importance Value

Relative importance values are used to determine which attributes are considered the most important by respondents to lecturers can be seen in Table 3.

Table 3: Percentage of relative importance value

Attributes	Percentage
Communication Style	11.86
Learning Method	12.63
Material Mastery	12.54
Lecturer's Personalities	20.65
Motivation Ability	10.66

Discipline	13.28
Assessment	18.37

Table 3 show percentage of relative importance value of attributes by respondents to lecturers. From the value of relative importance, it is known that the most important attributes in sequence are lecturer's personalities (20,65%), assessment (18,37%), discipline (13,28%), learning methods (12,63%), material mastery (12,54%), communication style (11,86%), and motivation ability (10,66%).

3.5 Correlation Test

Correlation test was conducted to find out the relationship between the combination of attributes and the student's preference for lecturers. Correlation test results can be seen in Table 3.

Table 4: Correlation test

Statistic Test	Value	Sig.
Pearson's R	1.000	0.000
Kendall's tau	1.000	0.000

Based on Table 4, the relationship between the combination of attributes and student's preferences can be seen in the Pearson's R value which shows the value of 1,000 or the influential student preference value is 100%. This shows that there is a very strong level of correlation, supported by a significant value of 0,000 (below 0,05) which indicates that the value is significant.

4 CONCLUSIONS

Based on the results of the study it can be concluded that the factors or attributes that become student preferences for lectures are interactive, innovative, applicative, relaxed, motivated, timely and objective in assessing. Generally, the main thing that is assessed or seen by students from a lecturer is personalities.

REFERENCES

- Alba, C. 2011. *Strategi Peningkatan Mutu Pendidikan di Perguruan Tinggi*. Bandung : ITB.
- Lestari, F. C. 2011. *Study of Conjoint Analysis in Reviewing Student's Preferences on the quality of STIS's Lectures*. Thesis. Bogor Agricultural University. Bogor. Indonesia.

- Noegroho, C. A. 2013. Application of Conjoint Analysis to Determine Student's Preferences for Lecturers (Case Study: Department of Mathematics, Faculty Mathematics and Natural Sciences of Pakuan University). Thesis. Pakuan University. Bogor. Indonesia.
- Taniredja, T., Mustafidah, H. 2014. *An Introduction to Quantitative Research*. Bandung: Alfabeta.
- Warti, R., Lestari, N., 2017. Student's Preferences in Mathematics Statistics using Conjoint Analysis, *Prosiding SIMaNI*s. Volume 1. Nomor 1. Pp.414-418.
- Yulianto, A., Hidayat, R., Akhmad, H., 2017. Student's Preferences of Industrial Engineering Lectures at Trunojoyo Madura University with Conjoint Analysis. Thesis. University of Trunojoyo. Madura. Indonesia.
- Yunikasari, N., Jatipaningrum M. T., 2017. Comparison of Metric and Non-Metric Responses in Conjoint Analysis for preferences of lecturer's qualities. *Journal of Statistika Industri dan Komputasi*. Vol 2. No 2. Pp.136-144.

