Millennial Lecturer in Higher Education: The Effect of Knowledge Clusters, Performance and Learning Satisfaction on Learning Outcomes

Vini Mariani 1 †,‡, Agus Putranto 2‡ , Ilona Gutanjala 3‡ , and Teguh Prasandy 2,*

1 Bina Nusantara University; vmariani@binus.edu

2 Bina Nusantara University; aputra@binus.edu

3 Bina Nusantara University; ilonagutanjala@binus.ac.id

4 Bina Nusantara University; teguh.prasandy@binus.edu

*** Correspondence: teguh.prasandy@binus.edu; Tel.: +62 85641841858 (INA)**

† Current address: Jl. KH Syahdan No. 9 Kemanggisan, West Jakarta, Jakarta Indonesia

Abstract: Generation Y is known as job jumpers because of the desire to earn a higher salary, career opportunities and opportunities to develop themselves. One type of work is a teacher because by becoming a teacher they get a better life, one of which is by getting extra income from the government for those who already have teacher certification, this is what encourages Generation Y to choose this profession. this study uses crosstabs for the data analysis process because the data comes from the LMS database owned by XYZ Campus. Millennial educators who have the highest performance value of ODL Social Science for Information System Engineering Cluster with a value of 5.19. The impact of transactions on millennial lecturers on students is able to fulfill any given workload.

Keywords: Millennial Lecturer, Knowledge Clusters, Performance, Learning Satisfaction, Learning Outcomes

1. Introduction

Generation Y is known as job jumpers because of the desire to earn a higher salary, career opportunities and opportunities to develop themselves. Some of the things according to statement (Saputra & Hutajulu, 2020) so that Generation Y loves their work and is very loyal is to make the work fun for them. One type of work is a teacher because by becoming a teacher they get a better life, one of which is by getting extra income from the government for those who already have teacher certification, this is what encourages Generation Y to choose this profession. In addition, Generation Y feels by becoming a teacher that they can actualize and develop themselves. Both are forms of higher education dharma. Self-actualization is reflected in the form of teaching, which will be seen in the dedication of students' achievements and learning outcomes, while self-development is reflected in the participation of teachers in events such as workshops or training courses conducted by internal and external campus.

For the other two dharmas of higher education in the form of research and community service. The form of research is publication in the form of scientific articles that are published in journals and seminar reports. While for Community Service in the form of providing training in providing the knowledge that a teacher has to the community. Of all the dharma activities listed above as a commitment performed every semester, it becomes a teacher's performance load activity report to be eligible to obtain teacher certification grants each semester.

The aim of this research was conducted at Campus XYZ as one of the educational institutions offering distance learning where teachers can teach through the Learning Management System so that many applicants, especially from generation Y, not necessary

comes on this campus, because apart from working as professionals, they can still work as a teacher. After they pass the long test, the teacher will be placed according to their scientific linearity. Some of them are in the ODL social science and management.

The current situation is due to the Covid19 pandemic, in which the government set aside learning at home so that many campuses put in course cluster. As a result, the number of new students (intake) of the ODL Social Science and ODL Management program is increasing strongly, which the transaction of teaching and learning activities has increased and the need for teachers (lecturer) has also increased.

Campus XYZ has an independent assessment that conducts lecturer performance assessments in the form of a teacher academic performance index whose value is accumulated in the annual performance of the teachers that can be seen through the Learning Management Systems. The performance value is included as a consideration in the assignment of lecturer in the following year. With this assessment, Gen Y lecturer can find out their achievements and dedication in teaching and impact the achievement and fulfillment of students' learning outcomes.

According to (Kamakura & Wedel, 1997), a statistical data fusion model that allows statistical association tests using multiple imputations presented an overview of this approach with an application comparing the crosstab results of combined data with those obtained from complete data. Meanwhile (Graydon et al., 2006) Crosstab is running in a column database management system. The column database management system determines the value of the crosstab operation for each result row and determines the value for the result column of the row combination as an aggregated value based on the intersection set record. From these two publications, this study uses crosstabs for the data analysis process because the data comes from the Learning Management Systems database owned by XYZ Campus.

From the description above, this research is titled Millennial Lecturers in Higher Education: The Effect of Knowledge Clusters, Performance, and Learning Satisfaction on Learning Outcomes.

2. Formulation

In the current study, we question the problem in this study is how to analyze the relationship between millennium lecturers and knowledge, performance and learning satisfaction on learning outcomes?

3. Scope of study

The scope of our study are:

1. Use of education and learning transaction data in the ODL Social Sciences and ODL Management.
2. Use student learning outcomes to see the impact of teaching and learning activities on student performance.
3. Using data for the 2017/2018, 2018/2019, 2019/2020 academic year.
4. ODL Social Sciences is limited to Information Systems Engineering clusters, and ODL Management knowledge cluster for a specialization in Global Business Management.
5. Use of the Microsoft Excel application in data processing.

4. Research Objective

The research objective this paper is:

1. Analysis millennial lecturer on Information System Engineering Cluster.
2. Analysis millennial lecturer on Global Business Management Cluster.
3. Analysis between millennial lecturer on ODL Social Science and ODL Management.

5. Literature

The millennial generation is the millennial generation or what is also called the Y generation, born around 1980 to 2000. Thus, it can be said that the millennial generation is the young generation of today who is currently about 15-34 years old. The age range is in line with the average age of students currently studying at tertiary institutions, is between 19 and 34 years (Hidayatullah et al., 2018).

XYZ University is conducts activities online and face-to-face through a website-based platform as a learning medium for students. This is so that learning can be done flexibly, students can learn anywhere, anytime. This is very supportive for students who are busy as employees, entrepreneurs. And now ODL is also starting to become interesting for High School graduate. The challenge of creating, modifying, and analyzing data generated from simulations in online classes, it is important that we know more about how students use simulations and model the data they generate in online learning environments (Rosenberg & Lawson, 2019).

Cross tabulations of dosage clusters and Stage of Change response categories with themes from the open-ended survey items provided a finergrained look into the question of what factors were associated with the highest levels of PBEE teacher practice change (Duffin & Perry, 2019). Crosstab analysis is a descriptive analysis used to determine the relationship between two variables. Crosstab analysis allows users to cross data from one variable to another. Crosstab analysis can be performed on ordinal or nominal variables.

6. Materials and Methods

The research method used is cross tables in the table:

1. The learning outcomes of each subject in the Information System Engineering Cluster, majoring in ODL Social Sciences
2. The learning outcomes of each subject in the Global Business Management Cluster, majoring in ODL Management
3. Continuity of the educational ODL Social Sciences teachers for the Information Systems Engineering cluster, so that the most consistent teacher in Information System Engineering Classroom Learning
4. Continuity of the educational ODL Management teachers for Global Business Management Cluster, so that the most consistent teacher in teaching ODL Management for Global Business Management Science Cluster is obtained.
5. Teacher Age and Teacher Performance Value ODL Social Sciences for Information System Engineering Cluster.
6. Teacher Age and Performance Value of ODL Management for Global Business Management Cluster.

After the data is tabulated, it is compared to the results of teacher performance in ODL Management and Social Sciences so that millennial teachers have the best performances between the two clusters.

7. Results

The ODL Social Sciences and ODL Management course was established in 2015. From the outset, this training was quite attractive to the public, according to new students for the ODL Social Sciences and ODL Management Training, which has increased every year.

Student registration for ODL Management is in the range of 800 and ODL for Social Sciences is in the range of 450. With this estimate there will be a higher increase next year given the existence of government policies applying online colleges to all levels of education. The method used in the learning process is done online and in person through video

conferencing. The online method is asynchronous through the Learning Management System, which requires more independ-ent learning from students.

The activities that students must perform to measure student performance include activity student in posting discussion forums, conducted weekly according to the topic, the presence of face-to-face or video conference students, quizzes, personal assignment, group assignments, final Test

Following are the learning outcomes students achieved for the 2017/2018, 2018/2019 and 2019/2020 academic years. ODL Information Systems for Information System Engineering Clusters of courses and learning outcomes are shown in Figure 1.

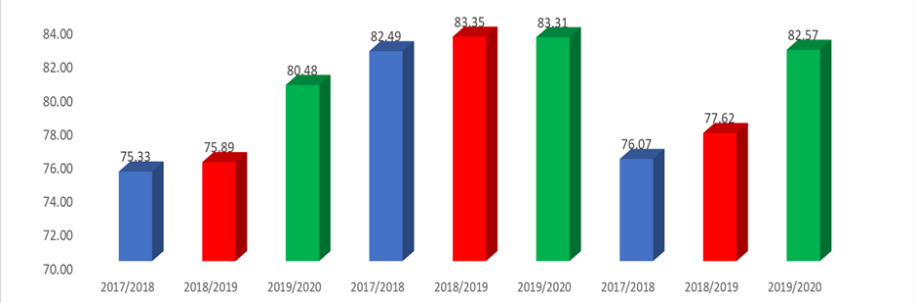

Figure 1. ODL Social Sciences Learning Outcomes for Information System Engineering Cluster

The ODL Social Sciences curriculum for the Information Systems Engineering Cluster consists of Business Process Fundamental, User Experience, and Advanced Information Systems Analysis and Design topics. The Information Systems Engineering Cluster scores an average of 79.68.

Each course shows an increase in value every academic year. ODL Management for Global Business Management Cluster with courses is shown in Figure 2.

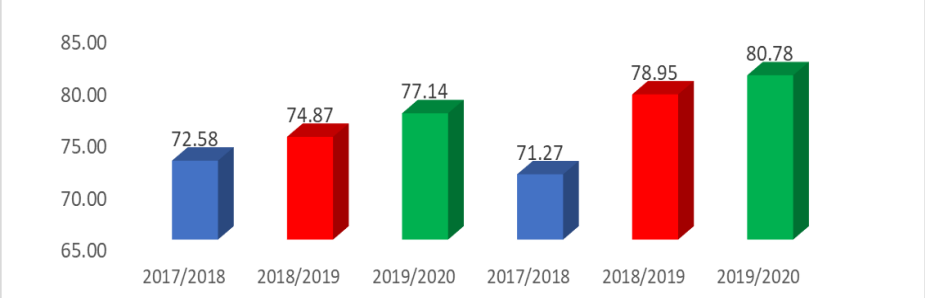

Figure. 2. ODL Management Learning Outcomes for Global Business Management Cluster

The ODL Management Study Program for Global Business Management Cluster consists of the courses International Business and Global Supply Chain Management. The Global Business Management Cluster has an average score of 77.84. Each course shows an increase in value every academic year.

Lecturers teaching for continuity are 14 transactions in 2017/2018, 17 transaction in 2018/2019 and 9 transaction in 2019/2020 on Information Systems Engineering cluster and 8 transactions 2017/2018, 7 transaction in 2018/2019 and 8 transaction in 2019/2020 Global Business Management Cluster, can be seen at table 1.

Table 1. Continuity teaching for Information System Engineering cluster and Global Business Management Cluster

Cluster	Total Transaction Academic Year		
	2017/2018	2018/2019	2019/2020
IS Engineering	**14**	**17**	**9**
Global Business Management	**8**	**7**	**8**

From here it can be seen that in the ODL Social Sciences and the ODL Management, there are changes per subject in the lecturers who teach per academic year. Changes in lecturers per study period are due to the busyness of the lecturers. Each academic year, the lecturer receives a willingness to teach form from the Operations section to fill in the lecturer's willingness to teach, in order to predict the number of subject transactions with the availability of lecturers. If the number of transactions is large and the willingness of lecturers is small, the Operations section will inform the study program in order to be able to inform the lecturer who is scheduled for the course. And if there is no willingness to be scheduled for the course, the program will admit new lecturers.

Table 2. Data Age and Performance Values of Lecturers on Information Systems Engineering Cluster

Age	Academic Year		
	2017/2018	2018/2019	2019/2020
26 - 30	4,83	4,70	
31 - 35	4,80	4,73	5,00
36 - 40	4,60	4,88	4.90
41 - 45			
Average	**4,74**	**4,80**	**4,95**

Table 2. It can be seen that millennial lecturers achieved an average score of 4.74 in 2017/2018, 4.80 in 2018/2019 and 4.95 in 2019/2020. So it can be seen that the performance value of lecturers is increasing every year. If you look at the lecturers, you can see that the highest was achieved in 2017/2018 by lecturers age 26-30, in 2018/2019 by lecturer at 36-40 while in 2019/2020 the highest was achieved by lecturers age between 31-35 years old.

Table 3. Data Age and Performance Values of Lecturers on Global Business management Cluster

Age	Academic Year		
	2017	2018	2019
26 - 30		4,87	
31 - 35	4,43	4,86	4,43
36 - 40	4,91	4,98	4,94
41 - 45		4,75	4,79
Average	**4,67**	**4,87**	**4,72**

Table 3 shows that millennial lecturers have an average performance score of 4,67 in 2017/2018, 4.87 in 2018/2019 and 4.72 in 2019/2020. So it can be seen that the performance value of lecturers is increasing every year. So it can be seen that the performance value of lecturers is increasing every year. If you look at the lecturers, you can see that the highest was

achieved in 2017/2018 by lecturers age 36 - 40, in 2018/2019 be lecturer at 36 - 40, while in 2019/2020 the highest was achieved by lecturers age between 36 - 40 years old.

8. Discussion

Based on student performance and lecturer changes, it can be seen that lecturer changes have no significant impact on student performance. This can be seen in Figure 1 and Figure 2, that student performance has no significant impact. This is due to the very good control over the material offered in the form of power points, lecturer notes, assignments, quizzes, discussion forums and exam, which are majority driven from the ODL Social Sciences. So that whoever the lecturer is teaching the students has all received the same material, so that whoever is teaching the lecturer has no impact whatsoever. What has a big influence is the activity of students during learning process.

Student learning performance can be determined, including student activity on discussion forums, student attendance, quiz scores, personal assignment scores, group assignment scores, and exam scores. This is evidenced by the active role of students in learning, as the independence of student learning is the key to successful student performance. Students should be able to organize their own time because the backgrounds of students who have worked is typically of ODL XYZ University.

If the two cluster of each academic year are compared, there will be similarity in values, namely in 2017/2018 the highest average of Information System Engineering is 75.33, while in Global Business Management's highest average is 72.58. Meanwhile, the highest number took place in the 2019/2020 academic year, Information System Engineering, with the highest average at 83.35, while the highest average in Global Business Management was 80.78. The two scores are still in the same range, namely 80 - 85 in the range of B + values, so students pass with good grades.

By looking at the good learning results of students, you can see that the lecturers are performing excellently. This is evidenced by various tasks that the lecturer performs in each class, such as creating discussion forums, correcting student assignments, creating exam questions, and correcting student exams. With so many assignments, lecturers are still performing well even though they have to fulfill other commitments, especially in the dharmas of higher education.

This is reflected in the great value of teacher performance, which continues to increase each academic year. If you look at the age of the two cluster, the highest is reached by lecturer at the age range 30 - 40.

9. Conclusions

The conclusions of this paper are:

1. Millennial lecturers the highest was achieved by lecturers age between 31-35 years old on Information System Engineering Cluster.
2. Millennial lecturers the highest was achieved by lecturers age between 36 - 40 years old on Global Business Management Cluster.
3. ODL Social Sciences is younger lecturer between 31-35 better than older lecturer, but ODL Management is age between 36-40 better than the others.

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