



Analysis of Creativity and Innovation of PGSD Lecturers in Online Learning based on Learning Management System FKIP University of Pakuan

Fitri Siti Sundari; Nurlinda Safitri; Ratih Purnamasari

Pakuan University, Bogor, Indonesia

<http://dx.doi.org/10.18415/ijmmu.v9i1.3247>

Abstract

This study aims to analyze the creativity and innovation of PGSD lecturers in online lectures based on the Learning Management System FKIP Pakuan University . This study uses a qualitative descriptive research method involving PGSD lecturers at FKIP Pakuan University. Research data were collected through observation, interviews and document analysis. The data was analyzed qualitatively by using the Analysis Interactive Model from Miles and Huberman, namely data collection , data reduction , data display), and drawing conclusions / verification (conclusions). The results showed that PGSD permanent lecturers had good creativity and innovation of PGSD lecturers in online lectures based on the Learning Management System FKIP Pakuan University. In creativity, PGSD permanent lecturers have very good fluency of thinking, very good flexibility of thinking, have good elaboration of thoughts and have good originality of thinking. While in innovation, PGSD lecturers have an average innovation in the good and very good categories. The learning media created are their own work and are varied.

Keywords: *Creativity; Innovation; Online Lectures; Learning Management System*

Introduction

For universities, the Industrial Revolution 4.0 is expected to be able to realize smart education through increasing and equalizing the quality of education, expanding access and relevance in realizing world class. The development of computer technology, especially the internet, is currently affecting all aspects of life, especially in the field of education. Internet is a global network that can connect thousands, even millions of computer networks. Internet use in education is distance learning or *distance learning* . As for the parts of *distance learning*, ie *online learning*, *virtual learning*, *virtual dlassroom* or *web-based learning*. Distance learning d itengah plague Covid-19 learning at home *Work From Home* (WFH) which is slightly disadvantageous aspect of education, especially the lecture that was designed before class schedule. Original lectures are offline, now turned into a lecture online (system *line*). Pakuan University has created an online course program. The online lecture program known as the system of *e-learning* (*online learning*). Online lectures at the University of Pakuan-based *Learning Management System* (LMS). *Learning Management System* (LMS) is a software tool designed to create, distribute, and regulate the delivery of course materials. LMS systems can help faculty to plan and create the syllabus, manage resource materials, organize lecturing students, managing grades,

attendance recapitulate, discussed in discussion forums, take a quiz, and displays the transcript. All Lecturers and Students carry out their lectures through LMS (lms.unpak.ac.id). In the LMS there are features that contain information about academic services, classes *online* per Faculty, PMB (Admissions), *Journal UNPAK*, and information in the form of an announcement. Device lectures each topic / meetings in LMS, consists of six events, namely the attendance list, material (PDF / Word), media (video / animate), assignments, discussion (discussion forums) and *web meet* (Gmeet / Zoom). LMS-based online lectures motivate PGSD lecturers to think creatively and always have innovation in designing media and materials that must be uploaded to the LMS.

Creativity is not innate, but something that can be created and trained by providing a stimulus to the brain. With frequent brain stimulation to think creatively, the inspiration to do, create, and create something is wide open so that it can produce something innovative. Meanwhile, innovation is the process of developing new ideas or incorporating new ideas into practical activities, resulting in the conversion of new ideas into useful applications. The application of new ideas can occur in the form of an innovation process that produces a better way or method in producing something innovative.

The creativity and innovation of PGSD lecturers can be seen from having new ideas that can be applied in the online lecture process, thus stimulating students to explore technology and information in answering the tasks given by the lecturer. With the presence of several PGSD lecturers who are not yet skilled in operating the LMS, the researcher wants to analyze the creativity and innovation of PGSD lecturers in online lectures based on the *Learning Management System* in the FKIP environment of Pakuan University during the 2020/2021 academic year. The purpose of this study is to analyze how many lecturers have creativity and innovation in online lectures based on the *Learning Management System* in the Pakuan University FKIP environment, which of course can be seen from the content of the lecture tools for each topic/meeting in the LMS.

Khalili (2016: 43) says that creativity is a process that individuals go through in the midst of their experiences to improve and develop themselves. In addition, Langgulong (2011: 174) states that creativity is a process carried out by someone which causes him to create something new for him. Meanwhile, according to Asfandiyar (2019: 43) explains that the creativity of teachers in the learning process which includes planning learning, implementing learning, and also evaluating students. Zimmeree in Suryana (2017:11) creativity is defined as the ability to develop ideas and find new ways to solve problems and face opportunities. Creativity as a potential development can not be separated from the inherent psychological aspects related to mindset, attitude and mental.

According to Sund and Slameto (2013:147), creativity has the following characteristics: a). a fairly large desire for curiosity, b). being open to new experiences, c). resourcefulness, d). a desire to discover and research, e.) tend to prefer heavy and difficult tasks, f). tend to seek broad and satisfying answers, g). have passionate dedication and are active in carrying out tasks, h). think flexible, i). respond to questions asked and tend to give more answers, j). ability to make analysis and synthesis, k). have the spirit to ask questions and research, l). have good abstraction power, and m). have broad reading background. With these characteristics of creativity, PGSD lecturers motivate themselves to continue and continue to develop competencies and skills in designing *Learning Management System* virtual classes every time they fill interesting topics.

According to Sternberg (1999), there are several aspects that can drive a person's ability to develop creativity, namely:

1. Fluency of thinking (fluency of thinking). Ability to generate lots of ideas that are out of mind quickly. In fluency of thinking what needs to be determined is quantity not quality.
2. Flexibility of thinking (flexibility). The ability to produce a variety of answer ideas or questions, see a problem from different perspectives and be able to use a variety of approaches or ways of thinking. Creative people are people who are flexible in thinking.

3. Elaboration of the mind (elaboration). The ability to develop ideas and add or detail the details of an object, idea or situation so that it becomes more interesting.
4. Authenticity of thinking (originality). The ability to come up with unique ideas or the ability to come up with original ideas.

Innovation is different from creativity. According to Jane Henry and David Walker in Kandiyatna (2010: 7) revealed that innovation is a combination of conception with discovery and utilization. The meaning of conception is a new idea, invention is a new idea that is turned into a reality, while utilization is the wide acceptance or profit resulting from the invention. According to Indonesian dictionary of innovation comes from the English language is *innovation* that means renewal, new changes. In this case, the definition of innovation is a process of implementation or application of methods or new ideas are actual or renewal process conducted in solving a problem. West (2010: 18) states that innovation does not imply absolutely new things. Change can be viewed as an innovation if the change is new to the person, group, or organization that introduced it. According to Damapour in Ahmadi (2010: 90) innovation is a process to turn opportunities into marketable ideas. Innovation is more than just a good idea for a pure idea that plays an important role, as well as having a creative mind to develop into a valuable idea. Prawiro (2018) says that something is said to be an innovation if it has the following characteristics: 1). Has a characteristic, 2). Is a new idea, 3). Done in a planned and 4). Have a purpose. Henceforth these characteristics will be used as aspects of innovation.

Research Methods

The research approach used in this study is a research that uses a qualitative approach. This study uses a qualitative method with a descriptive design, is a study that provides a thorough description of certain individuals or groups about the circumstances and symptoms that occur. (Sugiyono, 2009:2).

This research was conducted at the PGSD FKIP Study Program, Pakuan University, which is located in Ciheuleut Bogor. The type of data used is in the form of narratives, descriptions, explanations and filling out questionnaires from informants, both oral and written which are described in the form of field notes, questionnaires and documentation. The research flow used is as follows:



This study focuses on analyzing the creativity and innovation of PGSD lecturers in online lectures based on the *Learning Management System* FKIP Pakuan University. The following are aspects of the research:

Table 1. Aspects of creativity

Research focus	Sub-focus Study	Research Indicators
creativity and innovation of PGSD lecturers in online lectures based on the <i>Learning Management System</i> FKIP Pakuan University	creativity and innovation of PGSD lecturers in preparing learning tools at LMS	1. Fluency in thinking
		2. Flexibility of thinking
		3. Mind elaboration
		4. Authenticity of thinking

As for innovation, the aspects used in this study are as follows:

Table 2. Innovation Aspect

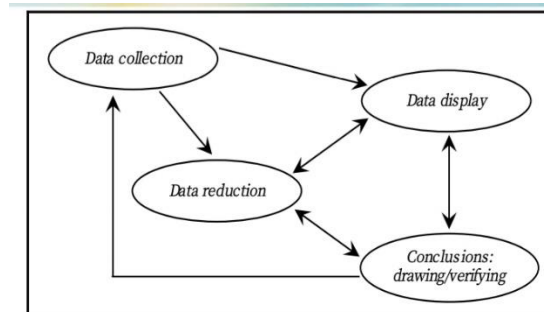
Research focus	Sub-focus Study	Research Indicators
creativity and innovation of PGSD lecturers in online lectures based on the <i>Learning Management System</i> FKIP Pakuan University	creativity and innovation of PGSD lecturers in preparing learning tools at LMS	1. Has a characteristic
		2. Is a new idea
		3. Done in a planned way
		4. Have a goal

Data collection techniques are carried out extensively and in depth through observation, interviews (interview instruments are open, structured with guidelines), documentation studies. This is in accordance with the opinion of Sugiyono (2009:225) which states that data collection can be obtained from the results of observations, interviews, documentation, and combination/triangulation.

The data were analyzed qualitatively by using the *Analysis Interactive Model* steps of Miles and Huberman, namely (Miles and Huberman, 2008: 32); data collection (*data collection*), data reduction (*data reduction*), data presentation (*data display*), and drawing conclusions/verification (*conclusions*):

1. Data collection (*data collection*), namely collecting data at the research site by conducting observations, interviews, and documentation by determining the data collection strategy that is deemed appropriate and to determine the focus and deepening of the data in the next data collection process .
2. Reduction of data (*data reduction*), which is a process of selection, focusing, abstraction, transformation of raw data that exist in the field directly, and passed the time of data collection, thereby reducing the data starts since researchers focused area of research.
3. Presentation of data (*data display*), which is a series of organizational information that allows research to be carried out. Presentation of data obtained by various types, networks, activity linkages or tables.
4. Conclusion *drawing*, namely in data collection, researchers must understand and be responsive to something that is examined directly in the field by compiling patterns of direction and cause and effect.

Schematically, the data analysis process using the Miles and Huberman data analysis model can be seen in the following chart:



(Miles dan Huberman, 1992)

Based on *interactive model* analysis, data collection, data reduction, data presentation and conclusion drawing are cyclical and interactive processes. Qualitative data analysis is an ongoing, iterative and continuous effort.

To facilitate conclusions, the following categories are used:

- 0% - 20% : Not very good
 - 21% - 40% : Not good
 - 41% - 60% : Not good
 - 61% - 80% : good
 - 81% - 100% : Very good
- (Riduwan, 2015: 15)

Results and Discussion

Data collection in this study was carried out to 21 permanent lecturers of PGSD FKIP Pakuan University, with different subjects. The research was carried out while still complying with the Health protocol during the COVID-19 pandemic.

This research begins with compiling research instruments. Instruments are prepared using google forms. Each lecturer was asked to fill out the instrument on the google form. On the other hand, direct observations of LMS were carried out to see the innovations made by lecturers using observation instruments. Each lecturer was observed for their innovative behavior in preparing online lectures through the LMS FKIP Pakuan University. Finally, a direct unstructured interview was conducted. The following is the data obtained based on the research aspect.

1. Fluency in thinking

In this aspect, questions are formulated, namely "Do you always prepare a list of attendance at every lecture?" and "Do you always make discussion forums?"

The data obtained from these two questions is 100% answered yes. So it can be said that this aspect has a very good category.

2. Flexibility of thinking

In this aspect, the questions "Do you apply online learning?", "Do you make your own materials?", and "Do you always give assignments to students?"

The data obtained, all lecturers said yes. So it's worth 100%. So this aspect is categorized as very good.

3. Mind elaboration

In this aspect, the question "Do you always make learning media?" and "Do you do lectures synchronously?" In the first question, it was obtained 100% yes. While in the second question, 95% answered yes. The average data is 97.5% with a very good category.

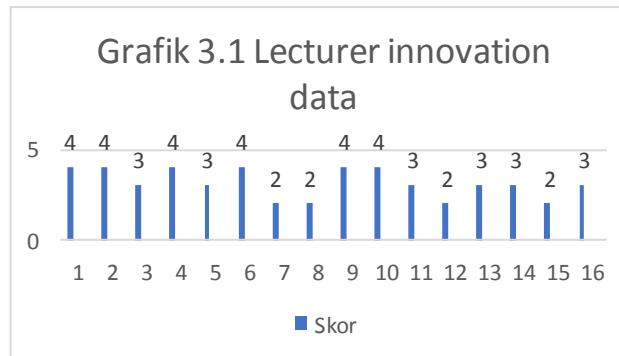
4. Authenticity of thinking

In this aspect, the question "Do you make learning innovations?" the answers obtained 76% said yes. So it falls into the good category.

When looking for the average of the four aspects of creativity above. Then obtained an average of 93.5% with a very good category. The data above is then proven by direct observation on the LMS. Based on the results of interviews, it was found that 76% of lecturers made innovations, especially in making learning media, as a means of delivering lecture material. The resulting innovation is in the form of teaching materials compiled with pdf, word, PPT and video applications.

Researchers made observations to see the innovations made by the lecturers. The following is the observation instrument used.

Table 3.1 Observation rubric



In the LMS direct observation process, two data were produced, namely elements of creativity and elements of innovation. Based on the results of observations obtained the following data:

Based on the data above, it is found that the highest score is at a score of 4 and a score of 3 which is as much as 6. If a percentage is made, the percentage is 37%. While the score of 2 has a percentage of 25%. This shows that the innovation of lecturers is high.

Zimmeree in Suryana (2017:11) creativity is defined as the ability to develop ideas and find new ways to solve problems and face opportunities. PGSD permanent lecturers have good creativity in solving the problem of discontinuing lectures face to face. The use of synchronous is a new idea that is deliberately done so that lectures will reduce the level of boredom. This shows that PGSD lecturers have innovative behavior. Everything that is done is planned, has a purpose and has new ideas. . Innovation is more than just a good idea for a pure idea that plays an important role, and has a creative mind to develop into a valuable idea. Prawiro (2018) says that something is said to be an innovation if it has the following characteristics: 1). Has a characteristic, 2). Is a new idea, 3). Done in a planned and 4). Have a purpose. Henceforth these characteristics will be used as aspects of innovation.

Conclusion

Based on the findings in the research that has been described previously, the researcher can find that PGSD permanent lecturers have the creativity and innovation of PGSD lecturers in online lectures based on the *Learning Management System* FKIP Pakuan University which is good. In creativity, PGSD permanent lecturers have very good fluency of thinking, very good flexibility of thinking, have good elaboration of thoughts and have good originality of thinking.. While in innovation, PGSD lecturers have an average innovation in the good and very good categories. The learning media created are their own work and are varied.

References

- Arshad, Azhr. 2010. *Learning Media* . Jakarta: Raja Grafindo Persada. Bandung: Alfabet.
- Islamiyah, Mufidatul. 2016. *Effective Use of Website-Based E-learning* Jakarta: Salemba
- Jalinus, Nizwandi and Ambiyar. 2016. *Media and Learning Resources*. Jakarta:
- Kandiyatna, Andriani. 2010. *Business Management for Entrepreneurs*. Jakarta: Kencana University. Using Codeigniter and JQuery. Yogyakarta: Andi.

- Milles, Mathew B and Michael A. Huberman. 2008. *Qualitative Data Analysis* . Jakarta: UI
- Munandar, Utami. 2012. *Creativity and Giftedness*. Jakarta: Gramedia Pustaka Utama.
- Munir. 2009. *Distance Learning Based on Information and Communication Technology*.
- Prawiro , M. 2018. *Definition of Innovation, Goals, Benefits, Characteristics of Innovation*.
<https://www.maxmanroe.com/vid/umum/pengertian-inovasi.html>
- Riyanto. 2011. *Creating Your Own E-commerce Application with PHP and MySQL*
- Sternberg, RJ 1999. *Handbook of Creativity*. New York: Cambridge University Press.
- Sugiyono. 2009. *Understanding Qualitative Research*. Bandung: Alfabeta.
- Suryana. 2017. *Entrepreneurship: Practical Guidelines, Tips and Processes Towards Success. Against Student Learning Outcomes of STMIK Asia Malang in Basic Physics Subjects*. *Scientific Journal of Technology and Information Asia (JITIKA)*. Vol.10.No.1.Trisakti.
- West, MA 2010. *Developing creativity in organizations*. Yogyakarta: Kanisius

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).