The Quality of Learning System by Using Online Learning Technology based on SIPDA during Covid-19 Pandemic

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Abstract. One impact of the Covid 19 Pandemic on the education is the implementation of online learning policy. All the educational institutions are encouraged to develop any online learning platforms and continue to socialize the use of the online learning system to all the academic community. This research aims to assess the quality of online learning conducted by the instructors and college students at the Language and Arts Faculty. The data were obtained through a response questionnaire that distributed to the college students. There are 3294 respondents who took part in this research that consist of the college students who are from the study program of Bahasa Indonesia, Indonesian literature, English literature, Educations of English language, German language, French language, arts, dance, music and performing arts. The research results showed that the implementation of the online learning has a good quality based on the results of the college students’ responses. However, there are several weaknesses in the implementation of the online learning process, such as there are still a small proportion of the instructors (15 percent) who have not been able to use the Unimed online learning information system (SIPDA), and the low feedback provided by the instructors to the college students. The findings of this research then become an input for the head of the Language and Arts Faculty to arrange the online learning policy which will later become a standard guideline for the online learning at the Faculty of Language and Arts, Universitas Negeri Medan.

1. Introduction

The development of information and communication technology has given large changes for the advancement of education. Along with it, learning methods have developed many improvements as well, either in personal learning methods, learning media or the learning process. The form of the information technology development which is applied in the education is E-Learning. The Internet-based learning/E-Learning is an innovation that has a very big contribution to the change in the learning process, where it is no longer only listening to material descriptions from lecturers but also the college students doing other activities such as observing, conducting, demonstrating and some others.

There are many types for Internet-based learning/E-learning. [1-3] states that Web-based learning is a learning activity that uses a media site (website) that can be accessed via the internet network. It is also known as “web based learning” which is a type of electronic learning (E-learning) application.

E-learning may give an interesting learning experience for the college students by forming a scientific climate which is adapted to an interesting learning material. The college students’ activities are supported by a competitive learning atmosphere, challenge case studies and stimulate learning, conducting the scientific discussion forums, the creation of research topics, and an assessment system that motivates them to learn. The college students also get feedback in the form of comments about their
activities, lack of explanation from the instructor so that they will get information from a lecturer directly.

Several research studies have found that blended learning can improve the learning outcomes which are equal to or higher than those of college students who study conventionally or completely online, although the success rates are various among the knowledge disciplines [4]. A similar research conducted by Sarah and Handaru Jati [5]. Their research result also shows an improvement in the college students’ activeness in attending the lectures. The results of his research indicate that there are differences in college students’ learning motivation between blended learning and conventional learning models which was 5.782 and there are differences in the level of understanding which was 9.935.

This research aims to describe the quality of the online learning process conducted by instructors – college students in 10 study programs at the Faculty of Language and Arts, Universitas Negeri Medan. The information obtained is focused on the assessing the online learning process which is conducted through the online learning information system platform (SIPDA) of Unimed.

2. Research Methods

The type of this research is an expo facto research where the researcher collects the data directly from the respondents through an instrument of data collection. This research was conducted at the Faculty of Language and Arts which consists of 10 Study Programs, they are: Bahasa Indonesia, Indonesian literature, English literature, Educations of English language, German language, French language, arts, dance, music and performing arts. As we understand that the data collection process is a very important stage in a research. The data that were collected were then used to answer the formulation of the problems in this research, they are knowing the quality of the implementation of the online learning process during the Covid 19 pandemic at the Language and Arts Faculty. The data were obtained through interviews, questionnaires, and observations on the SIPDA E-learning platform of Unimed. The data analysis technique was conducted by using a descriptive quantitative.

The implementation of this research is conducted in accordance with a predetermined schedule by first designing a research instrument that can be used in gathering the information from the respondents who were the source of the information. The number of the respondents was 3294 college students. Percentages are used for the data analysis technique. The percentage of the data from the college students’ response questionnaire obtained is calculated based on a Likert scale with the following rules: 1) a score of 5 represents the choice of "very good"; the score of 4 represents the choice of "good"; the score of 3 represents the choice of "less good", the score of 2 represents the choice of "bad" and the score of 1 represents the choice of "very bad".

3. Results and Discussion

Generally, the online learning that has been conducted at the Faculty of Language and Arts, Universitas Negeri Medan has been well based on the college students’ assessments. The number of the college student respondents who filled out the questionnaires in FBS was 3294 college students. Almost all the question items to assess the instructors’ performance in implementing the online learning were answered positive by the college students. Some notes that need to be considered and improved for future learning are the need for assistance services for the online learning and a forum for submitting the college students’ complaints regarding the online learning. The opportunity to be able to gain access to learning resources from a digital library also needs to be improved so that the college students can easily find some additional material in learning. In detail, the descriptions of student answers for each item related to the question instrument in the monitoring and evaluation of online learning at FBS Unimed can be explained as follows.
Table 1. The Answers List for Each Item of the Instrument of the Online Learning Quality at FBS Unimed

| No | Question Item                                                                                                                                                                                                 | I   | II  | III | IV  | V   | VI  | VII | VIII | IX  | X   |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-------|-----|-----|
|    | **The Readiness of Human Resources And Technology**                                                                                                                                                           |     |     |     |     |     |     |     |       |     |     |
| 1  | The instructors master the IT in the online learning                                                                                                                                                    | 4.16| 4.23| 4.45| 4.07| 3.95| 4.14| 4.32| 3.92  | 4.49| 4.36|
| 2  | The college students master the use of IT in the online learning                                                                                                                                   | 4.31| 4.28| 4.42| 4.2  | 4.36| 4.35| 4.23| 3.98  | 4.43| 4.31|
| 3  | The college students are able to use various online learning applications                                                                                                                   | 4.26| 4.25| 4.45| 4.12| 4.26| 4.26| 4.13| 3.95  | 4.42| 4.25|
| 4  | The college students and/or the instructors provide quick responses/feedback on the online learning                                                                                                    | 4.16| 4.16| 4.45| 3.96| 3.97| 4.13| 4.05| 3.89  | 4.4  | 4.24|
| 5  | The college students have usernames and passwords in SIPDA                                                                                                                                          | 3.94| 3.89| 3.98| 3.39| 4.1  | 4.29| 3.93| 3.83  | 4.44| 4.24|
| 6  | The quality of SIPDA as a Learning System Management (LMS)                                                                                                                                         | 3.73| 3.72| 4.28| 3.42| 3.71| 4   | 3.75| 3.74  | 4.32| 4.08|
| 7  | SIPDA has a complete feature as an online learning platform                                                                                                                                       | 3.67| 3.71| 4.28| 3.45| 3.6  | 3.86| 3.8  | 3.76  | 4.31| 4.08|
| 8  | SIPDA is easy to use (user friendly)                                                                                                                                                                      | 3.76| 3.67| 4.3  | 3.48| 3.65| 3.99| 3.76| 3.74  | 4.29| 4.13|
| 9  | The availability of learning assistance services related to the online learning                                                                                                                     | 3.85| 3.97| 3.64| 3.55| 4   | 3.92| 3.95| 3.8   | 4.23| 2.09|
| 10 | The information and technology infrastructure support the online learning                                                                                                                              | 3.85| 3.95| 4.42| 3.76| 3.91| 3.81| 3.94| 3.84  | 4.23| 4.07|
| 11 | The college students take advantage of the open learning resources available on the internet to help with assignments                                                                               | 4.24| 4.2  | 4.5  | 4.06| 4.39| 4.28| 4.27| 3.99  | 4.38| 4.32|
|    |                                                                                                                                                                                                                                                                   |     |     |     |     |     |     |     |       |     |     |
| 12 | The college students take advantage of the open learning resources available on the internet to help with assignments                                                                               | 3.67| 3.6  | 3.2  | 3.21| 3.45| 3.12| 3.45| 3.47  | 4.01| 3.72|
| 13 | The materials given by the instructors in the online learning are in accordance with the RPS                                                                                                           | 4.26| 4.2  | 4.41| 4.18| 4.15| 4.23| 4.17| 3.68  | 4.47| 4.24|
|    | **The Online Learning Process**                                                                                                                                                                         |     |     |     |     |     |     |     |       |     |     |
| 14 | The instructors convey learning topics and objectives clearly before entering the main materials                                                                                                    | 4.12| 4.1  | 4.44| 4   | 3.89| 4.09| 4.2  | 3.88  | 4.48| 4.28|
|    |                                                                                                                                                                                                                                                                   |     |     |     |     |     |     |     |       |     |     |

Average: 3.98 3.98 4.21 3.75 3.96 4.02 3.98 3.81 4.34 4.01
|   | The instructors convey the communication ethics in networks | 4.12 | 4.16 | 4.01 | 4.04 | 4.02 | 4.2 | 4.01 | 3.93 | 4.49 | 4.32 |
|---|----------------------------------------------------------|------|------|------|------|------|-----|------|------|------|------|
| 16 | The instructors clearly instruct how to participate in online teaching | 3.76 | 3.85 | 3.62 | 3.7 | 3.93 | 3.87 | 3.9 | 3.84 | 4.18 | 4.12 |
| 17 | The instructors teach in structured online learning proved by a program map | 4.11 | 4.13 | 4.05 | 3.95 | 4.04 | 4.24 | 4.01 | 3.94 | 4.5 | 4.33 |
| 18 | The instructors provide links (urls) of other learning resources apart from the main material | 3.86 | 3.98 | 4.4 | 3.96 | 3.86 | 3.67 | 3.89 | 3.88 | 4.41 | 4.2 |
| 19 | How the supporting media in the forms of text, audio, visual, video in online learning used by the instructors | 3.97 | 4.11 | 4.09 | 4.09 | 4.05 | 3.9 | 3.97 | 3.88 | 4.4 | 4.26 |
| 20 | The online learning strategies used by the instructors are various (chat, conference, quiz, and lesson) | 4 | 4.08 | 4.42 | 4.14 | 4.1 | 3.93 | 4.01 | 3.92 | 4.41 | 4.26 |
| 21 | The instructors directly answer when there are students who ask questions | 4.1 | 4.13 | 4.42 | 4.03 | 4.2 | 4.02 | 3.87 | 3.92 | 4.45 | 4.31 |
| 22 | The instructors give direct feedback if there is an online assignment | 4.08 | 4.13 | 4.41 | 3.9 | 4.05 | 3.83 | 3.86 | 3.92 | 4.45 | 4.34 |
| 23 | The learning strategy used indicates there is a learning process not only as assignments | 4.11 | 4.11 | 4.45 | 3.92 | 3.98 | 4.09 | 4.06 | 3.87 | 4.44 | 4.27 |
|   | **Average** | 4.02 | 4.07 | 4.23 | 3.97 | 4.01 | 3.98 | 3.97 | 3.89 | 4.42 | 4.26 |
|   | **The Learning Assignment and the Evaluation Outcomes** | | | | | | | | | | |
| 24 | The instructors give six assignments included in online learning | 4.23 | 4.15 | 4.4 | 4.12 | 3.97 | 4.18 | 4.13 | 3.75 | 4.43 | 4.25 |
| 25 | The instructors explain the products/bills that the college students will upload as a result of the learning products | 4.16 | 4.5 | 4.17 | 4.26 | 4.29 | 4.38 | 4.12 | 3.88 | 4.45 | 4.38 |
| 26 | The instructors explain the products/invoices that will be uploaded by the college students as a result of learning products | 4.16 | 4.17 | 4.45 | 4.26 | 4.38 | 4.29 | 4.12 | 3.88 | 4.45 | 4.38 |
| 27 | The instructors reflect on the problems encountered by the college students during learning | 4 | 4.09 | 4.41 | 4.01 | 4.11 | 4.12 | 4.02 | 3.83 | 4.37 | 4.39 |
| 28 | The instructors give the tests or exams to measure the achievement of the college students’ | 4 | 4.07 | 4.43 | 3.93 | 4.27 | 4.26 | 4.09 | 3.87 | 4.37 | 4.36 |
Based on the data on the respondents' answers results related to the quality of the online learning at the Faculty of Language and Arts in 10 study programs, it is obtained that: 1) The readiness of Human Resources (HR) and technology infrastructure, all the study programs have achieved a 'good' quality. It is seen from the average core that reached the value of 3.75 up to 4.34. Based on this data, the study program with the best human resource and technology readiness in the online learning was the Study Program of Dance Education with a score of 4.34; meanwhile the Study Program of English Literature obtained the lowest average score, 3.75. Furthermore, 2) the aspect of the online learning process, all the study programs have met a 'good' quality category as well. It is seen from the average score of 3.97 up to 4.42. Based on these data, it can be assessed that the study program that the best implements the online learning process is the Study Program of Dance Education, meanwhile related to the quality of assignments and evaluation of learning outcomes given by the instructors to the college students, the Study Program of English Literature is the last with a score of 4.09. The explanation of the percentage of student responses result from 10 study programs as described above can be seen in detail in the diagram below

| Competency | Score 1 | Score 2 | Score 3 | Score 4 | Score 5 | Score 6 | Score 7 | Score 8 | Score 9 | Score 10 |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 29         | 4.05    | 4.11    | 4.07    | 4.06    | 4.01    | 3.93    | 3.86    | 4.42    | 3.33    |          |
| 30         | 4.09    | 4.12    | 4.08    | 4.06    | 4.04    | 4.18    | 3.85    | 4.38    | 4.3    |         |
| 31         | 4.19    | 4.3     | 4.08    | 4.11    | 3.98    | 4.18    | 3.87    | 4.4    | 4.3    |         |
| 32         | 4.19    | 4.3     | 4.08    | 4.11    | 3.98    | 4.18    | 3.87    | 4.4    | 4.3    |         |
| 33         | 4.05    | 4.3     | 4         | 4.04    | 4.17    | 3.83    | 4.36    | 4.3    |         |         |
| Average    | 4.08    | 4.15    | 4.40    | 4.34    | 4.13    | 4.12    | 4.11    | 3.84    | 4.40    | 4.33    |

Note:  
I: The Study Program of Indonesian Language and Literature Education  
II: The Study Program of Indonesian Literature  
III: The Study Program of English Language and Literature Education  
IV: The Study Program of English Literature  
V: The Study Program of German Language Education  
VI: The Study Program of French Language Education  
VII: The Study Program of Fine Arts Education  
VIII: The Study Program of Music Education  
IX: The Study Program of Dance Education  
X: The Study Program of Performing Arts
The various quantitative descriptions related to the quality of the online learning at the Faculty of Language and Arts, which is shown from the results of the college student responses as described above, demand some improvement on self-reflection of each lecturer in improving professional quality towards mastery of digital technology.

In the 4.0 industrial era, digital technology can have a negative impact on the world of education if it is used inappropriately. Therefore, understanding the principles and factors that affect the effectiveness of the digital technology in learning is very important for an educator. Furthermore, an educator is required to have four competencies in order to be able to use digital technology appropriately. First, an educator must understand and be able to use digital technology and its application. Second is having leadership competencies that are able to direct the students to have an understanding of technology. Third is having the ability to predict precisely the direction of fluctuation of change and strategic steps to deal with it. Fourth is having competence in controlling oneself from all fluctuations of change, and being able to deal with it by generating ideas, innovation, and creativity.

Several researches have shown that technology has many positive effects on language learning, such as reading using videos. The internet has been integrated as an instrument to complement the language learning activities. One of the technology media that is often used today is some applications on mobile phones. The results showed that the college students who interact a lot with the applications on their cell phones can better understand the contents of the reading text. Another study tested the reading strategies of the college students at most Swedish universities. The data were taken from the students’ reading blog activities also explained the results of research in the use of e-learning using schoology portals is effective in adult learning that was conducted in universities.

4. Conclusion
The research results showed that the college students’ response to the implementation of the online learning at the Faculty of Language and Arts, Universitas Negeri Medan showed that the quality of the online learning that had been conducted was in a ‘good’ category. However, the results of this research
provide recommendations that some efforts to improve the professional quality of the instructors in managing the online learning are still necessary. It is also necessary to formulate an online learning policy in the form of standard operating procedures (SOP) related to the online learning techniques using one of the same platforms, in this case, the Online Learning Information System (SIPDA) of Unimed which has been developed since 2017

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