

**Online Learning Process During the New Normal Post COVID-19 in
Indonesia: A Case Study at the Universitas Negeri Padang**

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The research purpose is to see the effectiveness of online learning in Indonesia during the post-COVID-19 new normal period for 2020-2021. The research method used descriptive quantitative with the population being undergraduate students at Universitas Negeri Padang (UNP) with samples of undergraduate students in three (3) faculties, namely Language and Arts, Social Sciences, and Mathematics and Natural Sciences. The results show that the online learning process at UNP is running effectively because the online learning process has been initiated since 2013 so that lecturers and undergraduate students have sufficient insight and knowledge about online learning.

Keywords: attendance, lesson plans, platform, online learning

INTRODUCTION

Research on the learning process at universities is attractive since the results could be used to model the learning process at all education levels^{1, 2}. The learning process at universities is carried out in two primary forms: offline and online learning³.

Offline learning activity is carried out by face-to-face interaction; herein, lecturers as teachers interact directly with the students in the interactive lecture activities mode^{4,5}. Meanwhile, online learning activity is conducted through third-party media or platforms. In this case, lecturers use Information Technology Platforms (IT) such as Moodles, WhatsApp Group (WAG), and ZOOM Meeting to assist learning^{6,7}. In Moodle, lecture materials are uploaded first to the e-learning, including video, discussion forum, ebooks, and PowerPoint slides, and then students are asked to study the learning materials intensively and the attendance list⁸. Interactive lectures may be conducted in the platform's discussion forum, quizzes, and assignments⁹.

Meanwhile, in WAG, lecture materials are shared with the group, including video, ebooks, and PowerPoint slides. Then students are asked to study the learning materials intensively and collect the attendance list¹⁰. Interactive lectures may be carried out in discussions, quizzes, and assignments¹¹. The advantage of this platform is that lecturers and students do not have to be present simultaneously during the lecture process. However, the weakness of this process is that lecturers cannot monitor the lecture process in real time^{12, 13}.

The second online lecture platform uses using ZOOM App. ZOOM App is an interactive learning platform that allows lecturers and students to meet online¹⁴. Cameras and interactive audio allow lecturers to give lectures in real time. This lecture activity is also assisted by sharing PowerPoint slides so that lecture materials can be disseminated directly by the lecturers to the students. The advantage of the ZOOM App platform is that students and lecturers can interact directly with offline lectures. However, internet network constraints are the main obstacle for this facility^{15, 16, 17, 18} researched online learning implementation during the new normal post-COVID-19 in higher education. The results show that online learning platform applications such as Youtube, ZOOM, Google Meet, and Google Classroom can facilitate lecturers in teaching and undergraduate students to access lecturer material. However, the main obstacle is inadequate internet access. Next,¹⁹ researched online learning at universities in Slovakia, the Czech Republic, and Kazakhstan during the new normal post-COVID-19. The results show that the implementation of online learning faces many difficulties due to the broad range of social status, lack of social contact, and technical problems with internet connection during online lectures, so further research need to be done intensively. Next,¹ researched the COVID-19 effect on digital education, especially in Nigerian higher education. The results show that higher education students in Nigeria have low literacy on online learning technology due to limited access to electronic devices. Therefore, as recommendations, Nigerian higher institution administrators should return to traditional learning formats as soon as the pandemic ends, as well as an overhaul and restructuring of the internet and the national power grid

In this research, the authors want to know about the effectiveness of the online learning process in terms of the readiness of students to accept learning materials, as shown by the high ratio of students participating in the learning process, the readiness of lecturers to give a lecture in terms of the availability of lesson plans, and the high knowledge of undergraduate students and lecturers to utilize the online learning platform –

used in teaching. The research results of this can be useful for formulating policies on learning at the tertiary level, as a consideration for stakeholders, as input for stakeholders, and as a consideration for making future education regulations.

METHODS

The method in this research used quantitative descriptive with a population of undergraduate students at UNP with samples in 3 (three) faculties, namely Language and Arts, Social Sciences, and Mathematics and Natural Sciences. Data collection was carried out using a report conformity survey from the group of quality assurance, submitted through an IT-UNP with physical evidence in the faculties, which is routinely obtained by the agency of quality assurance at UNP three (3) times in a row many. For example, undergraduate students of Sociology in the Faculty of Social Science of has 160 sections (φ), which are intended for undergraduate students of 2019, 2018, 2017, 2016, and 2015 batches. In the January-June 2019 semester (odd), the number of sections is 77; it consists of 22 special rubrics for 2018 undergraduate students, 22 for 2017 undergraduate students, 22 for 2016 undergraduate students, and 11 for 2015 undergraduate students. Each rubric is distributed homogeneously among 38 undergraduate students (ϑ). (Note: the section number for 2015 undergraduate students is significantly reduced as they are projected to graduate in September 2019) based on the Agency of quality assurance at UNP.

Whereas in the July-December 2019 semester (even) the number of sections was 83; consisting of 22 special undergraduate students rubrics for 2019, 22 for 2018, 22 for 2017, and 17 for 2016. Each rubric is distributed homogeneously to 38 undergraduate students. (Note: 2019 enrollment was adjusted in June 2019, so new undergraduate students replace students who dropped out in September 2019) based on the Agency of quality assurance at UNP. The total number of undergraduate students supposed to be available in the lectures in the odd/even semester is formulated as follows:

$$\omega_{\theta} = \varphi \cdot \vartheta$$

Therefore, the percentage of undergraduate students attendance (in %) was calculated by the ratio number of attended undergraduate students in a class (ω_j) divided by the total number of undergraduate students (in 2 semesters) (ω_{θ})

$$\%A = \frac{(\omega_j)}{(\omega_{\theta})} \cdot 100\%$$

Similarly, the percentage of the lesson plan (in %) was calculated by the ratio number of documents (δ) divided by the total number of sections (φ) (in 2 semesters)

$$\%L = \frac{(\delta)}{(\varphi)} \cdot 100\%$$

In addition, the percentage of lectures attended by undergraduate students who used IT platforms (e.g., Moodle, WAG, and ZOOM App) (in %) was calculated by the ratio of students who participated in the class (ω_j) divided by the total number of undergraduate students (ω_{θ}) (in 2 semesters).

$$\%A = \frac{(\omega_j)}{(\omega_{\theta})} \cdot 100\%$$

A complete data Table description for undergraduate students attending, lesson plan, and IT Platforms are presented in supplementary information.

RESULTS AND DISCUSSION

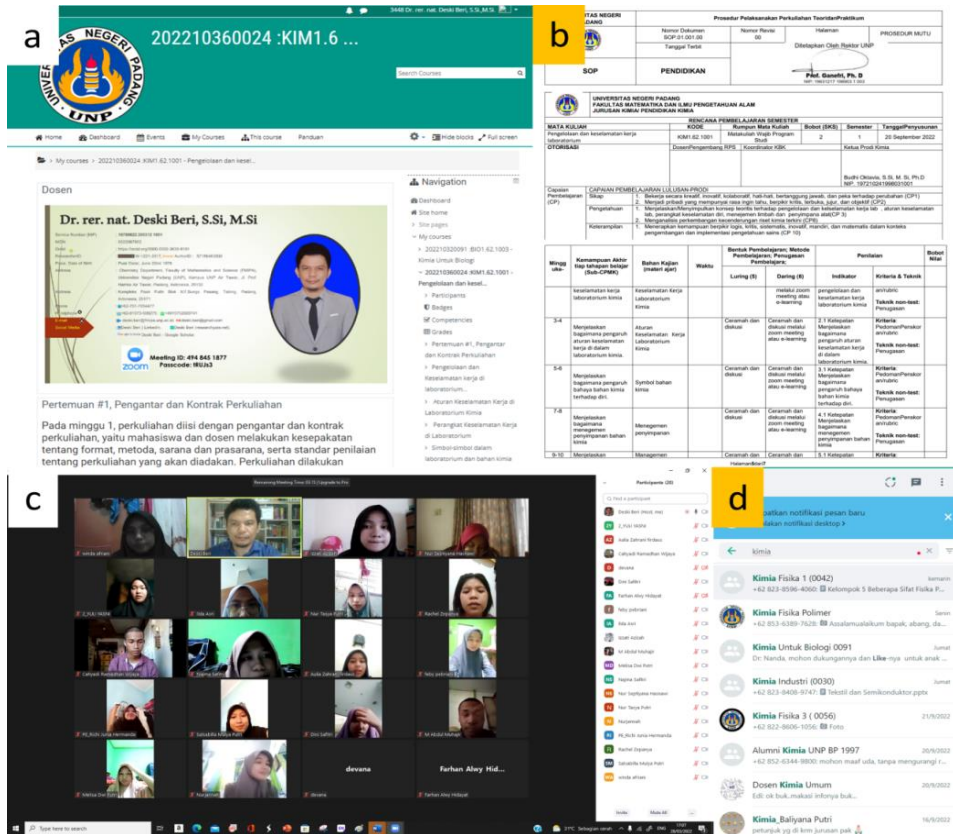
Online Lectures Platform

Online learning at UNP was initiated in 2013 by introducing Moodle platform. Until 2019, the progress for online learning was meager because undergraduate students and lecturers were much more likely to interact face-to-face. Even though the facility was available and accessible for lecturers and undergraduate students (i.e., widespread hotspots and excessive internet access on the campus and in undergraduate students' dormitory), both parties felt hesitant to use the facilities because lecturers thought their undergraduate students could not receive the knowledge as good as face-to-face interactions, and the feeling was mutual for undergraduate students. However, the COVID-19 pandemic in December 2019 made everyone aware that online lecture was necessary. Senior management at UNP took action and pushed the academic staff to switch from conventional lectures to online lecturer modes.

In the beginning, there was some shock on both sides (undergraduate students and lecturers) since both parties felt insecure. The lecturers must work extra time to prepare a new lesson plan suitable for these online processes. On the undergraduate students' side, the price for the laptop was relatively high, and undergraduate students also needed to spend extra for the internet credits. The UNP updated its online learning platforms to be able to read using Android, so undergraduate students could access learning materials using a smartphone that was widely available and accessible to every university student. Meanwhile, to overcome the issue regarding the internet credits, the Ministry of Education, Culture, Research and Technology (KEMENRISTEK DIKTI) Republic of Indonesia cooperated with PT. Telkom (Indonesia's Telecom Company) gives undergraduate students 50 GB of free internet access monthly. In addition, every registered undergraduate student in UNP can connect their device to the internet everywhere in Indonesia, as long as there is a hot spot called "wifi. id" available. The facility was dedicated to UNP undergraduate students to compensate for the COVID-19 pandemic effect. Therefore, in principle, the lecture process could be tailored to undergraduate students and on regular days. For more details, see Fig 1.

Fig 1 shows three (3) kinds of online learning platforms used in UNP, namely Moodle, WAG App, and ZOOM App. In Fig 1a, the lecturers can upload learning materials, lesson plans, lecture videos, PowerPoint slides, attendance, discussion forum, learning resources, ebooks, articles, virtual classes, quizzes, remarks, resumes, and exams into the systems. At the same time, undergraduate students can access all learning materials, research them and give responses, notes, or questions to the materials by re-uploading in into the available comment section. Fig 1b is an example of a lesson plan distributed to undergraduate students at the beginning of the lectures. Fig 1c shows undergraduate student and lecturer attendance during the ZOOM meeting. The interaction was conducted face-to-face and virtually, where the lecturer could monitor the progress of the lecturer simultaneously, as well as the conventional lecture process. Fig 1d is an example of using WAG. In WAG, the lecturers upload lecturer materials into the groups, and undergraduate students can access all learning materials, research them and give responses, notes, or questions directly to the dedicated lecturer.

FIGURE 1
E-LEARNING LEARNING FACILITIES FROM UNP

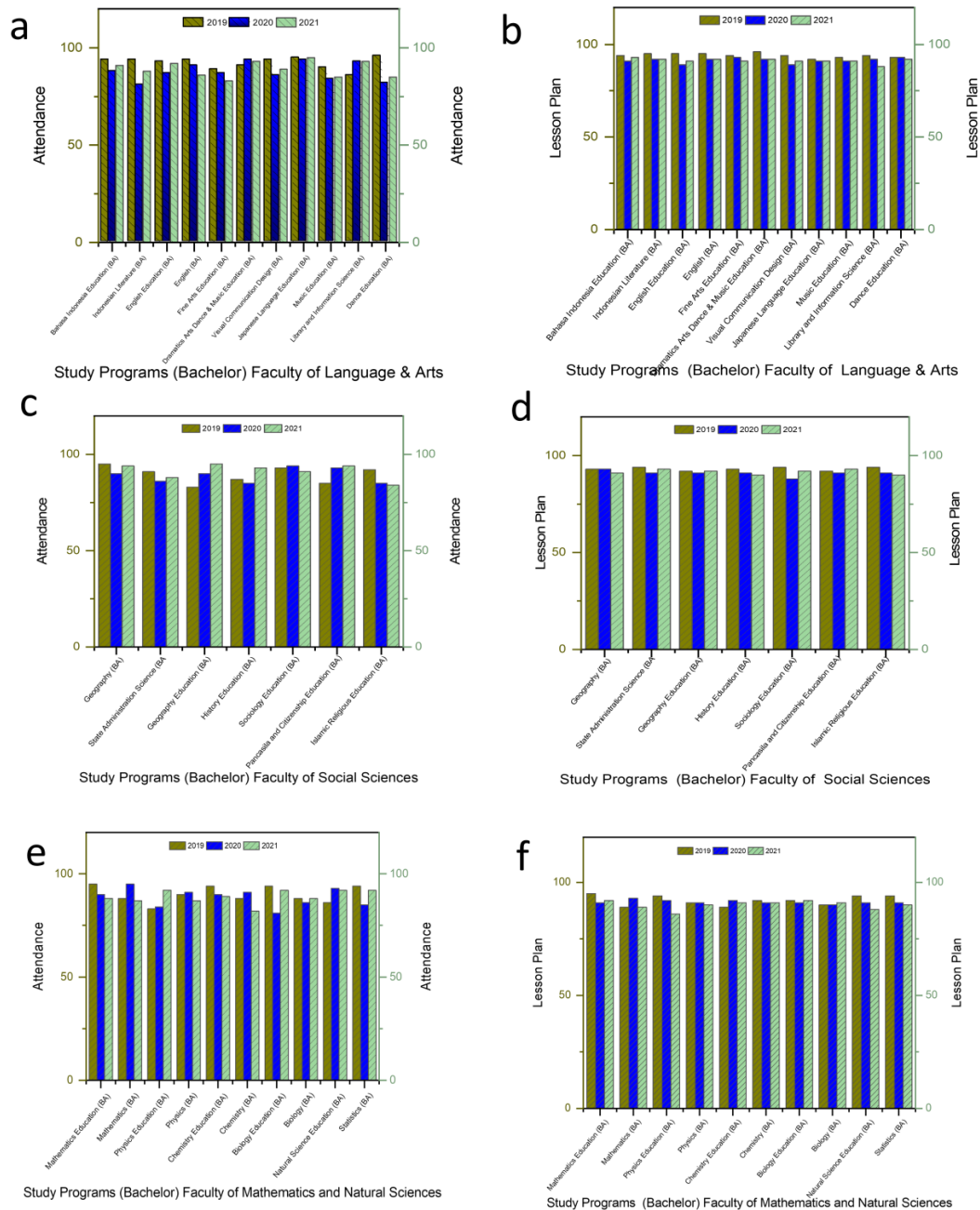


- a) The screenshot of the online learning platform in UNP where Moodle App is integrated with the platform;
- b) The screenshot of the lesson plan;
- c) the screenshot of the ZOOM App platform; and
- d) the screenshot of WAG App platform

Undergraduate Student Readiness

Undergraduate students’ attendance and lecturers’ readiness in terms of the availability of lesson plans are reflected in Fig 2 below.

FIGURE 2
RESULTS OF READINESS BY THE PERCENTAGE OF ATTENDANCE AND THE
PERCENTAGE OF THE LESSON PLAN AVAILABILITY



Undergraduate Student and lecturer readiness is reflected by the percentage of attendance and the percentage of the lesson plan availability.

Fig 2 (a & b) describes undergraduate students readiness in accepting the learning process reflected in the percentage of attendance and lecturer readiness in disseminating lecture materials reflected in the percentage of availability of lesson plans at the Faculty of Language and Arts during 2019 to 2021. In 2019, the maximum attendance percentage reached 96% for the bachelor program of Dance Education. In contrast, the minimum attendance percentage had reached 86% for the Library and Information Science

bachelor program. Thus, the average attendance percentage at the Faculty of Language and Arts is 92%. The maximum percentage of the lesson plan had reached 96% for the bachelor program of Dramatics Arts Dance & Music Education. In contrast, the minimum percentage of the lesson plan had reached 92% for the bachelor program of Japanese Language Education. The average lesson plan percentage at the Faculty of Language and Arts is 94%.

In 2020, the maximum attendance percentage reached 95% for the bachelor program of Japanese Language Education. In contrast, the minimum attendance percentage had reached 83% for the bachelor program of Fine Arts Education. Thus, the average attendance percentage at the Faculty of Language and Arts is 89%. The maximum rate of the lesson plan reached 93% for the bachelor program of Indonesian Language Education. In contrast, the minimum percentage of the lesson plan had reached 88% for the bachelor program of Library and Information Science. The average lesson plan percentage at the Faculty of Language and Arts is 91%.

In 2021, the maximum attendance percentage reached 94% for the bachelor program of Dramatics Arts, Dance & Music Education and the bachelor program of Japanese Language Education. In contrast, the minimum attendance percentage had reached 81% for the bachelor program of Indonesian Literature. Thus, the average attendance percentage at the Faculty of Language and Arts is 88%. The maximum portion of the lesson plan had reached 93% for the bachelor program of Fine Arts Education and Dance Education. In contrast, the minimum percentage of the lesson plan had reached 89% for the bachelor program of Visual Communication Design and the bachelor program of English Education. The average lesson plan percentage at the Faculty of Language and Arts is 91%.

Nevertheless, the maximum attendance percentage of bachelor programs for all three (3) faculties in 2019 goes to the Faculty of Language and Arts (96%), in 2020 goes to the Faculty of Language and Arts, Faculty of Social Science (95%), and in 2021 goes to Faculty of Mathematics and Natural Sciences (95%), respectively. Whereas the minimum attendance percentage for all three faculties in 2019 goes to the Faculty of Social Science and Faculty of Mathematics and Natural Sciences (83%), in 2020 goes to the Faculty of Mathematics and Natural Sciences (82%), and in 2021 goes to Faculty of Language and Arts and Faculty of Mathematics and Natural Sciences (81%), respectively. While the average percentage of attendance in 2019 for Faculty of Language and Arts (92%), Faculty of Social Science (90%), and Faculty of Mathematics and Natural Sciences (90%), in 2020 for Faculty of Language and Arts (89%) Faculty of Social Science (91%), Faculty of Mathematics and Natural Sciences (89%), and in 2021 for Faculty of Language and Arts (88%), Faculty of Social Science (89%), and Faculty of Mathematics and Natural Sciences (89%), respectively.

On the other hand, the maximum percentage of the lesson plan of bachelor programs for these faculties in 2019 goes to the Faculty of Language and Arts (96%), in 2020, goes to the Faculty of Language and Arts and Faculty of Social Science (93%), and in 2021 goes to Faculty of Language and Arts, Faculty of Social Science, and Faculty of Mathematics and Natural Sciences (93%), respectively. Whereas the minimum percentage of the lesson plan for these faculties in 2019 goes to Faculty of Mathematics and Natural Sciences (89%), in 2020 goes to Faculty of Mathematics and Natural Sciences (86%), and in 2021 goes to Faculty of Social Science (88%), respectively. While the average percentage of the lesson plan in 2019 for Faculty of Language and arts (94%) Faculty of Social Science (93%), and Faculty of Mathematics and Natural Sciences (92%), in 2020 for the Faculty of Language And arts (91%) Faculty of Social Science (92%), Faculty of Mathematics and Natural Sciences (90%) and 2021 for Faculty of Language and Arts (91%), Faculty of Social Science (91%), and Faculty of Mathematics and Natural Sciences (91%), respectively.

Online Learning Platforms Used

Three kinds of online learning platforms are used in the UNP: Moodle, WAG, and ZOOM Meeting. The results of the survey platform used depict in Fig 3 below.

FIGURE 3
ONLINE LEARNING PLATFORM USED IN THE THREE (3) FACULTIES AT UNP

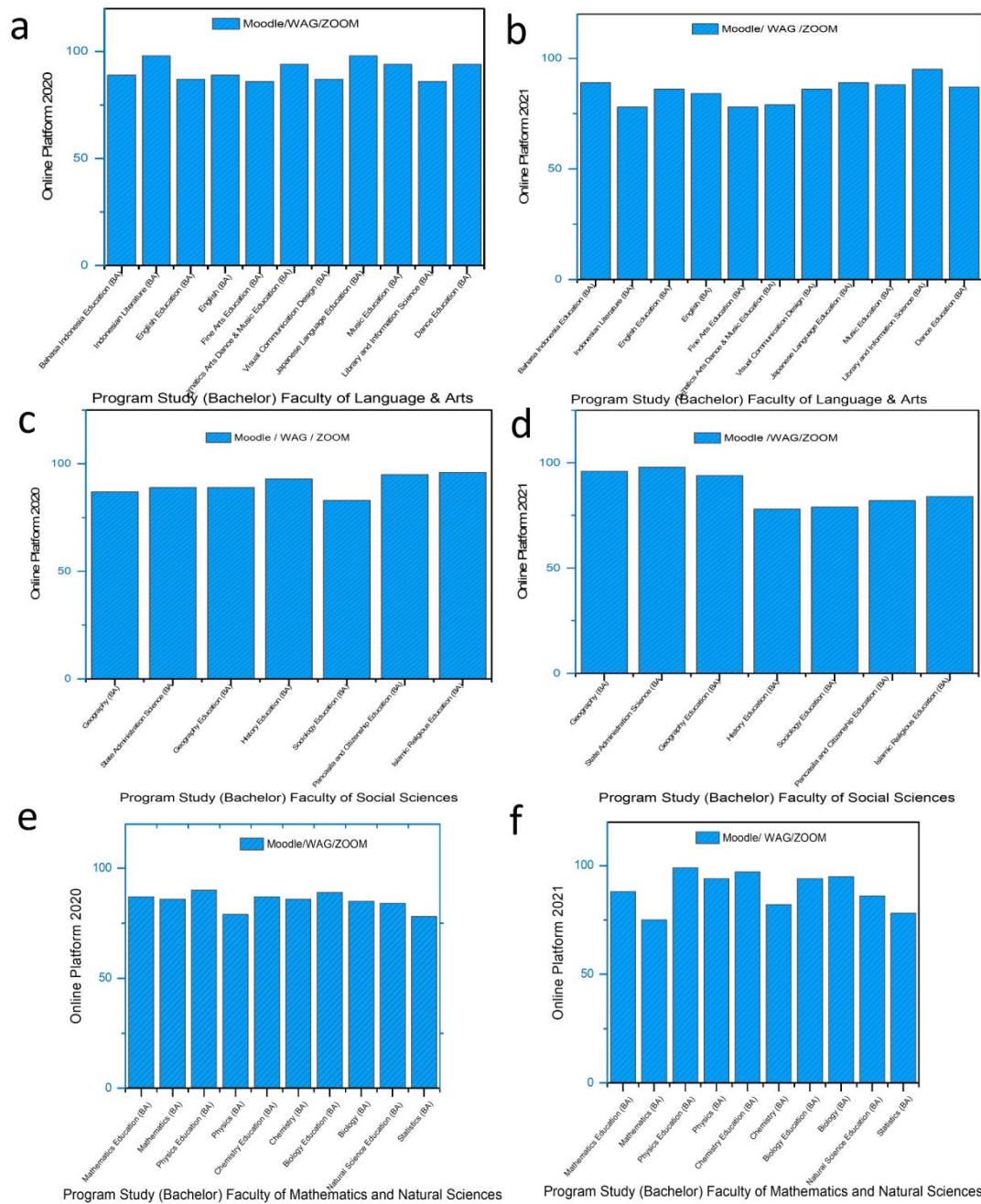


Fig 3 (a & b) describes the cumulative percentage of the online learning platforms (Moodle, WAG, and ZOOM) used in the Faculty of Language and Arts learning process during the new normal post COVID-19 (2020 to 2021). In 2020, Moodle/WAG/ZOOM’s maximum percentage reached 98% for the Japanese Language Education and Indonesian Literature bachelor program. In contrast, Moodle/WAG/ZOOM’s minimum percentage reached 86% for the bachelor program of Fine Arts Education. The average percentage of Moodle/WAG/ZOOM at the Faculty of Language and Arts is 91%.

In 2021, The maximum percentage of Moodle/WAG/ZOOM had reached 95% for the Library and Information Science bachelor program. In contrast, Moodle/WAG/ZOOM’s minimum percentage reached

78% for the bachelor program of Fine Arts Education. The average percentage of Moodle/WAG/ZOOM at the Faculty of Language and Arts is 85%.

Fig 3 (c & d) describes the cumulative percentage of the online learning platforms (Moodle, WAG, and ZOOM) used in the Faculty of Social Science learning process during the new normal post COVID-19 (2020 to 2021). In 2020, Moodle/WAG/ZOOM's maximum percentage reached 96% for the Islamic Religious Education bachelor program. In contrast, the minimum percentage of Moodle/WAG/ZOOM had reached 83% for the bachelor program of Sociology. The average percentage of Moodle/WAG/ZOOM at the Faculty of Social Science is 90%.

In 2021, the maximum percentage of Moodle/WAG/ZOOM had reached 98% for the bachelor program of State Administration Science. In contrast, the minimum percentage of Moodle/WAG/ZOOM had reached 78% for the bachelor program of History Education. The average percentage of Moodle/WAG/ZOOM at the Faculty of Social Science is 87%.

Fig 3 (e & f) describes the cumulative percentage of the online learning platforms (Moodle, WAG, and ZOOM) used in the Faculty of Mathematics and Natural Sciences learning process during the new normal post-COVID-19 (2020 to 2021). In 2020, the maximum percentage of Moodle/WAG/ZOOM had reached 90% for the bachelor program of Physics Education. In contrast, the minimum percentage of Moodle/WAG/ZOOM had reached 78% for the bachelor program of Statistics. The average percentage of Moodle/WAG/ZOOM at the Faculty of Mathematics and Natural Sciences is 85%.

In 2021, the maximum percentage of Moodle/WAG/ZOOM had reached 99% for the bachelor program of Physics Education. In contrast, the minimum percentage of Moodle/WAG/ZOOM had reached 75% for the bachelor program of Mathematics. The average Moodle/WAG/ZOOM percentage at the Faculty of Mathematics and Natural Sciences is 89%.

Nevertheless, the maximum percentage of Moodle/WAG/ZOOM of bachelor programs for these faculties in 2020 goes to the Faculty of Language and Arts (98%), and in 2021 goes to the Faculty of Mathematics and Natural Sciences (99%). The minimum percentage of Moodle/WAG/ZOOM for these faculties in 2020 goes to the Faculty of Social Science (83%), and in 2021 goes to the Faculty of Mathematics and Natural Sciences (75%). While the average percentage of Moodle/WAG/ZOOM for these faculties in 2020 for Faculty of Language and Arts (91%), Faculty of Social Science (90%), Faculty of Mathematics and Natural Sciences (85%) and in 2021 for Faculty of Language and Arts (85%), Faculty of Social Science (87%), and Faculty of Mathematics and Natural Sciences (89%), respectively.

Discussion

The results of this research provide an interpretation and meaning by the theory and references used. It is not only used to present findings. Interpretation must be enriched by referring, comparing, or contrasting with the findings of previous studies published in reputable journals, not predatory. It is advisable to integrate the findings into a body of established theories or knowledge, development of new theories, or modification of existing theories. The implications of the research findings are given.

In general, at the start of the COVID-19 Pandemic, undergraduate students' attendance was relatively high because the introduction of online learning platforms was seen as an innovative way to customize learning activities. Compared to undergraduate students in several African countries, online learning platforms there are not successful because the readiness of the government and universities in these countries is not affordable¹.

In addition, the readiness of lecturers to face online learning is quite adequate. Especially at UNP, online learning has been pioneered since 2013. During the new normal post-COVID-19, lecturers already had experience using online learning platforms such as Moodle. Compared to other countries that experience culture shock when they have to use online learning as found in Thailand²⁰ and Africa¹.

Online learning at UNP can take place better. As observed in Malaysia, the effectiveness of online learning is highly dependent on online learning experiences and lecturers' knowledge of online learning^{21, 22, 23, 24, 25, 26}, since being introduced for at least six years via Moodle and LMS at UNP. Implementation of online learning using the Moodle, Zoom, and WAG platforms can take place with a relatively high

percentage. The use of online learning methods is very useful in certain situations but has several problems in terms of attitude assessment.

CONCLUSIONS

During the COVID-19 pandemic, the online learning process has been conducted at UNP. While undergraduate students' attendance during the new normal post-COVID-19 did not show a decremental effect. Overall, the online learning process using the IT platform at UNP was conducted effectively, as could be seen in the participating undergraduate students and lecturers in the learning process in terms of undergraduate students and lecturers readiness demonstrated highly percentage of ~80-90%. It also can conclude that the undergraduate students and lecturers could use online learning platforms properly by looking at the ratio of Moodle/WAG/ZOOM used in the learning process show ~80-90%. The high level of participation of undergraduate students and lecturers in online learning at UNP is because supporting facilities and infrastructure for online learning are relatively available; socialization and training in using online learning platforms have been carried out since 2013 so that lecturers and undergraduate students already have insight and knowledge, as well as experience about online learning. It is hoped that in the future, even though the COVID-19 pandemic has subsided, the online learning process for some courses will still be maintained, and the facilities and infrastructure supporting online learning will be maintained and improved so that, in the future, online and offline learning can take place in harmony. In the long term, the government and stakeholders in Indonesia and elsewhere can research the results of this research for future education policies.

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