Quality of Learning during the Pandemic based on cognitive and affective aspects in Indonesia

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ABSTRACT
The purpose of this study is to (1) analyze the quality of learning during the pandemic, and (2) to analyze learning constraints during the pandemic. This research uses qualitative descriptive research methods. The use of qualitative descriptive methods in the study aimed to describe phenomena that focused on interrelationships between activities. The sampling technique is done by purposive sampling, which is based on provinces that have high cases of covid 19 in Indonesia. The quality of learning decreases because students do not have learning motivation. Many of the obstacles experienced during learning related to school unpreparedness relate to aspects of learning evaluation and affective. The quality of learning during the pandemic is largely determined by the optimization of information technology.

Keywords: Quality of learning, Pandemic period, Indonesia

Introduction
Jones [1] suggests that in the teaching and learning process can optimize online-based resources. In his research mentioned that online resources should be developed for the needs of students, teachers, and educational personnel. In addition, this research provides important knowledge that online resources are not only sites for accessing learning content, but also to communicate effectively and efficiently with friends, teachers, and educational staff. This can be taken into consideration in the development of online learning.

Jayawardena et al. [2] stated that based on thematic analysis, teachers identify five main factors that they believe affect students’ learning, among others: (1) family-related factors; (2) factors relating to students; (3) school-related factors; (4) factors related to mass media and technology; and (5) institutionally related factors. Technology factors have a good influence when combined with other factors. Pandemic covid 19 causes school unpreparedness in education management and sustainability of learning quality [3]. Vocational education is better to use hybrid learning to meet its learning standards [4]. The demographic characteristics of students influence the difference in stress levels in each student [5]. Big data and artificial intelligence should be developed to
improve the quality of learning during the pandemic [6].

Information technology plays an important role in optimizing learning during the covid 19 pandemic [7, 8, 9, 10]. However, not all teachers master information technology, so online learning is not optimal. Therefore, it is necessary to develop a learning model that refers to the weaknesses of learning during the pandemic. The risk of mental health disorders in students increases during the pandemic period [11, 12]. The purpose of this study is to (1) analyze the quality of learning during the pandemic, and (2) to analyze learning constraints during the pandemic.

**Methods**

This research uses qualitative descriptive research methods. The use of qualitative descriptive methods in the study aims to describe phenomena that focus on interrelationships between activities. Therefore, in this study there is no population, because this study originated from a social situation that focuses on the characteristics and quality of a phenomenon. The data collection technique is (1) Observation, which is done with clear and conscious observations about students' behavior during distance learning during the pandemic. Observations also determine the accuracy of behavior performed by each informant. (2) Interview In this study, researchers asked and recorded all answers from informants as they are. The interviewer also asked for clarification regarding the answer if there are doubts about the answer submitted by the informant. The data is declared valid if there is no difference between the results of the study and what actually happened to the research object. There are two instruments developed to look at the effectiveness of student learning and behavior during distance learning. Effectiveness in this context emphasizes the learning process, while student behavior emphasizes on the responses students provide during learning.

Miles and Huberman [13] stated that the data analysis conducted in this study began during the research and ended when all data was collected (March to October 2020). The interview process is conducted several stages, until the answers submitted by the informant have been considered credible and the collected data is saturated. In detail, the steps taken in data analysis according to Matthew B. Miles and A. Michael Huberman [13], are as follows: (1) Data Reduction as a process of selecting, simplification, literary, and rough data transformation that arises from field records, so that the data gives a clearer picture of the results of observations and interviews of students and teachers during the distance learning process; (2) Data Display, which is to compile some information to draw a conclusion. In this qualitative study, the presentation of data was conducted in the form of a brief description of the effectiveness and behavior of students in the distance learning process. (3) Conclusion Drawing or Verification, the researcher makes conclusions based on data that has been processed through reduction and display data. The withdrawal of such conclusions will be temporary in the event of changes in information and differences in information provided by some respondents, but if from start to finish all the data provided has been consistent, then the withdrawal of conclusions can already be considered credible.

The sampling technique is done by purposive sampling, which is based on provinces that have high cases of covid 19 in Indonesia. The province includes East Java and West Java. This research was conducted in October 2020. Respondents to the study numbered 10 students who had undergone online learning during the pandemic. Instrument development is carried out through validation of content by experts. Indicators used in instrument development consist of: (1) student motivation, (2) learning media, (3) learning methods, (4) learning barriers. Data analysis techniques used are descriptive techniques.

**Results and Discussion**

The majority of teachers use the assignment method in delivering learning materials as seen in table 1. This causes students’ learning motivation to be low. The overuse of assignment methods has saturated students. It also deals with the karaketeristic of different materials, so it requires different methods.
The main obstacles to learning during the pandemic are in the evaluation aspect of learning and affective aspects. In Table 2, the majority of respondents stated that measuring the results of learning becomes very difficult because it relates to the validity of the test results. Test results may be invalid because teachers cannot supervise students while taking tests. The cognitive aspect basically requires special evaluation techniques that cannot be done during the pandemic.

### Table 1. Method, media, and students’ motivation

| Respondents | Learning Method             | Learning Media  | Students’ Motivation |
|-------------|-----------------------------|-----------------|----------------------|
| 1           | assignment method           | Google Classroom| low                  |
| 2           | assignment method           | Google Classroom| low                  |
| 3           | assignment method           | Google Classroom| low                  |
| 4           | assignment method           | WhatsApp        | low                  |
| 5           | Lecture method              | WhatsApp        | high                 |
| 6           | assignment method           | Google Classroom| low                  |
| 7           | assignment method           | Google Classroom| low                  |
| 8           | assignment method           | WhatsApp        | low                  |
| 9           | assignment method           | Google Classroom| low                  |
| 10          | assignment method           | WhatsApp        | low                  |

### Table 2. Pandemic learning constraints

| Respondents | Implementation of Learning | Learning Evaluation | Affective Aspects |
|-------------|---------------------------|---------------------|-------------------|
| 1           | Concrete concepts are difficult to convey | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
| 2           | Students have difficulty responding | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
| 3           | Concrete concepts are difficult to convey | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
| 4           | Concrete concepts are difficult to convey | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
| 5           | Concrete concepts are difficult to convey | Variations of difficult questions to apply | Student attitudes Difficult to identify |
| 6           | Students have difficulty responding | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
| 7           | Students have difficulty responding | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
| 8           | Students have difficulty responding | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
| 9           | Concrete concepts are difficult to convey | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
| 10          | Students have difficulty responding | Difficulty measuring learning outcomes | Student attitudes Difficult to identify |
The negative impact that comes from online learning systems is the ineffectiveness of learning obtained by students. In addition, the limitations of technological capabilities make it difficult for students to access learning. From the results of an interview to one of the private vocational school students the online learning process in his school is less effective due to the limited facilities that support the online learning process. The school does not provide full learning facilities such as zoom, google meet, edmodo, etc. In fact, according to the results of Ardiwinata research [14], learning media becomes the most important aspect of learning, especially when pandemic conditions. There are only a few teachers who take the initiative to facilitate their students so that teaching and learning activities are still carried out even though they are less effective. The lack of full learning facilities enables students to only receive materials and assignments through the WhatsApp app. To know the presence of students sometimes teachers give assignments that must be collected that day. In addition, in vocational schools there are also practicum that must be implemented, as a result of which students conduct independent practicum activities at home with basic equipment. This confuses students with their practicum. These barriers are in line with the results of the study [7, 8, 9, 10], which states that information technology plays an important role for the optimization of learning during the covid 19 pandemic, so that learning will not run optimally without information technology.

At the time of this pandemic the learning and teaching process was very less effective, as online learning was only done several times a week. Teachers are only actively assigning assignments when approaching UTS or midterm exams and Final Semester Exams. In fact, only a few teachers who actively use online learning applications Online learning is currently not effective because many students are unemployed and just playing. Teachers who are homeroom teachers are less supervised and even less embracing their students to learn effectively during this pandemic. Schools that have been fairly favorite in Jember can not make learning and teaching online in this pandemic time a good journey, they look overwhelmed to undergo this online prison. This impact must also be felt by suburban schools even they could be more severe. So learning planning becomes very important to be associated with pandemic conditions. This is in accordance with the results of research conducted by Jufri et al. [15] which states that the ability of teachers in designing learning instruments is very important, and that can not be found during the pandemic.

Conclusion

The quality of learning during the pandemic is very low mainly due to the difficulty of measuring student learning outcomes (cognitive) effectively and validly. The ability of teachers to identify students' attitudes (affective) is also limited given the unpreparedness of the students in providing Information technology. In fact, learning during the pandemic relies heavily on optimizing information technology.

References

1. Jones, L. E. (2011). Introducing the ICF: the development of an online resource to support learning, teaching and curriculum design. Physiotherapy, 97(1), 55-58. https://www.sciencedirect.com/science/article/pii/S0031940610001379
2. Jayawardena, P. R., van Kraayenoord, C. E., & Carroll, A. (2020). Factors that influence senior secondary school students' science learning. International Journal of Educational Research, 100, 101523.
3. Ibrahim, F., Susanto, H., Haghi, P. K., & Setiana, D. (2020). Shifting paradigm of education landscape in time of the COVID-19 pandemic: Revealing of a digital education management information system. Applied System Innovation, 3(4), 1-21. doi:10.3390/asi3040049
4. Azlan, C. A., Wong, J. H. D., Tan, L. K., A.D. Huri, M. S. N., Ung, N. M., Pallath, V., . . . Ng, K. H. (2020). Teaching and learning of postgraduate medical physics using internet-based e-learning during the COVID-19 pandemic – A case study from malaysia. Physica Medica, 80, 10-16. doi:10.1016/j.ejmp.2020.10.002
5. Masha’al, D., Rababa, M., & Shahroug, G. (2020). Distance learning-related stress among undergraduate nursing students during the COVID-19 pandemic. The Journal of Nursing Education, 59(12), 666-674. doi:10.3928/01484834-20201118-03
6. Dwivedi, Y. K., Hughes, D. L., Coombs, C., Constantiou, I., Duan, Y., Edwards, J. S., . . . Upadhyay, N. (2020). Impact of COVID-19 pandemic on information management research and practice: Transforming education, work and life. *International Journal of Information Management, 55* doi:10.1016/j.ijinfomgt.2020.102211

7. Livari, N., Sharma, S., & Ventä-Olkkonen, L. (2020). Digital transformation of everyday life - how COVID-19 pandemic transformed the basic education of the young generation and why information management research should care? *International Journal of Information Management, 55* doi:10.1016/j.ijinfomgt.2020.102183

8. Syauqi, K., Munadi, S., & Triyono, M. B. (2020). Students’ perceptions toward vocational education on online learning during the COVID-19 pandemic. *International Journal of Evaluation and Research in Education, 9*(4), 881-886. doi:10.11591/ijere.v9i4.20766

9. Zheng, F., Khan, N. A., & Hussain, S. (2020). The COVID 19 pandemic and digital higher education: Exploring the impact of proactive personality on social capital through internet self-efficacy and online interaction quality. *Children and Youth Services Review, 119* doi:10.1016/j.childyouth.2020.105694

10. Qazi, A., Naseer, K., Qazi, J., AlSalman, H., Naseem, U., Yang, S., . . . Gumaei, A. (2020). Conventional to online education during COVID-19 pandemic: Do develop and underdeveloped nations cope alike. *Children and Youth Services Review, 119* doi:10.1016/j.childyouth.2020.105582

11. Aslan, I., Ochink, D., & Çinar, O. (2020). Exploring perceived stress among students in turkey during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health, 17*(23) doi:10.3390/ijerph17238961

12. Jiang, R. (2020). Knowledge, attitudes and mental health of university students during the COVID-19 pandemic in china. *Children and Youth Services Review, 119* doi:10.1016/j.childyouth.2020.105494

13. Huberman, M. & Miles, M. B. (2002). The qualitative researcher’s companion. Sage.

14. Ardwiinata, E. (2020, August). Kecemasan Mahasiswa Menghadapi Pengenalan Lapangan Persekolahan. In *Prosiding Seminar Nasional Bimbingan dan Konseling Universitas Negeri Malang* (pp. 137-141).

15. Jufri, A. W., Suryanti, N. M. N., Amin, M., Jaelani, A. K., & Setiadi, D. (2020). Workshop Teknik Pembimbingan dan Penilaian Mahasiswa Peserta Praktek Pengenalan Lapangan Persekolahan Bagi Guru-Guru Anggota KKG di Kota Mataram. *Jurnal Pengabdian Magister Pendidikan IPA, 2*(2), 0–5. https://doi.org/10.29303/jpmipi.v2i2.373