

STUDENTS PRACTICUM DURING COVID-19 PANDEMIC AT UNIVERSITAS TERBUKA: AN OVERVIEW OF STUDENTS EXPERIENCES IN THE BIOLOGY PRACTICUM COURSES

Dyah Aniza Kismiati, M.Pd.¹, Drs. Leonard Raden Hutasoit, M.Pd.²,
Prof. Udan Kusmawan, M.A, Ph.D³

^{1,2,3}Universitas Terbuka (Indonesia)

ABSTRACT

This paper aims at describing students' learning experience following Biology Practicum during the Covid-19 Pandemic. The Practicum consists of Biology Practicum-1, Biology Practicum-2, and Science Practicum. UT students' domicile at all the Provinces of Indonesia. While this Pandemic, they conduct the practicum under their local institution's policy and regulations. Hence, the students may choose one of the three methods offered by the Program of Study, namely face-to-face, webinar tutorials, and a combination of both methods. This study is qualitative. Data collection was done through questionnaires consisting of several questions and statements that explore students' experience in carrying out biological Practicum in the pandemic. Samples of the study were obtained purposively. A sampling technique is used to collect data within several requirements, including (1) the sample is a biology education student at Universitas Terbuka;

(2) the sample is a student registered in the registration 2020.2 and 2021.1; and (3) samples are students who have taken one or two or third biology practicum courses (biology practicum 1, biology practicum 2 or practicum science). The data obtained is analyzed descriptively. From the study results on 33 selected samples, it is known that majority of the students use the method of learning practicum biology through webinar tutorials that are as much as 52%, then 27% through face-to-face and others (21%) using the blended method. The selection of learning methods is decided by several considerations such as student's time-availability, student's learning style, student's ability, and, most importantly, consideration of risk zone status. The method of learning in biology practicum courses has its constraints. Based on the data, students who choose to follow biology through webinar tutorials and blended methods are often constrained in Internet network stability. In contrast, students who use face-to-face methods are constrained in limitations of equipment and materials for Practicum, distance constraints. The obstacles in these three learning methods are a lack of guidance from tutors and students' internal motivation. Thus, in this study, students need additional learning resources to minimize the obstacles they face in practice learning (especially biology practicum) during the pandemic.

Keywords: *Biology Practicum, Learning Experience, Tutorial Webinar, Face to Face, Blended, Universitas Terbuka.*

1. INTRODUCTION

The Covid-19 pandemic had a tremendous impact on learning. Various strategies and policies are tested to minimize the impact of pandemics. Many educational institutions are experiencing difficulties with these learning restrictions. Even, the pandemic of Covid-19 caused several schools and universities to remain temporarily closed because face-to-face education has ended (Zalat et al., 2021). This situation stimulates the growth of online education activities. Most of faculty have been involved in the best way to offer engage students, online course materials, and conduct evaluations (Mukhtar et al., 2020).

Online learning is learning experiences in synchronous or asynchronous environments by using different devices (Dhawan, 2020). The synchronous learning environment consist of a real-time interactions between learners educators and. It possibility to get instant feedback, even though, asynchronous learning is not properly structured. Actually, online learning is not a something new, but because of this pandemic, many institutions eventually have to use this education system in order to accommodate safe learning for students. One of the higher education institutions in Indonesia that is familiar with the online learning system is the Universitas Terbuka.

Universitas Terbuka (UT) is known for its accessibility, inclusivity and flexibility. It can accommodate and provide the opportunity for Indonesian students to get involved and enrolled in college experience (Basidin Mizal, Rayhan Izzati Basith, 2021). UT is also the state institution which organizes open and distance education. UT has a vision to become a world quality open and distance higher education institution in producing academic programs, as well as in implementing, developing, and disseminating information on open and distance higher education (Belawati et al., 2012). The system of UT does not need classroom interaction but utilizing media, such as modules also non-printed materials (Ratnaningsih, 2013).

Universitas Terbuka as the first distance university in Indonesia has the characteristics of a learning process provided through various media and supported by learning assistance known as tutorials (Wahyuningsih et al., 2019). Belawati in Adnan (2007) stated that learning assistance services for distance students are all forms of assistance provided to students so that their study process is smooth starting from the time of registration, the learning process, during the exam even when completing the exam. In a narrow sense, learning assistance services are services provided by education organizers to their students in learning teaching materials or during the learning process. The service in learning this teaching material is often referred to as a tutorial.

Holmberg in Wahyuningsih (2019) explains that the tutorial has the following functions: (a) meets the needs of students to conduct academic interaction with tutors and with fellow students; (b) assist or provide opportunities for students to develop thinking skills; (c) help students apply the knowledge and skills acquired through tasks given by tutors and then examined, commented on, and discussed by tutors; (d) special face-to-face tutorials, students can meet the need to socialize, so that the loneliness / sense of isolation experienced as PTJJ students can be reduced; (e) increase the student's motivation to learn; and (f) trigger, spur, and

familiarize students to learn independently. Tutorials conducted at UT serve as a driver as well as trigger the student learning process. The main purpose of the tutorial is to prepare students to be able to learn independently. (Simanjuntak & Rumanta, 2013). One mode of learning at UT that is still much in demand is Face- to-Face Tutorial (TTM) is an assistance and tutoring program provided by UT that aims to trigger and spur the student's independent learning process. The implementation of the tutorial is carried out in various modes, among others, by face-to-face (Alpin Herman Saputra, Hartati, 2021). In Indonesia, the implementation of online learning through webinars is still uneven. Webinars are neologisms and portmanteau seminars and the web. To simplify, webinars are seminars that take place online over the Internet rather than offline in conventional classrooms. (Gegenfurtner & Ebner, 2019). Webinars are also interpreted as one of the useful information technology innovations to limit geographical situations where educators and participants can hold classes virtually (Wibowo et al., 2020). Webinars can be conducted through internet-connected devices and use support applications such as video conferences (zoom, gmeet etc.) that are used for remote activities (Ratulangi & Lan, n.d.). In the Covid-19 pandemic, UT adapts well to finding solutions to the face- to-face tutorial process by enforcing webinar tutorials in sync using Microsoft Teams media (Alpin Herman Saputra, Hartati, 2021). At the UT, webinars in the form of tutorials are not only used to convey theoretical material, but also practice courses. It's certainly not an easy thing to do, but it also does not reduce the many benefits provided. Some studies have proven it. The use of webinars in learning, according to Hampton et al. (2017) has an effect on the increased flexibility offered by online learning environments and students' ability to adjust while studying (Hampton et al., 2017). By attending learned through webinars, students are easier to understand and discuss related to the material provided by lecturers, students also do not feel easily bored because it is considered through webinars approaching face-to-face directly and liveliness that can be monitored better (Hasanah et al., 2020).

2. METHODOLOGY

The type of this research is qualitative descriptive research. Data collection was done through questionnaires consisting of several questions and statements that explore students' experience in carrying out biological Practicum in the pandemic. Samples of the study were obtained purposively. A sampling technique is used to collect data within several requirements, including:

the sample is a biology education student at Universitas Terbuka; (2) the sample is a student registered in the registration 2020.2 and 2021.1; and (3) samples are students who have taken one or two or third biology practicum courses (biology practicum 1, biology practicum 2 or practicum science).

3. FINDINGS AND DISCUSSION

Student's Experiences In The Biology Practicum Courses

- *The Demographic Information of Participants*

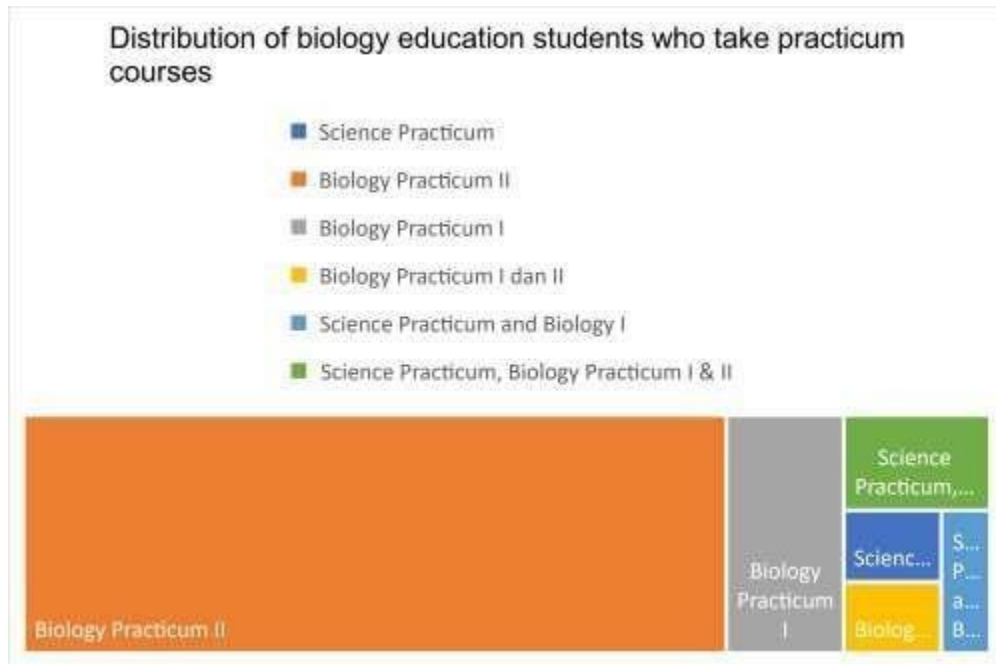
Participants in this study are biology education students who have followed one or more practicum courses in the Biology Education study program. The following is information on the age, gender and occupation of 33 samples of participants.

Table 1.
Student participants information

Initialname	Age (year old)	Gender	Occupation	Registration period
M1	21-30	Woman	Teacher	2021.1
M2	31-50	Man	Teacher	2021.1
M3	31-50	Woman	Teacher	2021.1
M4	31-50	Man	Teacher	2021.1
M5	Under 20	Woman	Freelancer	2021.1
M6	31-50	Woman	Teacher	2021.1
M7	31-50	Woman	Teacher	2021.1
M8	21-30	Woman	Teacher	2018.2
M9	21-30	Woman	Teacher	2021.1
M10	21-30	Woman	Teacher	2020.2
M11	31-50	Woman	Teacher	2020.2
M12	31-50	Woman	Teacher	2021.1
M13	31-50	Woman	Teacher	2020.2
M14	Above 50	Woman	Teacher	2021.1
M15	31-50	Woman	Teacher	2021.1
M16	31-50	Woman	Teacher	2021.1
M17	31-50	Woman	Teacher	2021.1
M18	31-50	Woman	Teacher	2020.2
M19	31-50	Woman	Teacher	2021.1
M20	31-50	Man	Teacher	2021.1
M21	31-50	Woman	Teacher	2020.1
M22	31-50	Man	Teacher	2021.1
M23	21-30	Woman	Teacher	2020.2
M24	31-50	Man	Teacher	2021.1
M25	31-50	Woman	Teacher	2021.1
M26	31-50	Woman	Teacher	2021.1
M27	31-50	Woman	Teacher	2021.1
M28	31-50	Woman	Teacher	2021.1
M29	31-50	Woman	Teacher	2021.1
M30	31-50	Woman	Teacher	2020.2
M31	21-30	Woman	Teacher	2021.1
M32	31-50	Woman	Teacher	2020.2
M33	21-30	Woman	Teacher	2020.2

Then, those 33 samples have taken one or more practicum courses in the biology education study program following figure 1:

Figure 1.

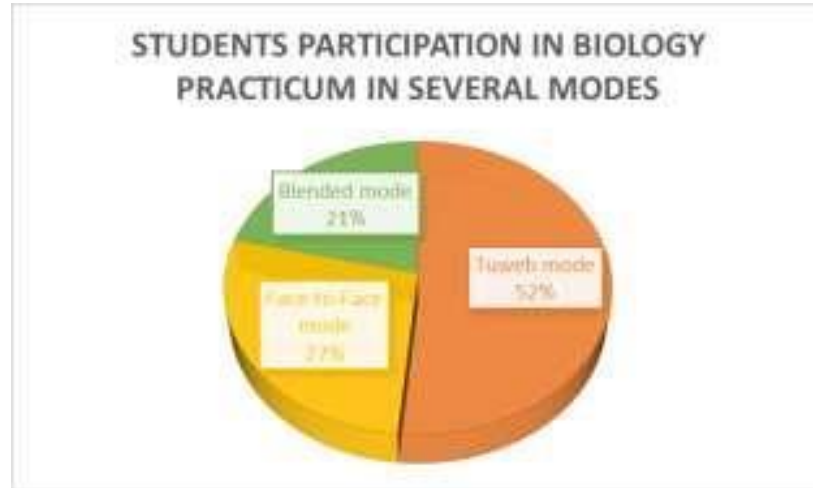


- *Student's Experience of Biology Practicum During Pandemic Covid-19*

Before the pandemic occurred, the biologic practicum was conducted face-to-face learning in several partner laboratories in each unit. But since the pandemic occurred, Universitas Terbuka followed the head of university's policy by giving options to regional units to organize practicum learning in accordance with the risk zone of spread of covid. Students as well as follow the direction of the unit related to their practicum courses. Here's the data.

Figure 2.

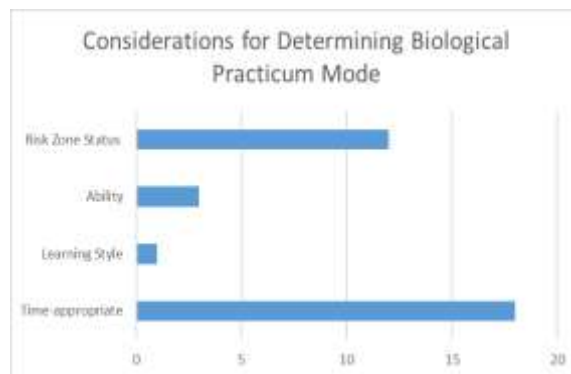
Student Distribution of biology education students who take practicum courses



Based on the data, most of the students who filled out the questionnaire, have chosen Tuweb mode for biology practicum learning. There are several reasons revealed from the determination of the practicum mode aimed in figure 3.

Figure 3.

Student Distribution of biology education students who take practicum courses

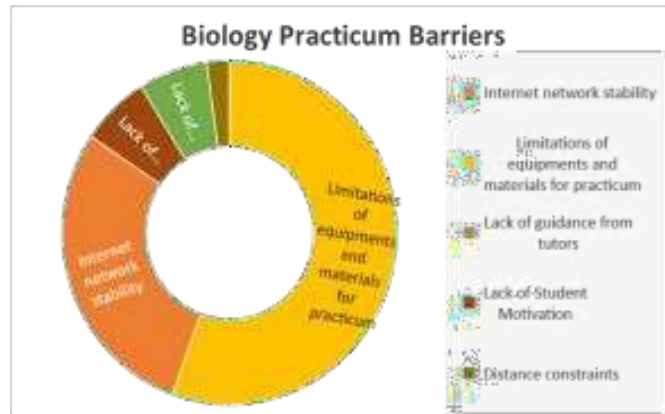


- *The Barriers of Biology Practicum During Pandemic Covid-19*

Tutorial webinar (Tuweb) is a mode of biology practicum that have chosen by most of the students. Tuweb as well as used in blended mode, because some practicum are done face-to-face but others are done through Tuweb. However, both of that three modes still have their own constraints for students to use. Figure 4 describe it.

Figure 4.

The barriers of Biology Practicum both three modes offered by Universitas Terbuka



- *Student's Hope of Biology Practicum Courses*

Several of the students write down their suggestions and hopes for biological practicum learning, whether held through face-to-face, webinar tutorial or blended mode. Some students complained about the lack of explanation from tutors and hoped the tutors could show the experiment virtually. They also hope that there will be additional virtual learning media that can guide them in practicum so that the direction of how practicum work will be clearer. Some students also expect during this pandemic to conduct a mandatory practicum only with one type of practicum in each of the learnings in the module because most of them are constrained by the time and limited tools and materials needed for practicum.

4. CONCLUSION

Based on the data, students who choose to follow biology through webinar tutorials and blended methods are often constrained in Internet network stability. In contrast, students who use face-to-face methods are constrained in Limitations of equipment and materials for Practicum, distance constraints. The obstacles in these three learning methods are a lack of guidance from tutors and students' internal motivation. Thus, in this study, students need additional learning resources to minimize the obstacles they face in practice learning (especially biology practicum) during the pandemic.

5. REFERENCES

- Alpin Herman Saputra, Hartati, S. A. (2021). Pembelajaran Orang Dewasa: Tutorial Webinar melalui Microsoft Teams Mahasiswa Universitas Terbuka. *Dwija Cendekia: Jurnal Riset Pedagogik*, 5(1), 5–24.
- Basidin Mizal, Rayhan Izzati Basith, and T. (2021). Critical Thinking Through Distance Learning: An Analysis of Indonesian Open University. 3(1), 17–26. <https://doi.org/10.35308/ijelr.v3i1i.3667>
- Belawati, T., Kusmawan, U., & Isman, S. M. (2012). Open and Distance Learning in Asia: A Case Study (R. Hogan (ed.); pp. 40–50). IGI Publisher. <https://doi.org/10.4018/978-1-4666-0206-9.ch003>
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- Gegenfurtner, A., & Ebner, C. (2019). Webinars in higher education and professional training: A meta-analysis and systematic review of randomized controlled trials. *Educational Research Review*, 28(October). <https://doi.org/10.1016/j.edurev.2019.100293>
- Hampton, D., Pearce, P. F., & Moser, D. K. (2017). Preferred Methods of Learning for Nursing Students in an On-Line Degree Program. *Journal of Professional Nursing*, 33(1), 27–37. <https://doi.org/10.1016/j.profnurs.2016.08.004>
- Hasanah, A., Sri Lestari, A., Rahman, A. Y., & Danil, Y. I. (2020). Analisis Aktivitas Belajar Daring Mahasiswa Pada Pandemi COVID-19. *Karya Tulis Ilmiah (KTI) Masa Work From Home (WFH) Covid-19 UIN Sunan Gunung Djati Bandung Tahun 2020*, 4–8. <http://digilib.uinsgd.ac.id/id/eprint/30565>
- Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, limitations and recommendations for online learning during covid-19 pandemic era. *Pakistan Journal of Medical Sciences*, 36(COVID19-S4), S27–S31. <https://doi.org/10.12669/pjms.36.COVID19-S4.2785>
- Ratnaningsih, D. J. (2013). Open and Distance Education Systems: do they enhance Graduates' Soft Skills? The results from 2009 Universitas Terbuka Tracer Study. *Open Praxis*, 5(4), 289–299. <https://doi.org/10.5944/openpraxis.5.4.85>
- Ratulangi, S., & Lan, S. (n.d.). Analisis Efektivitas Penggunaan Media Webinar dalam Pengembangan Kualitas Guru Analysis of the Effectiveness of Using the Webinar Medium in Teacher Development. 217–222.
- Simanjuntak, H., & Rumanta, M. (2013). Kualitas Pelaksanaan Tutorial Tatap Muka S-1 Pendas Di Upbjj-Ut Pangkalpinang. *Jurnal Pendidikan Terbuka Dan Jarak Jauh*, 14(2), 120–131.
- Wahyuningsih, S. S., Darmayanti, T., Bintarti, A., & Terbuka, U. (2019). Meta Analisis Tutorial Online. *Jurnal Pendidikan Terbuka Dan Jarak Jauh*, Vol.20(No.1 Maret), 32–38.
- Wibowo, B. R., Sudana, D., & Wirza, Y. (2020). Pemanfaatan Webinar Sebagai Media dalam Pembelajaran Kemampuan Berbicara untuk Pembelajar Dewasa di Indonesia The Utilization of Webinar as A Medium in Teaching Speaking Skill for Adult Learners in Indonesia. *Jurnal Penelitian Pendidikan*, 20(3), 417–431.
- Zalat, M. M., Hamed, M. S., & Bolbol, S. A. (2021). The experiences, challenges, and acceptance of e-learning as a tool for teaching during the COVID-19 pandemic among university medical staff. *PLoS ONE*, 16(3 March), 1–12. <https://doi.org/10.1371/journal.pone.0248758>