

IDENTIFICATION OF THE CAUSES OF STUDENT FAILURE TO TAKE ONLINE PRACTICUM IN FOOD TECHNOLOGY STUDY PROGRAM, UNIVERSITAS TERBUKA

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Abstract

In the application of online practicum by Tutorial Webinar (Tuweb) during the Covid 19 pandemic at Food Technology Study Program, Universitas Terbuka (Indonesia), there were several students who did not pass practicum courses such as the Food Engineering Principles, Food Processing Technology, and Sensory Evaluation courses. Failing to pass the practicum course indicated student failure that can disserve the institution and the students themselves. The purpose of this study was to identify the factors that cause students failure in participating in online practicum. The method used in this study is a qualitative descriptive approach by observing and evaluating the online practicum implementation documents in Semester 2020.1-2021.2 and interviewing the practicum instructors. Based on our results, we found that students who did not pass practicum courses during the Covid 19 Pandemic were due to not participating in online practice, not doing independent practicum assignments, and not collecting practicum reports. Based on these findings, there were implications that the Food Technology Study Program needed to provide more intensive communication to students who register practicum courses by utilizing various media regarding practicum debriefing materials and general provisions for online practicum courses, so that students are avoid factors causing failure and can pass taking online practicum courses.

Keywords: Covid 19 pandemic, distance education, failure factors, online practicum, tutorial webinar

1 INTRODUCTION

The competency targets for graduates of the Faculty of Science and Technology (FST) at Universitas Terbuka (UT) refer to the National Higher Education Standards (SNPT) contained in the Regulation of the Minister of Education and Culture Number 3 of 2020 covering attitudes, knowledge and skills expressed in the formulation of learning outcomes (LO) graduates (Kemdikbud, 2020). To achieve competency skills, graduates need the practicum in the learning process. Graduates from study programs are expected to have comprehensive competencies from the three learning domains (cognitive, affective, and psychomotor) in accordance with science and technology in their study field. In an education, the emphasis is not only on mastering the teory, but also on mastering the skills that can be acquired in practicum. In line with the 2022 PATPI curriculum, the food technology study program needs to be supported by practicum activities in scientific subjects, including chemistry, biochemistry, microbiology, engineering and food processing. (PATPI, 2022).

According to Nurhayati et al., (2021), to achieve the expected graduate competencies, not only conceptual knowledge is needed, but practicum is needed to demonstrate concepts, theories, principles and procedures of knowledge in a field of study. Practicum provides direct experience to students related to learning theory (Masruri, 2020). Through practicum, students can develop scientific process skills that support theoretical knowledge (Yunus & Syam, 2021). According to Indonesia's national qualifications framework (KKNI) in the 21st century, the 2022 PATPI curriculum emphasizes problem formulation, analytical and critical thinking, and collaboration in solving problems. This competency can be obtained through practicum because in practicum, students can practice skills in conducting experiments, using laboratory equipment, choosing analytical methods, measuring, and processing, conducting data analysis, and interpreting the data obtained. In addition, practicum activities can train the ability to cooperate and collaborate which are the soft skills required by a graduate in the world of work. Based on the tracer results of the Food Technology Study Program at Universitas Terbuka in 2020, students suggest more integrated practicum material to support graduate competence (Hakiki et al., 2020).

In December 2019, in China's Hubei province, Wuhan became the epicentre of a pneumonia outbreak (Papa et al., 2022). In a short time at the beginning of 2020, the phenomenon of the spread of the Covid 19 pandemic occurred in several countries, including one of which was in Indonesia. The spread of Covid 19 (Corona virus disease 2019) is very fast, which in a short time has spread to almost all countries in the world. The spread of this virus through droplets and direct contact with sufferers (Sumampouw, 2020). Under these conditions, the Indonesian government implements social distancing and physical contact policies (Kresna & Ahyar, 2020). In 2020, through a circular letter from the Ministry of Education and Culture Directorate of Higher Education Number 1 of 2020, higher education institutions are instructed to implement a distance learning system (Nisa, 2020). With this policy, the face-to-face learning system and practicum facilities were also closed, so that those are transferred to online learning system such as online practicum (Joji et al., 2022; Papa et al., 2022). Under these conditions, organizers need to adapt by modifying the materials and practicum program units. Prior to the Covid 19 pandemic, learning activities were carried out face-to-face or offline (synchronous) but during the Covid-19 pandemic, learning activities were not face-to-face or online (asynchronous).

Previous research by Papa et al., (2022) stated that they support anatomy teaching practice cadaveric dissection and cannot be completely replaced by online practice. Study by Winangun, (2021) implementing project based learning to replace practicum activities during the Covid 19 pandemic. Research result of Nisa, (2020) states that plant anatomy practicum is more effectively carried out face-to-face in the laboratory than online practicum. Meanwhile according Hanik & Wiharti, (2021), practicum activities can be carried out online from home by first modifying the material and practicum program units. Practicum in Covid 19 pandemic, blended mode is more successful and well received by students and institutions (Joji et al., 2022). Likewise, practicum activities in food technology study program at Universitas Terbuka, which before the Covid 19 pandemic for the 2018.1-2019.2 registration period were carried out face-to-face in partner university laboratories, but during the Covid 19 Pandemic during the 2020.1-2021.2 registration period, the practicum material was modified and carried out virtually through Tuweb using the Microsoft Teams application. According to Shurygin et al., (2022), LMS Moodle and laboratory work on Microsoft Teams proved to be useful for laboratory in Covid 19 pandemic. However, not all practicums in the food technology study program, at Universitas Terbuka can be carried out independently by students through web tutorials. For example, chemical practicum and food analysis that require laboratory equipment cannot be done using Tuweb. Three practicum courses that in food technology study program can be carried out independently through Tuweb include food processing technology, principles of food technology and sensory evaluation.

The existence of technical changes in the practicum implementation of the food technology study program has an impact on student grades as a reflection of the achievement of competency in practicum courses. Based on data on learning outcomes documents owned by the study program, no student received an E during the practicum registration period before the Pandemic (2018.1-2019.2), but during the covid 19 pandemic (2021.1) the number of students who received an E grade was 26 students or around 18 %, while during the 2021.2 registration period there were 9 students who got an E grade or around 10% of the total students doing practicum. Thus, it is necessary to study the causes of student's failure in taking online practicum courses held by Tuweb. This study aimed to identify what mistakes students obtained E grades or failed in online practicum courses through Tuweb in the Food Technology Study Program, Faculty of Science and Technology, Universitas Terbuka.

2 METHODOLOGY

The research was carried out at the Universitas Terbuka, South Tangerang. This study used qualitative research methods using descriptive data obtained through observing documents and interviewing practicum instructors. The data analysis technique used was Miles and Huberman in Asipi et al., (2022) research, interviews were conducted with four Tuweb practicum instructors with the criteria of having been Tuweb instructors for online practicum in the 2021 registration period. The interview data were carried out in the data reduction stage which aimed to summarize and focused on the things that will be studied, the next stage was data display by analysing qualitative data, describing, and presenting the data in the form of a flow or brief description, then the final stage was to draw conclusions. The first stage was the activity of interviewing practicum instructors accompanied by a review of the documents resulting from practicum student scores, then data analysis was carried out by systematically compiling the results of the interviews.

3 FINDINGS AND DISCUSSION

Based on data on the value of practicum courses for students of food technology study program at Universitas Terbuka, during the 2021.1 registration period there were 26 students or around 18% of students who obtained an E grade in practicum courses conducted online by Tuweb such as food processing technology, principles of food engineering, and evaluation sensory, while during the 2021.2 registration period there were 7 students or around 10% of students who received an E (Figure 1). Even though during the previous registration period (2018.1-2020.2), none of the practicing students in food technology study program got an E grades or all students passed online practicum courses. On the basis of the researcher's curiosity to find out in more detail about the factors that cause students failed in online practicum courses, the researchers conducted in-depth interviews with practicum instructors regarding what components influenced the final grade of the practicum course, and the problems faced by students in carrying out practicums as well as the factors that cause students to get an E grade. The research data are presented in Table 1.

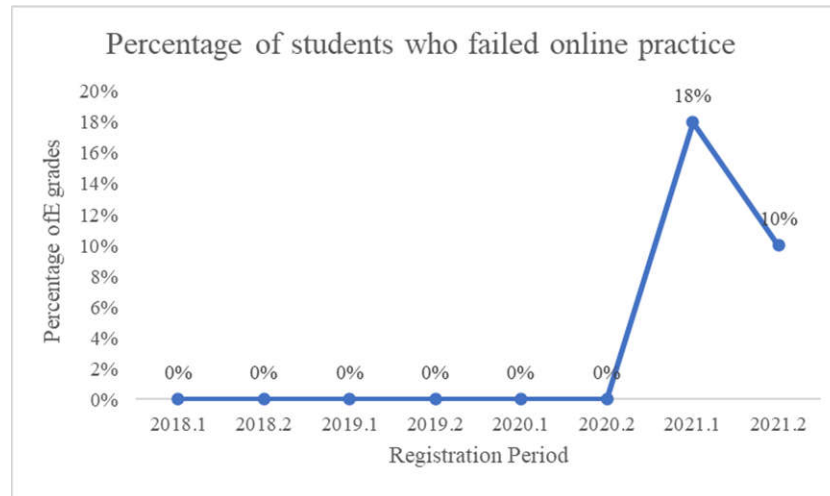


Figure 1 The percentage of students from food technology study program, Universitas Terbuka who obtained an E grade in online practicum courses

Table 1 Assessment components and factors that cause students to get an E grade

| Assessment component | Observed problem | Factors causing the problem |
|----------------------|------------------------------------|--|
| Report | Low practicum report value or zero | <ol style="list-style-type: none"> 1. Students do not work and upload practicum reports on the praktik.ut.ac.id page 2. Students commit plagiarism by copying and pasting the other's practicum reports |
| Practical Value | Low attendance rate | <ol style="list-style-type: none"> 1. Students are constrained by the network to access <i>Microsoft Teams Account</i> 2. Students are late in participating in practicum activities 3. Students do not take practicum activities in full or leave practicum activities before they are finished 4. Students have several times been absent from practicum activities for several reasons such as clashes with their work and not getting time off from work 5. Students do not work additional assignments for absence sanctions |

| | |
|---|--|
| Zero or low pre-test and post-test scores | <ol style="list-style-type: none">1. Students do not take the pre-test and post-test and do not read the practicum module before practicum activities2. Students do not pay attention to the materials presented during the practical activities |
| Low practicum readiness value | <ol style="list-style-type: none">1. Students do not use laboratory coats during practicum2. Students do not print out the practicum guidelines and forms needed during the practicum3. Students do not prepare the tools and materials needed for practicum4. Students are late for practicum activities |
| Low practical skill scores | <ol style="list-style-type: none">1. Students do not conduct independent practicum and do not upload it on the lms.ut.ac.id page2. Students are not skilled in conducting experiments and observations in practicum3. Students are not skilled in using practicum tools4. Students are not killed and inappropriate in presenting and interpreting practicum result data5. Students do not pay attention to the cleanliness and safety of practicum work |

3.1 Value of Practicum Reports

In food technology study program, Universitas Terbuka, the value of the practicum report contributes 40% to the final grade of the practicum course, and if you do not upload the practicum report on the praktik.ut.ac.id page, the system will automatically close so that the instructor cannot input the value components practice for students who do not upload practicum reports. Thus, the practicum report is the main assessment component which if not done can cause failure for students in conducting online practicum. Furthermore, interviews and analysis of the factors that caused students to get E grades were conducted. From the results of interviews to practicum instructors, the increase in the percentage of students who failed in Tuweb online practicum could be caused by several problems in the assessment component including the zero-practicum report

value or low. The acquisition of a zero or low practicum report value can be caused by several factors including students not working on and uploading practicum reports on the praktik.ut.ac.id page. The reasons for students not submitting reports are 1) students have difficulty accessing the praktik.ut.ac.id page due to problematic accounts; 2) students pay less attention to the deadline for uploading practicum reports; 3) students are constrained by the network when uploading practicum reports on the praktik.ut.ac.id page; 4) Students do not master practicum materials, so they have difficulty in compiling practicum reports; 5) students commit plagiarism by copying and pasting other people's practicum reports.

In terms of time, giving students time to work on practicum reports for 1 month is sufficient for students, but because the characteristics of Universitas Terbuka students are already working, with a high level of activity and other subject assignments and quite a lot of work assignments, some students do not work on practicum reports. or simply copying a friend's completed report. These results are in line with research Ali, (2017) which stated that some students did not work on practicum reports or only copied reports from friends who had finished reaching 43%. The writing of practicum reports is the most difficult thing for practicum students to do. The solution to this problem is that students must be able to organize and divide their time by not delaying course assignments with work assignments, so that both can be completed properly and on time.

3.2 Practical Work Value

The practical assessment component consists of practicum readiness scores, pre-test and post-test scores, attendance scores, and skills in doing practicum. The practical value contributes 60% of the final practicum course value. Even though the contribution is high to the final score, this practical value cannot be input if the practicum report is not uploaded on the praktik.ut.ac.id page. The low value of the practical component contributed to a decrease in the final grade and failed in the practicum course. In detail the components of the practice assessment are described as follows:

- a) The readiness of practicum students is assessed by the completeness of the laboratory coat and the guidelines and practicum forms. Practicum guidelines are urgently needed by practitioners and instructors as guidelines in carrying out work procedures in practicum activities, so that if students do not have a practicum module and practicum guide prior to practicum implementation, it becomes one of the indicators of students' unpreparedness in carrying out practicum which has an impact on the low value of practicum readiness. Planning

and preparation imposed the quality of education (Yun et al., 2022). According to Ali, (2017), practicum preparation including the availability of practicum guides or guidelines and completeness of practicum attributes including laboratory coat, ID cards, masks and forms for filling in practicum results as well as tools and materials needed for practicum activities. Students who are not perform in the kitchen based experiment at home said that the required materials was unavailable (Mojica & Upmacis, 2022).;

- b) Low practicum pre-test and post-test scores can be caused by students not reading the practicum module so that they do not master the material being practiced. It is aligned with Pujiati et al., (2018) which stated that a low pre-test score indicated that an initial understanding of the materials to be practiced was lacking. In addition, during the practicum activities students pay less attention to the explanation of the materials presented by the practicum instructor, so that students do not master the material and their post-test scores are low. To help students can pay attention, instructors need to be self-efficacy or can increase student's motivation (Rosen & Kelly, 2022).;
- c) Low attendance scores can be due to students not attending the Tuweb online practicum. Some reasons for student absence from participating in practicum activities are network constraints, being unable to leave work, and force majeure such as natural disasters, parents or relatives dying. According to Hanik & Wiharti, (2021), as many as 23.4% of students experience network problems, 21.5% of students do not have a quota and as many as 30.6% are busy. In addition, joining online practicum classes are late and leaving classes before the practicum time can reduce the value of practicum attendance. Students who are absent from online practicum usually receive additional assignments as a sanction for being absent from practicum, but these assignments are not carried out, so the attendance score is low;
- d) Skills in practicum are assessed from independent practicum assignments, skills in conducting experiments and observations in practicum, skills in using practicum tools, skills and accuracy in presenting and interpreting practicum result data, skills in paying attention to cleanliness and safety of practicum work.

4 CONCLUSION

During the Covid 19 pandemic, food technology study program implemented online practicum through Tuweb in three practicum subjects namely food processing technology, principles of food engineering, and sensory evaluation. The application of online practicum had an impact on increasing the percentage of students who failed the Tuweb practicum course. Based on the research results, there were several problems that caused students to get an E grade including: 1) students do not work on and do not upload practicum reports on the praktik.ut.ac.id page; 2) absence of students in Tuweb practicum activities; 3) low pre-test and post-test scores; 4) unpreparedness of students in doing practicum; 5) students' skills in doing practicum are low. The results of this study are expected can be a source of information so that food technology study program students can pass practicum courses by avoiding the factors that cause failure in practicum courses.

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