Quality assurance in courses with practicum: HOW AND WHY UNIVERSITAS TERBUKA DOES IT

Rinda Noviyanti1

1Department of Math & Natural Sciences, Universitas Terbuka (INDONESIA)

Abstract

This paper presents an analysis of the implementation of practicum for students at the Faculty of Mathematics and Natural Sciences (FMIPA) Universitas Terbuka (UT) as part of a comprehensive effort to deliver an educational process that ensures the quality of the courses offered. As a faculty offering science courses, FMIPA is required to conduct practicum for courses where in the learning process students need to follow the process, observe the object, as well as analyze, prove, and draw conclusions to an object, state, and process of the material learned so that the students can answer questions obtained through inductive observation. To provide a complete learning experience in accordance with the targeted competencies to students in 16 practicum-courses offered, FMIPA has prepared two types of practicum, field and self-directed. Field practicum is carried out by conducting a survey to a practicum site using a questionnaire as an instrument, and/or an interview guide to interview the resource persons in the form of experiment, or observe the practicum object. Meanwhile self-directed practicum can be done anywhere (no laboratory required). To evaluate the effectiveness of practicum implementation, a study was conducted involving 77 students taking the practicum-courses. The study was carried-out through online questionnaires where respondents were asked to answer questions in four categories, namely congruency of the targetted and perceived-needed competences, comprehensiveness of the practicum guide, availibility of practicum equipment, and availibility and quality of supervisors. The findings indicate that overall FMIPA has organized practicum that could guarantee the quality of learning outcomes.

Keywords: practicum, field-practicum, quality assurance, self-directed practicum

**1 INTRODUCTION**

Faculty of Mathematics and Natural Sciences (FMIPA) Universitas Terbuka (UT) as an academic unit in UT that accommodates courses that require practices provides learning assistance in the form of practicum. Practicum is conducted for learning materials that require students to have practical skills. The practicum in Agribusiness Study Program is aimed at improving the competence of Agribusiness students through application, analysis, synthesis, and evaluation of theories contained in the modules (FMIPA-UT, 2011). Practicum is an integral part of learning process and can be utilized to build the full competencies of cognitive, affective, and psychomotor aspects of the student, despite the emphasis on psychomotor domain (FMIPA-UT, 2011).

Sagala (2007) defines practicum as a learning process in which students are given the opportunity to experience, follow the process, observe an object, analyze, demonstrate, and draw their own conclusions about an object, situation, or process. In line with that, Subiantoro (2009) said that in practicum, it is possible to apply various science process skills as well as the development of scientific attitude that support the process of acquiring knowledge (scientific products) in students because through practicum students have opportunities to develop and apply the skills of science process and a scientific attitude to gain knowledge. On the other hand Suparno (2007) divides the practice into two activities, namely guided or planned practicum and free practicum. Students' activities in guided practicum are limited to experimenting and finding results only because the whole experiment has been designed by the facilitator. The experimental steps, the equipment to be used, and the objects to be observed or researched are pre-determined by the facilitator. While the activities of students in free practicum more demanding students to think independently, such as how to assemble experiments, experiment and solve problems, facilitators only provide problems and objects that must be observed or researched.

There are 16 practicum courses offered by the Agribusiness study program, 4 courses used in 3 majors, 5 courses used in Agricultural major, 4 courses uesd in Animal Husbandry major, and 3 courses used in Fisheries major (detailed courses depicted in Table 1). Practicum is developed for subjects that require students to perform certain skills.

Practicum is divided into two, field and independent practicum. Field practicum is practicum activities conducted in the field by conducting surveys at a practicum site using questionnaires as instruments, and or interview-guidelines for interviewing resource persons. In addition, filed practicum can also take form of practice/experiment/observation of objects of the practicum. Meanwhile, independent practicum is a self-employed practicum carried out by students and can be done anywhere (not necessarily in laboratory), for example at student's house, in office where student work, or other place worthy of being used as a practicum. Independent practicum can be done in groups but the report should be made individually (FMIPA-UT, 2011).

Tabl 1. List of Practicum-Courses in Agribusniess Study Program

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No. | Courses | Major | | | Type of Practicum | |
| A | B | C | X | Y |
| 1. | Programa dan Evaluasi Penyuluhan Pertanian | √ | √ | √ | √ |  |
| 2. | Manajemen Agribisnis | √ | √ | √ |  | √ |
| 3. | Studi Kelayakan Agribisnis | √ | √ | √ | √ |  |
| 4. | Metode dan Teknik Penyuluhan Pertanian | √ | √ | √ | √ |  |
| 5. | Dasar-Dasar Perlindungan Tanaman | √ |  |  |  | √ |
| 6. | Keteknikan Budidaya Ikan |  |  | √ | √ |  |
| 7. | Budidaya Ternak Unggas |  | √ |  | √ |  |
| 8. | Budidaya Ternak Perah |  | √ |  | √ |  |
| 9. | Budidaya Tanaman Pangan Utama | √ |  |  | √ |  |
| 10. | Budidaya Tanaman Perkebunan Utama | √ |  |  | √ |  |
| 11. | Bangunan dan Peralatan Kandang |  | √ |  | √ |  |
| 12. | Teknik Pembenihan Ikan |  |  | √ | √ |  |
| 13. | Pengolahan Hasil Pertanian | √ |  |  |  | √ |
| 14. | Teknologi Pengolahan Hasil Perikanan |  |  | √ |  | √ |
| 15. | Pemanfaatan Limbah Pertanian | √ |  |  |  | √ |
| 16. | Pengolahan Hasil Ternak |  | √ |  |  | √ |

Note: A=Agriculture B=Animal Husbandary C=Fishery

X= Field Practicum Y= Independent Practicum

Independent Practicum is one of the breakthroughs of Agribusiness study program to facilitate students in conducting practicum required in the course. Through independent practicum, students can practice in their respective residence location according to their needs. Study program prepares a practicum guide for each practicum-course. This guide is structured in such a way that it can lead students to practice without direct guidance from any party (Susilo et al, 2015). To ensure the quality of this endependnet practicum, it is necessary to evaluate the implementation of practicum in the field.

The population of this research is all active student of Agribusiness study program at FMIPA-UT registrated in the first semester of in 35 UT Regional Offices (ROs). In-depth interviews were also conducted for practicum managers at UPBJJ-UT and lecturers at Agribusiness PS at central UT as the practicum manual. Questionnaires are given to all students online through an online tutorial website located at http://student.ut.ac.id on each subject practicing. Questionnaires sent back by the students there are 77 pieces.

Respondents were asked questions to capture their level of agreement on four aspects of practicum implementation (practicum preparation, practicum guidance, competence, and practice). For each of these aspects, the respondent is asked to provide an assessment in the numbers 1 through 5 (1 = strongly disagree, 2 = disagree, 3 = do not know, 4 = agree, and 5 = strongly agree).

**2 RESULTS and DISCUSSIONS**

**2.1 Respondents’ Characteristics**

From total 77 respondents, there were 26 (34%) female and 51 male (66%) which actually represents agricultural extensian worker, the day-today work of the respondents, populaton which mostly men. Meanwhile, in term of age, :most of the respondents (70%) were under 34 years or younger

Table 2. Age Distribution of The Respondents

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Age (years) | | | | | |
|  | ‹ 25 | 25 - 29 | 30 - 34 | 35 - 39 | 40 - 44 | › 45 |
| Number (n) | 28 | 12 | 14 | 15 | 6 | 2 |
| Percerntage (%) | 36 | 16 | 18 | 19 | 8 | 3 |

Currently, the tendency for the majority of agribusiness students ages 25 years and below. This is different from the situation 10 years ago where the average age of Agribusiness study program students over 40 years (Argadatta et al, 2008). The shift toward younger students is encouraging because it is expected to more easily absorb technological advances. Meanwhile, the majority of Agribusiness study program students are high school graduates (60%), followed by graduates of D3 extension (31%). It is interesting that the number of respondents who work as agricultural extension workers is less than that which is not. Of the total 77 respondents, only 21% were extension workers, 16% were not employed, and the remainder (63%) were administrative staff at schools in notary offices, and cleaning personnel. These diverse types of jobs show that their present type of work is not a barrier for them to become a bachelor's degree in Agricultural Extension and Communication. In term of domicile, majority (60%) of respondents live outside the city UT ROs. This is in line with the UT mission of providing access to world-class higher education for all levels of society through the implementation of various distance education programs to produce highly competitive graduates.

**2.2 Practicum Preparation Aspect**

Respondents’ preparation for the practicum was good. This is evident from the ownership of basic material books and practice manuals (Table 3). Respondents have also made good use of the UT online network facility, seen by the way they obtained guidance from the UT website by downloading from elearning.ut.ac.id/lm page. The smoothness of respondents accessing the guides through the UT website could be supported by the respondents’ relatively young age, which could be more technologically literate.

Table 3. Respondents’ Preparation for the Practicum (N=77)

|  |  |  |
| --- | --- | --- |
| Statements | Percentange | |
| Yes | No |
| Have a the module to be practiced | 76,6 | 23.4 |
| Have an independent practicum/practice manual | 74.0 | 26.0 |
| Obtain independent practice manual/practice through: |  |  |
| 1. UT Website | 63.6 | 36.4 |
| 1. Catalog | 16.9 | 83.1 |
| 1. UT RO | 18.2 | 81.8 |
| 1. Other students | 13.0 | 87.0 |
| 1. Others | 9.1 | 90.9 |
| Get information about the implementation of independent practicum /practice from UT RO or Agribusiness Study Program | 74.0 | 26.0 |

**1.3 Practicum Guidance Aspects**

The majority of respondents agreed (72.7%) and strongly agreed (16.9%) that the practicum guide was easily accessible. There are still 10.4% of respondents who say they do not know, disagree, and strongly disagree that the practice guide is easy to obtain. This will be an obstacle for them to practice. The ease of accessing this guide is due in part to the diversity of means used in distributing guidelines. It was approved by 72.7% of respondents and strongly agreed by 16.9% of respondents.

A number of 57.1% and 13% respondents respectively agreed and strongly agreed that presentation of the material in the Practicum Guide was systematic. There were still quite a lot (29.9%) of respondents who stated that the presentation of material in the guidance is not systematic which in turn forcing Agribusiness study program to conduct research to find out which courses need to be improved. For clarity of practicum material, 83.1% of respondents agreed and strongly agreed that the material was clear enough. For the Language used, the majority of respondents stated that the languauge used were simple and easy to understand. Nevertheless, there were still 14.2% of respondents who felt that the language used in the guides was not simple and elusive. The guides were complete according to 80.6% of respondents. This results indicate that the Agribusiness study program needs to perfect the the incomplete guidelines.

Table 4. Respondents’ Perceptions of The Practicum Guide

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| The Practicum Guide is | Percentage (N=77) | | | | |
| Strongly Disagree | Disagree | Don’t Know | Agree | Strongly Agree |
| easy to access | 2.6 | 2.6 | 5.2 | 72.7 | 16.9 |
| distributed using variety of media | 2.6 | 3.9 | 13.0 | 72.7 | 7.8 |
| presentated systematically | 3.9 | 10.4 | 15.6 | 57.1 | 13.0 |
| clear in explaining the materials | 3.9 | 5.2 | 7.8 | 63.6 | 19.5 |
| used easy and simple language | 3.9 | 6.5 | 3.9 | 67.5 | 18.2 |
| complete | 3.9 | 10.4 | 5.2 | 66.3 | 14.3 |
| clear in explaining how to write the report | 3.9 | 9.1 | 6.5 | 68.8 | 11.7 |
| clearly stated all aspects required in the report | 2.6 | 6.5 | 11.7 | 74.0 | 5.2 |
| explaining scoring system | 3.9 | 6.5 | 23.4 | 62.3 | 3.9 |

The report writing guidelines, reporting aspects, and report scoring guidelines are aspects newly incorporated in the guidelines. This is related to the research of Susilo et al in 2015 stated that students still have difficulties in writing independent practicum reports. For clarity of report writing guidance, reporting aspects, and reporting guidelines the results are almost identical to the practicum manual. The majority of respondents agreed to all three. Only on scoring guidelines, respondents who did not know its existence were 23.4%. This situation is a warning to the study program to further clarify the scoring guide, and socialize it to the students.

**2.4 Competencies Aspects**

When asked about the suitability of competence that students will achieve in practicum/practice in accordancewith the curriculum, 67.5% of respondents agreed and 13% strongly agreed. Respondents who did not know accounted for 14.3% and the rest disagreed and strongly disagreed (Table 5). For questions about course materials, the majority of respondents also agree that the course material taken is quite helpful in carrying out the practicum/practice. There were 7.8% and 2.6% of respondents who disagree and strongly disagreed, although the percentage was very small but the study program will keep improving.

Table 5. Respondents’ Perceptions on Competencies in the Practicum

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Statements | Percentage (N=77) | | | | |
| Strongly Disagree | Disagree | Don’t Know | Agree | Strongly Agree |
| Comptencies to be achived in practicum is in line with comptenecies targtted in the curriculum | 3.9 | 1.3 | 14.3 | 67.5 | 13.0 |
| Learning material is sufficient to support the practicum implementation | 2.6 | 7.8 | 9.1 | 62.3 | 18.2 |

**1.5 Practicum Implementation Aspects**

Students of Agribusiness study program must condut practicum to be able to pass the relevant course. Therefore, it is necessary to evaluate how the students' assessment all aspects related to the implementation of the practicum. Table 6 shows the respondents’ percpetions to four aspects of the practice implementation.

The easyness in obtaining practicum tools in the field was agreed and strongly agreed by 51.9% and 13% of respondents although there were still some who did not know (15.6%), disagree (14.3%), and strongly disagree (5.2%). Meanwhile, for easyness in obtaining the practicum materials, 62.3% of respondents agreed and 13% of respondents strongly agree. The total percentage of respondents who answered did not know, disagree, and strongly disagree is still quite large, 24.7%.

Table 6. Respondents’ Percpetion of Aspects in Practicum Implementation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Statements | Percentage (N=77) | | | | |
| Strongly Disagree | Disagree | Don’t Know | Agree | Strongly Agree |
| Practicum ools is easy to find in field | 5.2 | 14.3 | 15.6 | 51.9 | 13.0 |
| Practicum materulas are easy to get | 3.9 | 9.1 | 11.7 | 62.3 | 13.0 |
| Practicum guide is easy to implement | 2.6 | 11.7 | 9.1 | 70.1 | 6.5 |
| All praticum materialas can be carried out according to duidance and students’ ability | 3.9 | 13.0 | 6.5 | 66.2 | 10.4 |

In general, practicum instructions were easy for students to follow. This can be seen from 70.1% of respondents who agreed and 6.5% strongly agree. Although the percentage that stated their agreement wais quite big, there were still 14.3% of respondents who disagreed and strongly disagreed. This indicates that there is still some parts of the Practicum Guide that is difficult to understand. For statements all practice materials can be practiced in accordance with the instructions and ability of students, 66.2% of respondents agreed. Percentage of respondents who declared disagreement 13%, strongly disagree 3.9% and do not know 6.5%. The third total of these percentages is significant to be explored further.

Practicum in Agribusiness study program carried out without direct guidance in the field. However in the implementation there are also students who do practicum with the direct guidance of instructors (Table 7). Respondents need direct supervisors for practicums which they find difficult to obtain tools and materials, even though they have been adhered to by doing them in groups. Instructors for the practicum are usually tutors for the courses. Tutors-instructors are selected and recruited by UT ROs and given permission to facilitate students in tutorial sessions as well as in practicum activities

Table 7. Guidance in Practicum

| Statements | Percentage (N=77) | |
| --- | --- | --- |
| Yes | No |
| Conduct the practicum/practice yourself without the guidance of Instructor | 68.8 | 31.2 |
| Conduct group practicum/practice without instructor guidance | 39.0 | 61.0 |
| There is an accompanying instructor tutor/student colleague | 42.9 | 57.1 |

**2 CONCLUSIONS AND RECOMMENDATIONS**

**2.1 Conclusiona**

Practicum in the Agribusiness study program has been carried out well. This is reflected in the respondents’ answers to the various questions. The majority of respondents expressed readiness to practicum (having BMP and practicum guidance as well as having consulted with UT ROs). Moreover the majority of respondents expressed their agreement to the three aspects asked; aspects of practical guidance (ease of getting guidance, systematic in material writing, material clarity, completeness of guide), aspects of competency (suitability of practice and material in BMP), and aspect of practicum implementation (ease of obtaining tools and materials, ease of practice manual). Some of the respondend mentiined the neccessity to have facilitator at hands while doing the practicum, especially for learning materialas that they find difficult.

**2.2 Recommendations**

Agribusiness study program should keep mapping the various aspects of practicum which respondents stated as not good enough. The results of this mapping need to be followed up by improving the practicum guidelines so that the quality of the lab can be perfected.

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