



## STUDENTS' ACCESSIBILITY AND INTENSITY TO THE ONLINE TUTORIAL PROGRAM

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### ABSTRAK

Salah satu jenis tutorial yang dikembangkan Universitas Terbuka (UT) adalah tutorial *online*, yaitu bentuk alternatif tutorial yang mempercepat proses interaksi antara mahasiswa dengan tutor. Tujuan penulisan artikel adalah menganalisis upaya untuk meningkatkan aksesibilitas dan intensitas mahasiswa dalam tutorial *online*. Responden penelitian adalah mahasiswa Program Studi Agribisnis FMIPA-UT yang dipilih dengan sengaja berdasarkan tingkat keaktifan dalam tutorial *online*. Teridentifikasi ada 90 mahasiswa yang aktif, dan dikirimkan kuesioner kepada mereka. Jumlah kuesioner yang telah diisi dan dikirim kembali adalah 38 kuesioner. Kuesioner dikirimkan kepada responden melalui pos, e-mail, dan disisipkan dalam tutorial *online*. Pengumpulan data menggunakan metode sensus, data dianalisis secara deskriptif dan regresi berganda. Hasil penelitian menunjukkan bahwa aksesibilitas dan intensitas mahasiswa dalam tutorial *online* adalah rendah, ditunjukkan dengan jumlah waktu akses < 1,7 jam per minggu, dan frekuensi akses (1-11 jam per minggu). Artinya, responden belum memanfaatkan tutorial *online* dengan optimum sebagai media pembelajaran. Sebagian besar responden mempunyai interaksi yang sedang. Mereka lebih banyak terfokus pada bagian utama dalam tutorial *online*, yaitu forum diskusi, sementara beberapa bagian lain dalam tutorial *online* belum dimanfaatkan. Upaya untuk meningkatkan aksesibilitas dan intensitas mahasiswa dalam tutorial *online* adalah: 1) meningkatkan sosialisasi pelaksanaan tutorial *online* kepada mahasiswa; 2) mengembangkan materi inisiasi yang menarik; 3) pembekalan tutor; 4) kerja sama UT dengan penyedia jaringan internet di daerah untuk memperluas akses mahasiswa terhadap tutorial *online*.

**Kata kunci:** aksesibilitas, intensitas, tutorial *online*

### ABSTRACT

*Universitas Terbuka (UT) - The Indonesia Open University - provides online tutorial as one of the techniques for improving interaction process between students and tutors. This article is aimed at analyzing efforts which can improve the students' accessibility and intensity to the online tutorial. Respondents were purposively selected based on the level of students' activity on the online tutorial at Agribusiness Study Program. Of the 90 people who were sent the questionnaire, 38 people returned the completed questionnaire. Questionnaires were distributed to students by way of postal mail, e-mail, and inserted on the online tutorial program. Data were collected by census method, analysed by descriptive and multiple regression analysis. The findings indicated that the students' accessibility and intensity to the online tutorial is still low, indicated by the number of low access time (<1.7 hours per week) and low access frequency (1-11 hours per week). The respondents were not use online tutorial program optimally as a medium of learning. At most, respondents had only medium interaction in the online tutorial. They were mostly focused on the main part of the online tutorial, e.g. the discussion forum, while many other parts were less explored. Efforts to improve the students' accessibility and intensity to the online tutorials are: 1) Improving socialization of online*

tutorial; 2) developing interesting initiation materials; 3) tutor briefing for improvement; and 4) cooperation of UT with internet service providers in the region to expand alternative access of online tutorials for the students.

**Keywords:** *accessibility, intensity, online tutorial*

## INTRODUCTION

Learning support services are facilities provided by Universitas Terbuka (UT, The Indonesian Open University) as a university that apply open and distance learning (ODL). In the ODL system, students should be independent learners. A primary learning resource in ODL is printed materials supplemented by non-printed materials. Besides, students can also use various learning support services.

Learning support services provided by UT are aimed for accommodating student's interaction with teaching materials, student's interaction with a tutor through the tutorial mode, and inter-student's interaction through various activities of study groups (Budiwati, 2007). Through independent learning, guided learning, and using a variety of learning resources as a whole students are expected to perform optimally with satisfactory results.

One type of tutorial currently provided by UT is online tutorial, a form of tutorial using the internet. The advantage of such online tutorial is, that students do not have to meet face to face with the tutors. Benefits for students include acquiring knowledge or information from fellow students and tutors, asking tutors about teaching materials which are not understood. Another benefit is that students can access online tutorial anytime, anywhere. Therefore, online tutorial is suitable for working students who have limited time to attend face-to-face tutorials.

At UT, online tutorial scores contribute 30% of the students' final score. Assessment of student's activities of online tutorials include frequency and intensity of students' activities in accessing the materials. In particular, the intensity of the students to access online tutorials is important to be analyzed.

Students' accessibility to online tutorial are associated with the availability and accessibility of the internet network. With the development of information and communication technology (ICT) in their area, the students are expected to intensify their participation. The presence of ICT has become increasingly important for educational activities, especially in the learning process. Through the use of ICT and the development of ICT-based learning systems, educational services can be expanded to reach remote areas. The existence, development, and advancement of ICT, as well as the free flow of information, allow the application of the concept of lifelong learning and flexibility in human resource development.

But, research by Yuliana and Wardiny (2011), indicated that the students' accessibility and intensity to online tutorials is not optimal. So, there should be efforts to improve students' accessibility and intensity to online tutorial programs. This article is aimed at analyzing students' accessibility and intensity to online tutorials and efforts to improve them.

## METHODS

The research design is explanatory research. Respondents were purposively selected based on the level of students' activity in the online tutorial at Agribusiness Study Program. Determination of the respondents is based on the students' activities in online tutorial. There were 90 students out of a total of 400 who meet these criteria, All 90 students were sent questionnaires, but only 38 completed and returned these. Data collected and analyzed were thus from these 38 students.

Data collected were primary and secondary data, and was collected by census method. Primary data were obtained through questionnaires to the students, while the secondary data were collected by browsing the data of online tutorial participants and their activities as recorded in the Moodle Program. Distribution of questionnaires to the students used: postal mail, e-mail, and attached on the online tutorial program. Most of the students returned the questionnaire via e-mail, followed by online tutorial program, and lastly via postal service.

Data was analyzed by descriptive analysis to describe the students' accessibility and intensity in online tutorial. To analyze the influence of the factors of students' accessibility and intensity on online tutorial, multiple regression is used. Independent factors in this study were: income level (X1); students' residence (X2); availability of computer and internet (X3); (X4). While, dependent factors were: level of convenience to access (Y1); amount of time to access (Y2); frequency of students' access (Y3); students' interaction in online tutorial (Y4); amount of students' activity in online tutorial (Y5).

## RESULTS AND DISCUSSION

### Students' Accessibility to Online Tutorials

#### *Level of Convenience of Access*

One indicator to measure the students' accessibility to online tutorial is the level of convenience of access. It is based on the definition by Sapari et al. (2009), that the accessibility is the level of convenience to reach goals related to communication behavior. The level of convenience of access to online tutorial is presented in Table 1. Most of the students (73.7%) said that access to online tutorial is easy. They have no constraints, including access to the internet. Level of convenience of access to online tutorial is supported by ICT facilities at UT, which are updated continuously to improve services.

Table 1. Level of Convenience to Access

Level of Convenience to Access	Frequency	Percentage (%)
Difficult	10	26.3
Easy	28	73.7
Total	38	100.0

Results of multiple regression analysis to factors that affect the level of convenience to access (Y1) are presented by the equation:  $Y1 = 0.072 + 0.204X1^* - 0.113X2 + 0.194X3^* + 0.547^* X4$ . The level of convenience to access (Y1) as an indicator of the students' accessibility was influenced significantly ( $\alpha = 0.05$ ) by the students' income level (X1); the availability of computer and internet (X3); and the level of convenience to access UT's website (X4), with  $R^2$  value of 0.716.

Based on the results, 73.7% of students find it quite easy to access the UT's website. This will directly influence their access to online tutorial. This fact is supported by Panen (2002) who argued that access to instructional media have to consider practical factors, such as ease of access to internet or website. Student's income level also affects students' accessibility to online tutorial. The higher the students' income, the more easily their access to the internet, because they have computers and internet connections at home.

### **Amount of Time of Access**

Distribution of the amount of time of access to online tutorial per week by students are presented in Table 2. Most of the respondents (47.4%) had a low access time (<1.7 hours per week); a result related to students working hours, hence their time of access to online tutorial is only at night. To increase the amount of time of access requires a special approach by the tutors, which can influence students convenience in learning through online tutorial.

Table 2. Amount of Time of Acces per Week

Amount of Time of Acces	Frequency	Percentage (%)
Low (< 1.7 hours)	18	47.4
Medium (1.7 – 2.8 hours)	12	31.6
High (> 2.8 hours)	8	21.1
Total	38	100.0

Results of multiple regression analysis to factors that affect the amount of time of access (Y2) are presented by the equation:  $Y2 = -0.534 + 0.257X1 + 0.288X2 + 0.223X3 + 0.428X4$ . The amount of time to access was not significantly influenced by the factors, X1 (students, income level), X2 (students' residence), X3 (availability of computer and internet) and X4 (level of convenience to access UT's website), with the value  $R^2 = 0.172$ . Most students are already working (92.1%), therefore they have difficulties in accessing online tutorials every day. With a nearly uniform background of students' working hours, those factors have not significantly influenced the amount of time of access.

### **Students' Intensity in Online Tutorial**

#### **Frequency of Access**

Frequency of access to online tutorial by the student was defined as the time consumed by the student to access the whole online tutorial activities per week, during the semester. It was measured from the activities of students reading or downloading initiation materials, answering questions in discussion, and doing the task. Frequency of access by student are presented in Table 3.

Table 3. Frequency to Access per Week

Frequency of Access	Frequency	Percentage (%)
Low (1-11 hours)	17	44,7
Medium (11-22 hours)	12	31,6
High (22-33 hours)	9	23,7
Total	38	100,0

Frequency of access by most student (44.7%) are as low as (1-11 hours per week). It means, that most of the respondents did not use online tutorial optimally as a medium of learning. Based on the results of previous studies by Yuliana & Winata (2009) and also Susanti (2007), the majority of UT's students have also a low ability in using computers and the internet. Such conclusions are also supported by the findings of this research, 68% of respondents stated that they rarely use the internet in their daily work. It is clear that the low ability in using computers and the internet has become an obstacle to the students in accessing online tutorial. Dealing with this issue, we recommend that UT develop a socialization program to introduce online tutorial with practice to better prepare the students before entering the learning process.

Results of multiple regression analysis of factors that affect the frequency of student's access (Y3) are presented by the equation:  $Y3 = 2.279 + 0.329X1 - 0.470X2 - 0.182X3 + 0.021X4$ , where X1 is students' income level, X2 is students' residence, X3 is availability of computer and internet, and X4 is level of convenience to access UT's website. Frequency of student's access was not significantly affected by those factors, with the value of  $R^2 = 0.184$ .

### **Student Interaction with Online Tutorial Materials**

Student interaction here is defined as how many times a student attended activities of online tutorial. Such activities are downloading and reading the initiation materials, reading the discussion questions, answering the questions and or attending discussions, responding to answers from other students, reading assignments, uploading assignments, opening the discussion participants' list, and other activities. Kustiari *et al.* (2006) suggested that the learning intensity of student can be accessed from their access to innovation and their interaction with the source of innovation. Student interaction with online tutorial materials is presented in Table 4. Most of the students (55.3%) have interaction at medium level (6-10 activities per week). This result is quite good, assuming that the students have been motivated to learn the tutorial materials.

Table 4. Student Interaction per Week

Student Interaction	Frequency	Percentage (%)
Low (1-5 activities)	9	23.7
Medium (6-10 activities)	21	55.3
High (11-15 activities)	8	21.0
Total	38	100.0

Student interactions on online tutorial were influenced by the level of awareness and the level of self efficacy in using e-learning (Padmo and Julaeha, 2007). In other words, the ability of students in using computers and the internet also affect the interaction of students with online tutorial. Therefore, students should prepare themselves before attending online tutorial.

Results of multiple regression analysis of factors which affect the student interaction (Y4) are presented by the equation:  $Y4 = 0.863 + 0.186X1 - 0.018X2 + 0.09X3 + 0.281X4$ , where X1 is students' income level, X2 is students' residence, X3 is availability of computer and internet, and X4 is level of convenience to access UT's website. Student interaction was not significantly affected by the factors, with the value of  $R^2 = 0.103$ .

However, research by Yuliana describes that students at early adulthood tend to be interested in the advancement of science and technology and use it in the learning process (Yuliana, 2007). The source of information of online tutorial directly influences this interaction, because most of the students receive information from UT's website. Students' employment status have also significantly influence the interaction with online tutorial. Working students have relatively lower interaction, due to time constraints. Places where students could access tutorials were important. There were more flexible, cheaper, and more comfortable places to access tutorials than commercial internet shops (warnet) such as their homes and at Regional Offices where computers for use by students were available.

#### *Level of Student Activities in Online Tutorial*

The level of student activities in online tutorial was determined by counting the number of hits made by the students during a semester. The number represents how many students make connections with online tutorials in one semester. The results can be seen in Table 5.

Table 5. Level of Student Activities in Online Tutorial per Semester

Amount of Activities	Frequency	Percentage (%)
Low (1-145 hits)	22	57,9
Medium (146-288 hits)	13	34,2
High (288-431 hits)	3	7,9
Total	38	100,0

Most of students (57.9%) have low levels of activities. It means that the students are less exploring all parts of online tutorials. Students still use only the main part of the tutorial, e.g. answering questions posed in discussion forums, and rarely open up other parts. The number of hits can be increased if students have more time to access the online tutorials.

Results of multiple regression analysis to factors that affect the level of student activity (Y5) are presented by regression equation, is  $Y5 = 1.135 - 0.004X1 - 0.194X2 + 0.247X3 + 0.046X4$ , where X1 is students' income level, X2 is students' residence, X3 is availability of computer and internet, and X4 is level of convenience to access UT's website. The level of student activities was not significantly affected by those factors, with the value of  $R^2 = 0.110$ . But, one factor significantly affected the level of student activities, which is the availability of computers and internet connection (X3). Online tutorials can be accessed from anywhere and at anytime if the student wants. Moreover, if the computer is portable it will be easier for the students to attend online tutorials.

#### **Factors Related Students' Accessibility and Intensity**

The results showed that there are factors related to students' accessibility and intensity on the online tutorial, among which are: 1) the majority of respondents (73.7%) had worked primarily as a civil servant (agricultural extension workers) with working time from morning till evening; 2) information resources of online tutorial are less accessible by respondents (39.5% of respondents who access the UT website and 34.2% of respondents obtain information of online tutorial from UT's regional office); 3) 57.9% of respondents lived outside of town with limited internet access; 4) some of tutors respond students untimely (42.1%), and their initiation materials are considered less attractive. This is

confirmed by Susanti's findings (2007), that the low participation of students to the online tutorial were due to their busy working hours, and their ability to use computer and the internet.

It is required for the efficiency of online tutorial that before starting students must prepare e-mail address, course registration, and have the skills to use computers appropriately. However, these requirements are often ignored by students. This might be one of the reasons of the low intensity to the online tutorial.

Concerning tutors, Rashid and Rashid (2011) explained that the use of technology, which is important in the ODL learning process, is sometime become problem for the tutors. Therefore, necessary preparation and training for tutors in the use of technology become important. On the other hand, the attitude of tutors in managing tutorial, especially in providing and delivering tutorial materials is a key success in ODL learning.

### **Efforts to Improve Students' Accessibility and Intensity in Online Tutorials.**

While the reality of online tutorial delivery is not satisfied yet, some efforts should be made since online tutorial will become essential parts of the future ODL learning process. The following are some suggestions and some efforts that have been done in improving students' accessibility and intensity in online tutorial.

#### **1. Socialization of Online Tutorial**

Socialization of online tutorial programs should be enhanced, in order to make students familiar with it. Socialization can be done through face to face meetings with students, or by video conferences with the students at UT Regional Offices. Up to this time, socialization of online tutorial is mostly done through face to face meetings by UT's RO staff. However, socialization with video conference can also be arranged by the UT Center in Jakarta with RO's which involve students.

The socialization materials may include introduction to online tutorial definition, learning objectives through online tutorial, online tutorial benefits for students, online tutorial assessment methods, and the operation methods of online tutorial. Furthermore, in such socialization the students need to practice in using online tutorial programs. Being familiar with online tutorials, students can be expected to have better motivation for attending the program.

#### **2. Improve the Quality of Initiation and Discussion Materials**

The initiation materials are the main part of the online tutorial implementation. Therefore, the materials should be made interesting in order to attract the students to read or download the materials. The same materials also deal with the questions posted in the discussion part of the tutorial, which is expected to attract many students to participate.

Similar with the printed materials, to be interesting, the initiation materials should have clear objectives and coherent explanations, and with sufficient examples and non-examples. (Suparman, 2004).

### **3. Tutor Briefing**

A tutor need to have adequate capability to conduct online tutorials. Therefore, a tutor briefing before implementation of online tutorial is necessary. Tutor briefing is important to improve the quality of tutors, in order to make learning more comfortable for students.

According to Librero (2010), online tutorial program is a collaboration of teaching and learning, involving a considerably higher level of interaction. The teacher actually becomes a member of the class while acting as a facilitator and participant in the activities along with the students as they fulfil course requirements.

### **4. Cooperation with Internet Service Providers in the Region**

To improve student's accessibility to online tutorial, one important thing that can be done is cooperation of UT with internet network providers in the place where students reside. Such cooperation can be done in a mutually beneficial relationship between UT and the providers. Internet networks is expected to become increasingly available in all of Indonesia, therefore it is increasingly possible for internet service providers to cover the most remote areas. As Padmo and Pribadi (2002) expected, there is hope that the utilization of computer networks will affect student access and further affect the success of their studies.

## **CONCLUDING REMARKS**

This study is explanatory and do not pretend to be generalized. However, assuming that many UT students have similar attitudes towards learning through the internet, this exploratory study can be very useful in conducting further studies with larger populations and better samples.

The suggested efforts to improve students' accessibility and intensity can be used as variables for an Experimental Development Study to test the viability of these suggestions.

The preliminary conclusions of this small study are: (1) That ease of access to online tutorial was not accompanied by high levels of access time, the frequency of students' access were in the low category (1-11 hours per week); (2) Most of the students have not optimally use online tutorials as a medium of learning. Students were still focused on the main part of the tutorial, which was answering discussion questions, but there were many other parts that were less explored by the students; (3) Students' accessibility level is significantly influenced by income levels, students residence, the availability of computers and internet connections, and level of convenience to access UT website.

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