

Face-to-face Tutorial Program in Distance Education:

How Effective to Improve Students' Performance

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### Abstract

Face-to-face tutorial program for Universitas Terbuka in-service teacher training program is intended to improve students' performance in final exam. The purpose of the study is to assess the effect of success in the tutoring program on students' performance in the final examination and to estimate the relationship of key tutor characteristics with these outcomes. Findings of the study suggested that there is a substantial difference between the average of students' tutorial scores and that of the final examination results. The correlation between the tutorial results and the final exam scores is very small but positive and significant in overall sampled courses. Partial correlation analysis between tutors' specific characteristics shows that the association of students' tutorial scores and final exam results is significant in the group of students guided by tutors holding a master's degree and in those instructed by university affiliated tutors. The mean difference analysis between groups defined by tutor characteristics showed that the students guided by tutors with a master's degree did substantially and significantly better than those instructed by tutors with only a bachelor's degree, but there is no significant difference between the groups defined by tutors' professional affiliations.

*Key words:* face-to-face tutorial, distance education, student performance

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The establishment of the open universities, according to Perraton (2000), has created a new mechanism for teacher education. The emphasis has been on in-service upgrading rather than initial education. A number of Asian open universities have run programs to upgrade teachers in response to government requests (Perraton, 2000), including the Indonesia Open University. The Indonesia Open University or Universitas Terbuka (UT) is the only university offering in-service teacher training program through distance education. Participating in the program for most teachers, especially for the elementary school teachers, is a real challenge. Taking the program through distance education requires the teacher trainees to study independently. Since the students are full-time working teachers and they have been accustomed to class-room teaching, they find it difficult to adapt to the distance learning system. To solve these problems, UT provides a classroom-based, face-to-face tutorial program (Universitas Terbuka, 2013).

According to Race (1994), through tutorial program a tutor can help students to start out on their studies in an organized, productive way. However, lack of reading habits compounded with full time teaching, family and community obligations often disrupt their reading time. Simpson (2003) in her study on pre-service teacher training in 21 distance education programs found that distance learners were not part of a 'reading culture' and tutoring session can motivate students to read and a tutor can provide advice on how to read effectively. Interaction and communication among students also promotes personal relations. Holmberg, as cited by Simonson, Smaldino, Albright, & Zvacek (2009), argued that personal relations and empathy between learners and those supporting them are central to learning in distance education. Bof

(2004) in his study on teacher education at a distance with face-to-face tutoring program in Brazil reported that tutoring had a positive impact on students' course completion rate and on the achievement of in-service teacher trainees who seek professional qualification through distance education. Butale (2008) in his study in Botswana reported that distance education program for Diploma in Primary Education (DPE) use print based instructional materials and require two week face-to-face tutorial. However, Butale argued that requiring high numbers of tutorial meetings can be inconvenient. Its flexibility is limited as compared to those programs that include online components to make students more independent of the institution. Butale argued that technology mediated distance education is often described as flexible and portable therefore convenient for working adults. However, in most developing countries access to information and communication technology is limited. For the Indonesian context, where primary school teachers are spread throughout the archipelagic country, the use of information and communication technology such as Internet is hampered by the availability of appropriate infrastructure. Most teachers live in rural areas have difficulties in accessing the Internet compared to their counterparts in urban areas. Whenever access is available, they still find the obstacles due to the computer prices and the cost to subscribe to the Internet are very high for most primary school teachers in Indonesia. Considering the mentioned conditions, face-to-face tutorial is the best fit for the UT elementary school teacher training program.

Students participating in the tutorial program have an opportunity to get guidance from the tutors, to meet with their peers, and to discuss problems found in their independent study. Participation in the tutorial program also increase students' opportunity to get a better final grade for the course since 50% of the final grade shall be determined by their marks on tutorial assignments. The other 50% of the grade is contributed by student score on the final exam of the

course (Universitas Terbuka, 2013). Universitas Terbuka regional centers have responsibility to implement the tutorial program including to recruit tutors.

The main objective of UT tutorial program is to improve students' performance reflected from their achievement on the final examination. A tutor has a key role in improving students' achievement. However, recruiting qualified tutors is a problematic task for most UT regional centers since the number of the students is very big. The minimum qualifications of the tutor is university lecturer holding a master degree. The availability of qualified tutor candidates has forced the UT regional centers to employ candidates with lower qualifications, such as high school teachers with a bachelor's degree. However, with their experience in teaching related courses, tutors would be able to help to improve students' performance in the course final exam.

This research examines the effect of face-to-face tutoring program on students' performance in the final course examination and to estimate the relationship of key tutor's characteristics with these outcomes. More specifically, the study analyzes the level of association between students' tutorial score and their results on the course final examination, and the relationship between tutors' level of previous education and tutor's professional affiliation with these results, and how the students and tutors interpret these phenomena.

### **Method**

Design of the study was mixed-method research employed both quantitative and qualitative data and approaches. Quantitative data consist of the students' tutorial assignment scores and final exam results. While the qualitative data entails the in-depth interview results with the sample of the students and tutors. The two types of data were synthesized in the analysis phase of the study.

Samples of the study were a cohort of students (elementary school teachers) who enrolled the elementary school teacher training program at one of UT regional centers located in Java. There were four sample courses representing Mathematics, Science, Social Science, and Indonesian. The quantitative data were the teacher trainees' test scores consists of the tutorial scores and raw numerical scores results on the semester final examinations. While the qualitative data were collected through telephone interviews. Eight tutors, twelve students, and regional administrator were selected to be interviewed. In drawing the samples, representativeness of the students (test scores and residential area) and tutors' characteristics (educational background and institutional affiliation) were considerations. Participating student in the interview was compensated Rp100 000 in the form of a mobile phone credit.

Correlation analysis were used to evaluate the relationship between students' score on tutorial assignment and their results on the final examination with  $\alpha=.05$  level. Partial correlations were also applied to analyze score on tutorial and results on final exam within groups of tutor characteristics in order to explore the possible effects of key tutor characteristics on students' performance. Two-tailed test was conducted to analyze the mean differences (Howell, 1995) between the groups of tutors hired among university lecturers and those recruited from secondary school teachers and also between those with the master's degrees and those with the baccalaureate. In order to reach better understanding of the underlying issues, the findings of quantitative data analysis were combined with the results on qualitative inquiry by interpreting the students' performance using the interview results.

## **Results**

### **Descriptive Statistics**

There were 725 students enrolled in the cohort. The numbers of students participating in the face-to-face tutorial in each sample course were 661 for Mathematics, 680 for Science, 668 for Social Science, and 668 for Indonesian. The average of students' participation in the tutorial program was above 90%. The means of tutorial scores are 81.87, 85.31, 84.72, 84.72, and 84.26; and the means of final exam score are 36.73, 35.69, 41.38, and 43.17 for Mathematics, Science, Social Science, and Indonesian respectively. The range of the tutorial score are 0 (minimum) and 100 (maximum), while the range of final exam score are between 10 (minimum) and 82 (maximum).

### **Correlation between Tutorial Score and Final Exam Score**

The correlation between teacher trainees' tutorial score and final examination score by course (the values of  $r$  - Pearson Correlation) are 0.052, 0.071, 0.085, and 0.049 respectively for Mathematics, Science, Social Science, and Indonesian. The only correlation that comes close -- at 0.05 levels of significance -- to meeting Cohen's Rule of Thumb for effect size is the one for Social Science tutorial participants. Cohen categorizes  $r$  values of  $\geq|0.1|$ ,  $\geq|0.3|$ , and  $\geq|0.5|$  respectively as "small," "medium," and "large" (Cohen, 1988). These results indicate that the relationship between tutorial results and students' achievement on the final examination is very small ( $r < 0.1$ ). The students' tutorial result is not a good predictor of the final examination grade.

Even though the correlation between tutorial scores and final exam results is very small and significant only in one course, in overall courses in all groups of tutor characteristics the correlation is significant with 0.01 levels of significance. Partial correlation analysis within tutors specific characteristics shows that tutors level of education as well as tutors professional affiliation correspond to this correlation. In the groups of students guided by tutors with Master's degree educational level, their tutorial score positively and significantly correlate to their final

exam results with 0.01 levels of significance. Positive and significant correlation also found in the groups of trainees instructed by tutors affiliated to university lecturer. While in the groups of trainees with tutors holding baccalaureate and those with tutors affiliated to high school teachers, the correlation between tutorial score and final exam results is not significant. To compare what tutor characteristics have a significant effect on trainees' final exam results, mean difference analysis between groups of tutor characteristics was conducted.

### **Final Exam Score Differences between Groups Defined by Tutor Characteristics**

Data analysis results on the final exam score differences between groups defined by tutor characteristics shows that students taught by tutors holding the master's degree do substantially and significantly better than those instructed by tutors holding only the baccalaureate. When the data is broken down by course, teacher educational level is associated with significant mean score differences in all courses *except* Mathematics. However, there is no significant difference between the groups defined by tutors' professional affiliations. Tutor professional affiliation seems only to have a marginally significant effect in two of the courses – Social Science and Indonesian language.

### **Discussion**

The face-to-face tutorial program for the elementary school teacher training program at UT is designed to help students to solve the problems found in their independent studies. The tutors come to the classroom is not for lecturing because the time assigned for the tutorial meeting is limited. Intensive reading and studying the learning materials independently besides participating in the tutorial program would influence the success of the students in the final exam. In open and distance learning (ODL), the tutor is a facilitator of learning rather than an instructor. The course materials or learning resources provide the content, while the tutors help

learners to develop the skills needed to comprehend, assimilate and apply the content. Tutors may suggest how learners approach and work with the content, and sometimes give clarification, but they rarely present content by directly instructing the learners (Commonwealth of Learning, 2003, p.31-32).

Data analysis results shows that the correlation between teacher trainees' tutorial score and final exam score is very small in four sample courses (Pearson correlation,  $r < 0.1$ ). There is a substantial difference between the average of students' tutorial scores and that of the final examination results. The interview results with the students on tutorial implementation show that most interviewees explain that in general, there was no complaint from the students. These findings were confirmed by the interview results with the tutors. The tutorial works pretty well. All facilities have been well prepared by the regional center. The regional center staffs monitor tutor preparation and implementation regularly.

The quality of the tutorial implementation may not strongly associate with the students results on the final exam. Lack of students' preparation for the final exam thought to be one of the main factors associated with students' low average score in the final exam. Students believe that by actively participating in the tutorial they could achieve the passing grade of the course due to significant contribution of the tutorial score to the final grade. Results of the interviews with the tutors validated the above argumentation. Insufficient preparation of the students was the main problem faced by the tutors in implementing the tutorial. Lack of enthusiasm and curiosity of the students coupled with the lack of reading habits were the common problems found by the tutors. There is anecdotal evidence that achieving a high grade was not as important for them since they have been teaching. Pursuing the diploma was their main goal, thus passing all courses is more important than getting a good grade. Full time teaching compounded by

family and community obligations often disrupt their reading time. They are forced to find strategies in order to be able to complete the program on time. The students studied more seriously on the course without tutoring because its final grade was 100% drawn from the final exam score. For the course provided with tutoring, they tend to not so intense reading the course materials for final exam preparation. Due to significant contribution of the tutoring score contribution to the final grade, the students feel confident to get the passing grade. The students who have double duties -- for example, both as a teacher and a housewife -- often have difficulty reading the course materials every day; but they make efforts. As one student said, "I am a housewife, but I manage the time if possible to read the book at least the night before the tutorial session, but for the courses without tutorial I have to dedicate more time to read the course materials since there is no tutorial score contribute to the course final grade".

The more fundamental explanation relating to the significant difference between the results of the tutorial test and final exam was submitted by some students such as different nature of tutorial assignment and final course exam grading systems, as well as to the weak reading abilities of many students. One student who got a high score on the final exam explained that the final exams are taken from the modules (printed course materials). Some tutors just didn't discuss that content in any depth, only on the surface. He added, if he had depended strictly on the tutorial program, his grades would not have been as good as what he got. He read and tried to learn the content of the course materials on his own. Another student saw a related failure of tutors. The tutors may have little idea about nature of the final exam. They should at least know the types of questions that will be asked on the final exam. On the other hand, other students referred to problems on the student side. The real problem is the weakness of students reading

habit. Final exam results depend more on the students' own competence and effort. If they are hardworking they will get better grades.

It is very important for the tutor to encourage the students to read the course materials in order the students could perform well in their final examination. In open and distance education, tutors have many roles and responsibilities such as academic advising, academic instruction and coaching, academic facilitation, academic assessment, and administrative record keeping and communication with administrative staff (The Commonwealth of Learning, 2003). In the UT context, the main roles of tutors are as an academic instructor and coach for academic assessment. As an academic instructor and coach, a tutor has responsibilities in responding to questions from learners, clarifying course materials when necessary, developing additional resources or tutorial materials, helping learners develop specific skills, providing remedial help, or advice on where to obtain it, providing information about additional resources for learners who want to pursue a particular interest in greater depth, and planning and guiding discussions among learners, whether face-to-face, or mediated through a conferencing technology (The Commonwealth of Learning, 2003, p. 29).

Besides trainees' individual traits, as discussed above, certain tutor's characteristics also contribute to the trainees' achievement in the final exam. Tutors with master's degree previous education have better impact on students' achievement in final exam than their counterparts with baccalaureate education. The students guided by master's degree tutors have better perceptions on their tutors; feel more confident that tutors have a positive contribution on students' motivation. The tutors with higher levels of education tend to have a broader knowledge, scientific insights, and experiences than their compatriots with lower educational levels. This conclusion is mainly applicable to language and science related courses. For the courses

associated with Social Science and Mathematics, tutors with higher level of education do not significantly correlate to student's achievement in final exam. In fact, the opposite finding was found in Mathematics. In Math, a group of students with baccalaureate educational tutors, especially those affiliated to university lecturer, tends to have significant means difference compare to those with master's degree tutors. Tutors with a baccalaureate background may be more patient in explaining and guiding students. Tutors in Math related courses usually have educational background that really fit with the course they teach. A tutor with unfit educational background may feel uncomfortable to be a tutor in these areas. This is a slight difference from other courses such as in behavioral sciences. However, overall, the mean difference on final exam scores between groups of students with master's degree tutors and those with baccalaureate is significant with 2.47 point difference and with significant level of 0.01. This result indicates that tutor's previous education has a positive impact on student achievement.

Results of the interviews with the trainees validated the findings of the quantitative analysis. When the students were asked about the effects of tutors' level of education on their achievement, a majority of the interviewees said that tutors with higher levels of education had greater impact. As one student put it that tutors with master's degrees perform better than those with baccalaureates. But in some courses, tutors with baccalaureate also perform very well. It really depends on the individual tutor. For example, the Statistics tutor, he teaches very well even though he is a baccalaureate teacher and he is very good in tutoring.

Regarding the effects of tutors' professional affiliation to teacher trainees, there was no significant difference of means on trainees final exam score between group of trainees with the tutors recruited from university lectures and that with tutors hired from school teachers specifically. Apparently, the trainees did not question their tutor's professional affiliation. The

most important thing for them is that tutors master the contents and have a good teaching method. The school teacher tutors may find no obstacles in tutoring the subjects due to their teaching experiences in the subject areas and familiarity with the elementary education especially for those as school supervisors. Highly selected tutors from school teachers may also contribute to this result. The tutors hired among school teachers were highly selected due to more prospective tutors available.

High school teachers recruited as tutors may have similar capabilities, teaching experience and master contents on elementary school teacher education as university lectures. The followings are the interpretation of the center administrator on the effect of tutors' professional affiliation. Tutors recruited from school teachers perform well because they master the content of the course and teach the related subject at schools. We usually hired the tutors from teachers for the courses that difficult to find the tutors among university lecturers such as tutors for Mathematics or Science. These subjects are very common in high schools. The teacher tutors also help us to fulfill the tutor positions in rural or remote areas where the university lecturers are not available. We have no problem with the teacher tutors. We carefully looked their CV and teaching experience before recruiting them. We also monitor and evaluate their performance. If they don't perform well we easily find the replacements.

### **Conclusion**

There was a positive correlation between the students tutoring results and the final examination scores but the degree of correlation was very small, with a Pearson  $r$  value  $<0.01$ . Even though the correlation is significant, the effectiveness of the tutorial to improve students' performance on the final exam is low. Less intense preparation for the final exam and lack of students' reading habit were suspected to be the main factor that contribute to the low

performance of students on the final exam. For the final exam preparation, in the tutorial session a tutor should provide guidance how to read effectively and should motivate students to read the course materials regularly.

Certain tutor characteristics also contribute to trainees' accomplishment on the final exam. Tutors holding a master's degree tend to contribute better results on trainees final exams compared to their counterparts with a lower level of education. However, the relationship between tutors' professional affiliation and trainees' achievement on final exam was not substantial. The mean difference of trainees' final exam results between groups of trainees with university affiliated tutors and those with secondary school affiliation was not significant. Tutors hired among school teachers have similar performance with those recruited amongst university lecturers.

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