THE FLORIDA STATE UNIVERSITY

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EVALUATING THE EFFECT OF FACE-TO-FACE TUTORING ON IN-SERVICE TEACHER TRAINEE PERFORMANCE AT THE INDONESIA OPEN UNIVERSITY

By

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I dedicated this to my parents:

Pak Rai and Ibu Rai

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TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

The Indonesia Open University (Universitas Terbuka or UT) face-to-face tutoring program for in-service teacher training is intended to improve teacher trainees' course completion rates. The university has attempted to intensify trainees' motivation to participate in the tutoring by increasing the contribution of tutorial performance to the final course grade. Very few studies have been conducted to find evidence that the tutoring program is positively associated with the learning outcomes of the trainees. The purpose of the study is to evaluate the fidelity and quality of the implementation of the tutoring program, assessing the effect of success in the program on students' results in the final course examination, and estimating the relationship of key tutor characteristics with these outcomes.

This study employed both quantitative and qualitative approaches. Information on program implementation was largely observational or interview-based and data on program results consists of the teacher trainees' test scores on tutorial and final examination. Finally, overall joint analysis of these bodies of data is undertaken on the basis of the results of telephone interviews with the key stakeholders and their interpretation of the quantitative data. The study was conducted at the UT regional center of Serang involving teacher trainees, tutors, and the center administrators as interviewees and four sample courses related to Social Sciences, Mathematics, Sciences and Indonesian.

Findings of the study suggested that the center has implemented the tutoring program with relatively high fidelity. However, these results were not strongly associated with trainee achievement on the final exams, in other words the quality of the tutoring program was low. There is a substantial difference between the average of trainees' tutorial scores and that of the final examination results. The correlation between the trainees' tutorial results and their 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 trainees' tutorial scores and final exam results is significant in the group of trainees 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 trainees 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.

The local key stake holders interpreted that different characteristics and scoring systems between both assessments may contribute to the weak correlation between tutorial score and final exam results. Tutors and the Center Administrator added that lack of trainees' preparation and poor reading habits may be factors correlated to the trainees' low average on the final exam. There is an indication that the heavy weighting of the tutorial's as part of the final grade contributes to the trainees less intensive preparation for the final exam. Interpreting the impact of tutors' specific characteristics on trainees' final exam achievement, almost all interviewees agreed that tutors with a Master's degree have better knowledge and teaching experience. The trainees were not concerned with their tutor's professional affiliation as long as the tutors had mastery of the course contents, good teaching methods, and could motivate trainees to study. The center administrator expressed that no significant impact of tutors hired from the university and those recruited amongst secondary school teachers was a result of strict recruitment and continuous tutor performance monitoring and evaluation.

Based on the findings, I recommend that UT revisit the proportional contribution of the tutorial score to the trainee's final grade. I also recommended that in hiring new tutors, candidate with a Master's degree educational level or higher should be given priority. Recruiting tutors amongst secondary school teachers should continue as long as continuous and rigorous selection and performance evaluations are conducted.

ABSTRACT

The Indonesia Open University (Universitas Terbuka or UT) face-to-face tutoring program for in-service teacher training is intended to improve teacher trainees' course completion rates. The university has attempted to intensify trainees' motivation to participate in the tutoring by increasing the contribution of tutorial performance to the final course grade. Very few studies have been conducted to find evidence that the tutoring program is positively associated with the learning outcomes of the trainees. The purpose of the study is to evaluate the fidelity and quality of the implementation of the tutoring program, assessing the effect of success in the program on students' results in the final course examination, and estimating the relationship of key tutor characteristics with these outcomes.

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CHAPTER 1

INTRODUCTION

Rationale

Teachers appear the world over to be one of the main contributors to, and one of the main determinants of, the quality of education (Bruns, Filmer & Patrinos, 2011). Improving teacher quality is a major issue in Indonesia. A study conducted in 2008 by the World Bank on the policies and practices governing teacher employment and deployment in Indonesia found six major issues. Principal among them was the low quality of teachers. The enactment of the Law No. 20/2003 on the National Educational System and the Law No. 14/2005 on Teachers and Lecturers indicate the Indonesian government's concern for improving teacher quality. Both laws acknowledge the crucial role of teachers for successful reform of the educational system (Jalal et al., 2009). However, Indonesia is in the difficult situation or dilemma of needing both more and better qualified teachers. To understand the complexity of the issue and the measures that are required to resolve it, one needs to look back a little at history.

In the early independence period (1945-1960) teachers had high status and relatively high salaries. Though the official requirements for holding teaching positions were much lower than now, the high status and relatively good salary ensured that the best students competed for available positions. The new teachers were quite competent compared to their peers. As the country began to develop, however, new economic, social and political activities appeared on the labor market that paid more and granted higher status than teaching. As a consequence, the brightest students chose other occupations and the relative quality of the teaching corps began to drop.

At the same time, the education system continued expanding with government efforts to provide access to higher levels of education to increasing numbers of citizens, and this created a need for new teachers. For the reasons indicated, the new recruits came from a less qualified group of available graduates.

In an attempt to remedy this situation of deteriorating quality of education, the government legislated a series of measures designed to raise the level of previous schooling required of new teachers and to upgrade the qualifications of those already in teaching positions. As a consequence, two contradictory forces began impinging on the qualification levels of practicing teachers. On the one hand, either they have or are now required to obtain higher levels of formal schooling as a requisite for occupying their positions, which means that the qualifications of the teaching body are increasing. On the other hand, due to the low social status and economic pay of teachers, candidates for positions are increasingly drawn from the least competent and gifted people with the required level of previous education. The result is that the quality of the teacher corps is not increasing in the way that is needed. The Distance Learning Bachelor's Degree Program for In-Service Teachers administered by Universitas Terbuka is one of the most prominent approaches now used in Indonesia to solve this problem and increase the quality of the teacher corps and of instruction in Indonesia's schools.

Universitas Terbuka (UT) or The Indonesia Open University is a state university and the only university in Indonesia offering all programs through distance learning mode. For most teacher trainees who have been accustomed to face-to-face instruction, participating in distance education program constitutes a real challenge. Taking the program through distance education and using printed material as the main medium of instruction requires the teacher trainees to study independently. However, since the students themselves are full-time working teachers,

they may be too exhausted to participate fully in the program and to follow it effectively. Anticipating this problem, UT has provided a classroom-based, face-to-face tutoring program eight times per semester for the courses that convey core competencies, require a practicum and/or are inherently difficult to master without guidance and oversight (Universitas Terbuka, 2005). In order to make it easier for the teacher trainees to participate in the tutoring program without compromising time needed for their classroom duties, the programs are conducted at the district level mostly on weekends or during school holidays. Universitas Terbuka Regional Centers in cooperation with District Education Offices are responsible for implementing the tutoring programs and hiring the tutors.

The tutoring program provides an opportunity for teacher trainees to get guidance from the tutors, meet with their peers and to discuss problems that they have experienced in their independent study. To increase teacher trainees' motivation for participating in the tutoring sessions, UT has stipulated that teacher trainee participation in the tutoring be graded and that 50% of a trainee's final grade for any given course shall be determined by their marks on tutorial assignments. The other 50% of the final grade is constituted by teacher trainee score on the final exam for the course (Universitas Terbuka, 2011).

The final exam for each course is conducted at the end of the semester during which the class was taken. It is administered in the universities or schools of the district capital and is compulsory for all students enrolled in the course. Regional centers are responsible for administering the final exam. The exam supervisors are hired from local university lecturers or school teachers. A tutor cannot be an exam supervisor.

The final exams themselves are developed centrally at the UT head office and then distributed to all examination locations under regional centers supervision. Students' final exam

answers are graded centrally except for certain courses that are tested using essay exams. Essay exams are graded regionally by qualified local universities lecturers appointed under the coordination of UT regional centers in conformity with standard guidelines provided by the UT head office. Only a few courses such as those on writing skills use essay examinations. Most final exams are in the form of objective short-answer or multiple-choice tests.

One objective of the tutoring program is to improve teacher trainees' learning achievement and, as a consequence, their performance on the final exam. A tutor has an important role in improving teacher trainee performance. However, due to the enormous number of the trainees, hiring qualified tutors is a problem. To guide regional centers in recruiting the tutors, UT has specified required tutor qualifications and educational background. At a minimum, tutors should be university lecturers possessing a master's degree. However, due to the limited number of qualified tutors, the regional centers are allowed to hire candidates with lower qualifications, such as high school teachers holding a bachelor's degree.

Statement of the Problem

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. While research conducted by Belawati (2005) suggests that online tutorial grades for non-teacher students of the Indonesia Open University (UT) are positively correlated with students' course completion rates and student achievement on final exams, there are no similar studies for the much larger and strategically critical in-service teacher training program.

Universitas Terbuka has made major efforts to improve teacher trainees' course completion rates by creating the face-to-face tutoring program; and the university has likewise attempted to intensify trainees' motivation to participate by increasing the contribution of tutorial performance to the final course grade. But what is the evidence that the tutoring program is in fact positively associated with the learning outcomes of teacher trainees? There is as yet little effective quality control of either the implementation or the results of the tutoring program for teacher in-service trainees. As a consequence, there is much uncertainty about how and how well the tutoring is actually planned and carried out; about what tutors really do; about what tutoring in general and the tutors' work in particular contribute to teacher achievement; and about how tutors make that contribution. This uncertainty is a genuine cause of concern because Indonesia is investing a great deal in the teacher in-service upgrade effort and counting on its success.

Purpose of the Study

The study is designed to begin evaluating the operations of the Universitas Terbuka face-to-face tutoring program for in-service teacher trainees and its contribution to their academic success and certification. Accomplishing that task will entail evaluating the fidelity and quality of tutoring program implementation, assessing the effect of success in the program on students' results in the final course examination, and estimating the relationship of key tutor characteristics with these outcomes. Fidelity refers to the degree to which the program implemented in the field actually corresponds to the methodology or model prescribed. Whereas quality refers to the effectiveness of the program and the degree to which it does accomplish its objectives and enables participants to achieve the prescribed outcomes.

Research Questions

The setting of the study is face-to-face tutoring for in-service teacher trainees in the distance education program. The research questions principally concern the implementation of the program, the association of tutorial results with trainees' achievement in the final examination, the relation of selected tutor characteristics with those outcomes, and the way in which key stakeholders view the conduct and effects of tutoring. The study will seek to answer five research questions:

1. How well is the face-to-face tutoring for Universitas Terbuka distance learning teacher trainees actually implemented in local sites – that is, to what degree does its conduct match its intended design and how do key stakeholders judge the quality of the services provided?
2. What is the level of association between students' tutorial grades and their results on the course final examination?
3. What appears to be the relationship between tutors' level of previous education and their professional affiliation with these results?
4. How does a sample of stakeholders in the local operation of the program interpret these results and the effects of the face-to-face tutoring?
5. What recommendations may be made on this basis for better design and implementation of the face-to-face tutoring and improved outcomes from it?

Significance of the Study

Tutoring programs for in-service teacher trainees are an essential part of the learning process, as mandated by UT in the university catalog. Participating in the tutoring does not, however, guarantee that a trainee will achieve better learning outcomes or final exam results at

the end of the semester. There are many related factors that contribute to the success of the tutoring program in improving teacher trainees' performance. It is important to perform an evaluation as a basis for recommendations that may lead to program improvement.

The results of this evaluation are important to provide evidence for institutional policy making and to make more informed recommendations for improvement. If the tutoring program has a positive association to teacher trainees' performance, the policymakers have evidence to promote the program and to encourage the teachers to improve their participation. If the inverse results are found (that tutoring might not contribute significantly to student achievement), the policy makers will be more informed and thus able to take greater efforts to improve the program. Furthermore, other researchers and institutions should conduct continuous evaluations, in order to find the problems in tutoring programs, and the solutions to solve them.

As part of the learning process in the teacher training program at UT, tutoring provides opportunities for students to expand and share their knowledge. Through active participation in the tutoring sessions, the trainees should be able – at least in theory – to improve their teaching performance. Loneliness is one of the major barriers hampering student persistence in distance learning. Long experience in a collaborative classroom learning environment contributes to students finding it difficult to study independently. Social interaction is another benefit that enhances student persistence in the program. Low completion rates are a common issue in distance education programs such those of UT. A quality tutoring program would have at least a good chance of improving students' completion rate. But to maintain the quality of the tutoring program, regular assessment and evaluation are a requisite.

UT has great expectations for the tutoring program as a means for enhancing student persistence and achievement. A large amount of money has been allocated for this program,

primarily to pay tutors' salaries. A competitive tutor's salary allows UT to hire highly qualified tutors from reputable local universities. However, hiring qualified tutors does necessarily equate to marked improvements in student performance. The tutorial management and implementation strategies adopted by regional centers may also have an impact on tutor performance, as may various characteristics of the tutors, but it is hard to know *a priori* which ones might be most beneficial. Evaluating the contributions of factors ranging from tutors' educational background and their professional affiliation to trainees' achievement is thus an activity of natural interest to policy-makers, insofar as it helps them, for example, to decide whether hiring tutors with lower educational qualifications or with background occupational experience limited to high school teachers is a worthwhile strategy to adopt. As mentioned earlier, certain regional offices find it difficult to hire tutors who meet all UT's criteria. A study that at least probes the influence of tutor characteristics on teacher trainees' achievement should prove useful in policy deliberations.

It is important for UT to maintain the tutoring program's quality for the in-service teacher trainees. By definition, the outcome of the program is of major concern to UT stakeholders such as the Ministry of Education and Culture, which grants scholarships for most primary teachers to pursue a Bachelor's degree. More qualified teachers could see better performance in the classroom and increased retention of students. As a consequence, the results of this evaluation should contribute both to enhancing the quality of the in-service teacher training program and to informing future research on the subject.

Limitations of the Study

The circumstances under which the research study had to be conducted created certain limitations that should be carefully enumerated:

1. The variables involved in the conduct and effects of the tutoring program cannot be easily identified and measured. Many factors contribute to its success and to student achievement. This study will naturally focus on a few variables that seem particularly significant and are at the same time relatively easily observed and measured.
2. The sample of the study is limited to four courses taken by the students in one cohort. The locus chosen for the study is also restricted to one single regional center. These factors naturally limit the representativeness of the study's findings.
3. The correlation model used to analyze the quantitative data of the study cannot establish certainty about cause and effect relationships, though it can suggest possible influences.
4. No attempt is made in this study to evaluate the particular curricular content of the tutoring program or the validity and relevance of the material covered in the final exam.

CHAPTER 2

LITERATURE REVIEW

Chapter 2 is devoted both to a review of bodies of literature that are of importance to the conduct of the study and to an overview of the intervention model of the UT Distance Learning face-to-face tutorial for teachers. The three bodies of literature covered in the first part of the chapter include (a) conceptual material on distance learning for teacher education; (b) analyses of the efficacy of face-to-face tutoring in teacher distance learning; and (c) principles of adult learning that underlie the related pedagogical practice.

Distance Learning for Teacher Education

The Commonwealth of Learning (2003) confirms that open and distance learning (ODL) allows learners to study when and where suits them best. They continue learning while fulfilling commitments to work, family or community. Those living in remote areas or with limited transport can study courses that would otherwise be inaccessible to them (p.14). One of the main reasons for delivering training and education via ODL is to make it accessible to people who cannot attend regular classes due to social, structural or personal situations. These might include a lack of places in educational institutions, distance from educational institutions, absence of specific programs, family commitments, the need to continue earning while learning, or travel costs (The Commonwealth of Learning, 2003, p.17).

Definition and Usage

Distance learning refers to situations where learners are physically separated from the educational provider, communicating in writing (using letter mail, email, fax, or computer conferencing); verbally (by telephone, audio conferencing, video conferencing); or in face-to-face tutorial sessions (The Commonwealth of Learning, 2003, p.13).

The term ‘open and distance learning’ is used as an umbrella term to cover educational approaches of this kind that reach teachers in their schools, provide learning resources for them, or enable them to qualify without attending college in person, or open up new opportunities for keeping up to date no matter where or when they want to study. Open and distance learning often makes use of several different media sources. Students may learn through print, broadcasts, the internet and through occasional meetings with tutors and with other students (UNESCO, 2001, p.11).

There is increasing use of open and distance learning in developing and developed countries. Distance education has been used in teacher training for a long time in many countries to provide a route to initial qualifications for considerable number of teachers, both new participants to teaching and experienced unqualified teachers (UNESCO, 2001), and continuing professional development (Latchem & Robinson, 2007), with relatively lower cost compared to that of conventional program (Perraton & Potashnik, 1997).

The cost is not the only consideration for many governments in the developing world in determining distance learning for their teachers’ training program. When using distance education for in-service teachers, the teachers do not need to leave their teaching activities. The skills gained from the program can immediately be implemented in the classroom.

Utility in the Indonesian Context

In the Indonesian context, besides the above mentioned advantages, distance education provides similar opportunity for all teachers to improve their qualification since most of the teachers, especially the elementary school teachers, serve in rural and remote areas. Distance education is the only hope for them to improve their qualifications due to their limited access to conventional universities compare to their counterparts in the urban areas. Difficulties in

attending campus based programs for in-service teachers and the limited capacity of conventional universities, make distance education useful for teachers in rural and remote areas and is also beneficial for their counterparts in urban areas. Increasingly demand for teacher training at a distance is strengthened by the reality that a number of teachers need to improve their qualifications and the government of Indonesia has determined the time for the teachers to qualify for certification.

The establishment of the open universities 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, including Indonesia (Perraton, 2000). In Indonesia, the use of open and distance education for teacher training began in 1989. The government of Indonesia raised the level of the basic qualification for junior high school teachers to that of a Diploma II, requiring two years of post-secondary school training. Indonesia gave the newly established Universitas Terbuka the job of raising the quality of the teaching force and meeting the new demands for teachers for junior secondary education.

In line with the enactment of the Teacher and Lecturer Law No. 14 in 2005 requiring a Bachelor's degree or four year university diploma for all teachers by 2015, the Government of Indonesia re-assigned UT to carry-out teacher education through distance education, especially for the elementary and kindergarten teachers. This is not apart from the success of the UT to improve teacher quality through the D-II program. A study conducted in 2001/02 showed improvement in teacher performance after graduating from UT. Data were collected through classroom observation in six provinces, using the Teacher Performance Assessment Instrument, a questionnaire and an interview involving 344 elementary school teachers who graduated from

the DII-PGSD Program. The study reported that the mean score of the teachers' performance was 3.7 (on a scale of 1 to 5), or 74 % of the ideal performance. It was also reported that the teachers had the capacity to handle instructional problems in their classrooms (Wardani et al., 2002 cited in Belawati & Wardani, 2010).

Similar study in 2008 but involving 200 teachers that graduated from the S1-PGSD, the D-II Program for Elementary Physical Education, and the D-II Program for Kindergarten Teacher Education also reported positive impacts of the teacher training program through distance education to teacher performance. Data were collected through classroom observation, a questionnaire and an interview with the stakeholders in six provinces. The study found that the mean score of teachers' performance was 4.16 (83.2%) for graduates of the S1-PGSD and 4.32 (86.4%) for graduates of the DII Program for Kindergarten Teacher Education. Interview results with stakeholders indicated that the performance of teachers graduating from Universitas Terbuka was comparable with that of teachers graduated from face-to-face teacher education institutions, with the former showing even more independence, more creativity and a greater hard-working ethos (Universitas Terbuka, 2008 cited in Belawati & Wardani, 2010).

Sandra et al. (2011) and Sukmayadi et al. (2011) reported an existing gap between the concepts and the actual facts of tutorial implementation. Both groups of researchers conducted similar studies in different settings on the tutorial conducted at UT involving two supporting courses for classroom action research. Both studies intended to evaluate the challenges faced by tutors in helping student teachers to prepare an action research plan and the obstacles encountered by students in conducting the action research itself. While Sandra et al. (2011) performed their research in two urban tutorial centers, Sukmayadi et al. (2011) conducted their study in four study centers categorized as rural areas. Both groups of researchers collected the

data for their studies through classroom observation, survey, interviews, and focus group discussion involving tutors and student teachers in selected tutorial sites. Sandra et al. (2011) reported that the tutors seemed to focus on the concepts and theories rather than to provide student teachers the opportunities to practice actual classroom action research.

Both Sandra et al. (2011) and Sukmayadi et al. (2011) reported that a lack of actual examples of classroom action research found in the course textbooks may contribute to the difficulties faced by tutors as well as students in implementing the theory and concepts of classroom action research in real practice. The contents of the learning materials tended to be too theoretical. Sukmayadi et al. (2011) argued that the first course material was less effective in providing the guidance for students in preparing and conducting classroom action research. They added that the four- semester lag between the first course and the second one (the course requiring the students write the action research report) also contributed to students difficulties in this matter. Sandra et al. (2011) explained that there was a lag between the course developers' assumptions and the reality. For example student teachers seem to lack the skills to critically and systematically analyze problems found in their own classrooms, to write or to organize reflections on their activities at the level assumed in the course materials. Some tutors were seemingly unfamiliar and inexperienced with classroom action research thus they could not guide the student teachers in conducting classroom action research optimally. Sandra et al. (2011) further explained that the design, content, and staffing of action research tutorials should address the above issues.

Institutional Supports for Distance Education

Single-mode distance-open universities struggle with branding of their programs and graduates as "second class" by such professional associations as law, medicine, and engineering

(Eastmond, 2000, p. 3). Credibility is an important factor that determines the success or failure of a distance or open institution (Eastmond, 2000). It is important for distance education institutions to provide students support services in order to improve the quality of their programs and graduates.

Studies have shown that a number of specific factors related to persistence and achievement of individuals involved in distance education including media of instruction, locus of control, instructor contact, and certain demographic characteristics such as age, gender, income, and educational level (Whittington, 1995); design, delivery and support services used by the instructors (Hsu & Shine, 2005). Learner's control is not only concerned with independence (freedom of choice about the place, time, pace, and methods of the learning), but also with the learner's proficiency such as ability and willingness to learn independently, and availability of human and/or non-human support to guide and facilitate learning (Garrison, 1989 cited in Ozoglue, 2009). Garrison argued that when intellectual and emotional support and guidance are needed, control cannot be achieved by simply granting independence and freedom. True control is achieved only when a balance among independence, proficiency, and support is found (p.25).

Tinto and Pusser (2006) suggested that student attributes such as personality, drive and motivation are beyond immediate institutional control. Among the five conditions proposed by Tinto and Pusser (2006), institutional support (academic, social, and financial) is one condition that promotes student success. Tutoring, one kind of the academic support provided by distance education institutions enhances students' social and academic integration and students' learning. Tutoring provides the opportunity for students to study in groups and be actively involved in academic and social integration (Tinto & Pusser, 2006).

The importance of studying in groups for distance learners is more apparent when viewed from their previous learning experience. Most distance students are working adults and their involvement in distance education is relatively new. Although many distance students are cited as being independent learners, they derive value from collaborative learning experience (Dabbagh & Bannand-Ritland, 2005 cited in Simonson et al., 2009, p.165). Simonson et al. (2009) argued that the presence of other learners can benefit the learning experiences of all members of the class by providing social and information interactions. By collaborating, all students expand their knowledge, skills, and abilities to self-assess their own progress. Working together creates a richer learning experience for the individual participant (p. 165).

The use of printed materials as a single medium of instruction often causes feelings of isolation among distant learners. Face-to-face instruction facilitates the importance of seeing and being seen, and personal nature of the learning environment (Simonson et al., 2009). Face-to-face tutoring provides opportunities for interaction and communication between learners and instructors and among learners. Interaction and communication among students also promotes personal relations. Holmberg, a distance education theorist, argued that personal relations and empathy between learners and those supporting them are central to learning in distance education (Simonson et al., 2009).

Pera (2008) conducted a participatory action research study to analyze the impact of concurrent face-to-face support on students taking classes over the Internet. The purpose of his research was to evaluate the impact of face-to-face support on students taking online classes, and to make recommendations for the development of online instructional models that include concurrent face-to-face support. He found that face-to-face meetings provided personalized support and a bond of trust and cohesiveness among the participants began to develop. The

participants solved technical problems, analyzed relevant course content, positively modified their study habits, and paced themselves towards common goals. The most important finding of Pera's study was that the participants kept feelings of frustration and isolation at bay, the common feelings that experience by most of distance learners, because the face-to-face meeting gave students a sense of friendship and belonging. Pera (2008) suggested that the establishment of a similar concurrent setting that provides support for several online courses has the potential to become an important addition to distance education.

One study conducted at UT students demonstrates that tutoring has a positive correlation with student achievement. Belawati (2005) in her study on the impact of online tutorials on course completion rates and student achievement at UT found that student achievement increased as the result of student participation in online tutorials. She more over explained that there was a possibility that students who voluntarily participated in online tutorials were initially already different from those who did not participate. Students who voluntarily participated in online tutorials perhaps had higher motivation, higher intellectual skill or were more skillful in using the Internet (Belawati, 2005). However, the results of the study indicate positive impact of the tutoring program on UT student's course completion.

The Efficacy of Face-to-face Tutoring in Distance Education

Face-to-face tutoring in distance education for teacher training programs is not uncommon, especially when the instructional materials are print-based. The use of printed materials as the main medium of instruction requires teacher trainees to spend more time reading the materials in order to succeed in taking the program. 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'. She found that most of them came from circumstances where books were either non-existent or very rare. Tutoring session can motivate students to read and a tutor can provide advice on how to read effectively.

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. In his qualitative research, Butale (2008) involved ten female teachers. He found that female teachers, studying through distance education, face problems associated with requirements to be physically present at college campuses for face-to-face tutorials which are in conflict with their many responsibilities. The women experienced difficulty managing work, domestic responsibilities and distance learning. Additionally, distance learning made it difficult for them to participate in social activities that are a significant part of their culture. 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 limited computer skills and lack of

knowledge on Internet technologies. Ownership of computers and Internet facilities is another barrier. The computer prices and the cost to subscribe to the Internet are very high for most primary school teachers in Indonesia.

The difficulties in implementing on-line tutoring for distance learners in developing countries are not uncommon phenomena. Panga (2010), in his study using a sequential mixed method research design to collect and analyze data on adult students' perception of the traditional distance education programs and the option of a blended learning model in Sub-Saharan Africa, surveyed 1,200 distance learners and did in-depth interviews with 20 participants. He found that students from rural areas preferred print medium as the method of instructional delivery while urban students favored online learning. Findings of Panga's study could not be separated from the Internet access and students' computer literacy. Limited Internet access and insufficient knowledge on how to use Internet technologies, especially for the students living in rural areas, the traditional print-based form of correspondence study has remained the primary distance education delivery method in Africa (Panga, 2010).

Even though students from urban areas have better computer skill and Internet knowledge, and wider Internet access, it doesn't mean that the use of e-learning platform for their study could be easily implemented. Panga (2010) reported that almost all students had no access to a computer and the Internet at home because of affordability. Average computer prices were too high, telephone charges for dial up Internet were equally overpriced and rates charged by Internet service providers were equally unreasonably high for many adult students. The majority of adult students raised doubts about the success of the university's move to implement e- learning under the prevailing adverse economic climate (p. 100-101). With limited access and

lack knowledge on how to use the Internet, traditional print-based has remained the primary distance education delivery method in Africa (Panga, 2010).

A successful model for the delivery of teacher education at a distance with face-to-face tutoring program was reported by Bof (2004). Bof conducted a survey on distance learning in-service teacher training program developed to upgrade 27,000 teachers working throughout Brazil. The program's aim is to deliver 3,200 hours of training, divided into four modules (semesters), each comprising 800 hours of individual and group activities (p.9). The course design includes a face-to-face session, individual activities outlined in a study guides, tutor evaluation of the teaching practice in the teacher-trainees' own schools following the course studies, tutorial meetings, bimonthly tests on all content areas, and activities to prepare for the bimonthly tests – i.e., activities organized by the Training Agencies for teacher-trainees prior to test-taking. Tutorial meetings, conducted every other Saturday, focus on guiding and monitoring the teacher-trainees' work in progress, and include support materials such as videos related to each of the Study Guide units, and a forum for discussion and dialog to clarify any problems or questions the teacher-trainees may have (p.9). Bof reported that the survey results show that after participation in the program, 98 percent of teacher trainees reported that they perceive they are more valued by their school and communities, and 99.3 percent agreed that they had grown considerably within their profession. Tutors and teacher-trainees also indicated that the program contributed to an increase in self-esteem, in that they feel more valued professionally, which in turn has elevated their overall participation in their schools and classrooms. As such, teacher-trainees indicated they felt more respected in their school and local community (Bof, 2004, p.9).

The Role of Tutors

Race (1994) uses the term “tutoring" to cover a number of things includes assessment, tutoring, and counseling. Among many functions proposed by Race (1994), assignments from tutors for distance learners can serve some important purposes; to help students to prepare for exams, to give students feedback and comments on their work, and to maintain and develop students’ motivation and commitment to their studies.

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).

Tutors have many roles and responsibilities in open and distance education. The Commonwealth of Learning (2003) lists the following roles and responsibilities for ODL tutors: academic advising, academic instruction and coaching, academic facilitation, academic assessment, and administrative record keeping and communication with administrative staff. 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 according to the Commonwealth of Learning (2003, p. 29), 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 (audio, video, computer).

As an academic assessor, a tutor has a role such as setting assignments for learner assessment, clarifying assignment tasks and options to learners, assessing, grading and providing feedback to learners on their assignments, setting examinations, marking examinations, maintaining supportive communication with learners, initiating contact with learners at the start of the course, maintaining regular contact with learners for the duration of the course, and helping learners address issues that may impede their progress in the course (The Commonwealth of Learning, 2003, p. 29).

Separation between learners and instructor, make distance learners often feel lonely and lack of confidence. A tutor can help learners to feel they're not alone, build their confidence, and remind them that a tutor is there to help, not just to assess (Race, 1994). Most distance learners are working adults and have left school for years. They find it difficult to adapt to the distance learning system. Race (1994) suggested that a tutor can help learners by providing study skill advice and help them to start out on their studies in an organized, productive way.

Underlying Principles of Adult Learning

Jensen (1998) stated that according to Moore and Kearsely, most distance education students are adults between the ages of 25 and 50. In order to effectively design courses meant for adult students, it is necessary to understand how adults learn, and especially how their needs differ from those of children. Jensen moreover stated that most current theories of adult learning are based on the work of Malcolm Knowles, who introduced the term 'andragogy' to describe the art and science of helping adults to learn. Knowles theorized that adult learners have distinct

and unique characteristics. Sound instructional design in distance education will depend on a clear understanding of the effects of adult learning (p.1).

Based on the work of Malcolm Knowles, Billington (2000) investigated which factors in adult learning environments best facilitate adult growth and development. Billington found the following seven key factors in learning programs that stimulated adult development:

1. An environment where students feel safe and supported, where individual needs and uniqueness are honored, where abilities and life achievements are acknowledged and respected.
2. An environment that fosters intellectual freedom and encourages experimentation and creativity.
3. An environment where faculty treats adult students as peers--accepted and respected as intelligent experienced adults whose opinions are listened to, honored, appreciated. Such faculty members often comment that they learn as much from their students as the students learn from them.
4. Self-directed learning, where students take responsibility for their own learning. They work with faculty to design individual learning programs which address what each person needs and wants to learn in order to function optimally in their profession.
5. Pacing or intellectual challenge. Optimal pacing is challenging people just beyond their present level of ability. If challenged too far beyond, people give up. If challenged too little, they become bored and learn little. Those adults who reported experiencing high levels of intellectual stimulation--to the point of feeling discomfort--grew more.

6. Active involvement in learning, as opposed to passively listening to lectures. Where students and instructors interact and dialogue, where students try out new ideas in the workplace, where exercises and experiences are used to bolster facts and theory, adults grow more.
7. Regular feedback mechanisms for students to tell faculty what works best for them and what they want and need to learn--and faculty who hear and make changes based on student input (p. 1).

Teacher trainees are adult and have different and distinctive characteristics. Billington's seven key factors in adult learning environment is suitable for investigating face-to-face tutoring for teacher training program through distance education at Universitas Terbuka.

The face-to-face tutoring program is one of the institutional support services provided by UT to improve the quality of in-service teacher training program graduates. Even though the principle of distance education is the concept of separation between instructor and learners, many advocate the need of face-to-face instruction (Simonson, Smaldino, Albright, & Zvacek, 2009). Race (1994) argued that for distance learners, the open learning program is not going to be the only thing in their lives. He stated that many distance learners may have full-time jobs, may have demanding family, and have limited time for studying. Tutors can help them by breaking down their studies into manageable chunks. Time management skill are essential for all kinds of open learners – and it's usually open learning tutors that are first to find out when learners lack these (Race, 1994, p. 157).

In relation to the principle of distance education and to the independence of distance learners, a question that often emerges is "Whether open learners need tutoring?" To answer that question, Race (1994) stated as follows:

> If learning materials were perfect, and if learners' learning skill were highly developed, there might be no need for tutoring. Even with imperfect learning materials, many learners soldier on and succeed without the help of a tutor. He more over argued that many open learners have no choice – there just isn't a tutor any way. But most open learners would like some supports. Even with the best of open learning materials, a good tutor can make all the difference to the learners' voyage. At the same time, it must be admitted that a poor tutor can do untold harm to learners' self-esteem and motivation. The essence of good tutoring lies in being responsive to learners' needs. A good starting is to think about the learners themselves (p. 156).

Overview of the Program

I turn now to an analytic presentation of the nature of the "intervention model" of the UT tutoring program for teacher trainees. Most institutionally-sponsored education programs are designed to achieve particular individual and group learning goals and therefore propose some variety of carefully elaborated strategy as a means of achieving their objectives. As a consequence, a first concern in any evaluation is to establish to what degree the program was in fact carried out as proposed and what slippages or variance there may have been between design and execution. Assessing fidelity of implementation requires, however, that one first articulate and describe the intervention strategy or model itself. The present section is devoted to that task.

Simpson (2003) in her study of pre-service teacher training in 21 distance education programs found that the programs examined in the study were far from homogenous. Each program studied represented in some sense a unique response to a unique set of circumstances (p.182). To optimize learning achievement, she concluded that distance education programs must adapt to participants' social and learning behaviors. In the Indonesian cultural context, according

to Dunbar (1991), reading is not a popular means of gaining knowledge. He observes that most students prefer direct, oral, interpersonal communication, ideally in a sociable atmosphere, as a medium for gaining new knowledge. The strong background of oral tradition in the country may be the main reason for distance learners' difficulty in adapting to strategies of distance education that emphasize printed text as their principal medium. The face-to-face tutoring program is in effect an effort to mitigate the difficulties encountered by teacher trainees in distance learning. A more detailed sketch of the tutoring program for in-service teacher training at Universitas Terbuka follows.

UT offers all courses for the in-service teacher training program every semester. There are 48 courses for the entire program. UT divides the courses into a package of ten semesters (package 1 to 10). Every package consists of four to five three-credit courses. Every student can take only one package in one semester. The number of packages the trainees should take in their program depends on their educational background when they enrolled the program. The trainees with senior secondary teacher training or high school diploma background should take all 10 course packages (145 credit hours), from package 1 to 10 sequentially. Students holding two-year university degrees (D-II) in primary education should take packages 6 to 10 sequentially.

In order to avoid complications in managing the tutoring program, teacher trainees should register for the course package in a group coordinated by sub-district department of education offices. Each group consists of 20 - 30 teachers from the schools located in the same sub-district. Once a group of trainees registered for the course package, the regional center assigns tutors, the schedules and the sites for the tutoring. Each group will have one tutor per course. To participate in the tutoring, the trainees should come to the assigned tutorial site. To make it easier for the trainees to participate, the regional center schedule the tutorial sessions in the district or one of

the sub-district capitals to take place on Saturdays and Sundays or during school holidays. The regional center conducts eight tutoring sessions per semester for each group and the sessions all last two hours. After completing any given tutoring program, the trainees take the final exam for the course in question in a designated location (usually on local university campuses or at schools in district capitals). If the trainees fail to complete one or more courses in a given semester, they can re-take the final exam in one of the following semesters. UT does not provide tutoring for the incomplete courses; however, the scores on tutorial assignments that the trainees completed during previous semesters are still used in calculating the final grade for the course.

The face-to-face tutoring program is designed specifically to help students (teacher trainees) master the course competencies. Tutoring is a trigger and driver of student learning. From this tutoring, it is expected that students will have the willingness and ability to learn, observe, think, behave and learn the subjects with good substance. The main objectives of the tutoring program are as follows:

1. Providing students the opportunity to interact directly with the tutor and with other students in reviewing the substance of the course.
2. Helping students learn to solve various problems through additional information, discussion, practice various skills, and other activities.
3. Strengthening student mastery of the substance of teaching materials.
4. Reducing the sense of loneliness or isolation in the study.
5. Increasing student motivation and self-confidence (Universitas Terbuka, 2005).

Different from conventional face-to-face classroom program, face-to-face tutoring limits the number of courses, content, and frequency and time of meeting. Universitas Terbuka does

not provide face-to-face tutoring for all courses offered for the teacher training program. Only 29 out of 48 courses provide tutoring, based on the following criteria.

1. Courses that support the program core competency.
2. Courses that requiring practice and/or practicum.
3. Courses that have a high degree of complexity and difficulty (Universitas Terbuka, 2005).

For other courses which do not provide tutoring, the trainees can study individually or with their friends in their assigned group.

Materials covered in the tutoring activities in general are as follows:

1. Learning orientation (at the first meeting), which informs about the course objectives, plans and tasks, tips, and discuss the ways to overcome problems in learning, and other relevant information.
2. The problems found in student learning materials (modules).
3. Essential concept of the courses being studied by the trainees.
4. Issues found in running everyday tasks at schools.

With the limited amount of tutoring and time, a tutor cannot deliver all course contents. Not all things can be discussed in the tutoring program. The tutoring sessions only discuss the important learning substances, strategic of learning, and the contents not easily learned and understood by the trainees (Universitas Terbuka, 2005).

The frequency of the meeting is eight times per semester, 120 minutes for each meeting. The first meeting begins with an orientation of tutoring that explains the purpose of tutoring, course competency, schedules and tutoring scenario, the assignments that must be prepared and conducted, and assessment systems. At the end of each meeting, the tutor provides the

assignments and informed students the textbook chapters should be read and prepared for the next meeting (Universitas Terbuka, 2005).

There are three tutorial assignments for each course in the form of essay or practice. Students do the essay assignments in the classroom individually, 30 to 60 minutes. For the practical assignments, students can do in the classroom or outside the classroom, depending on the characteristics of the assignments and the time needed. The following diagram shows the pattern of tutoring program and distribution of the assignments.

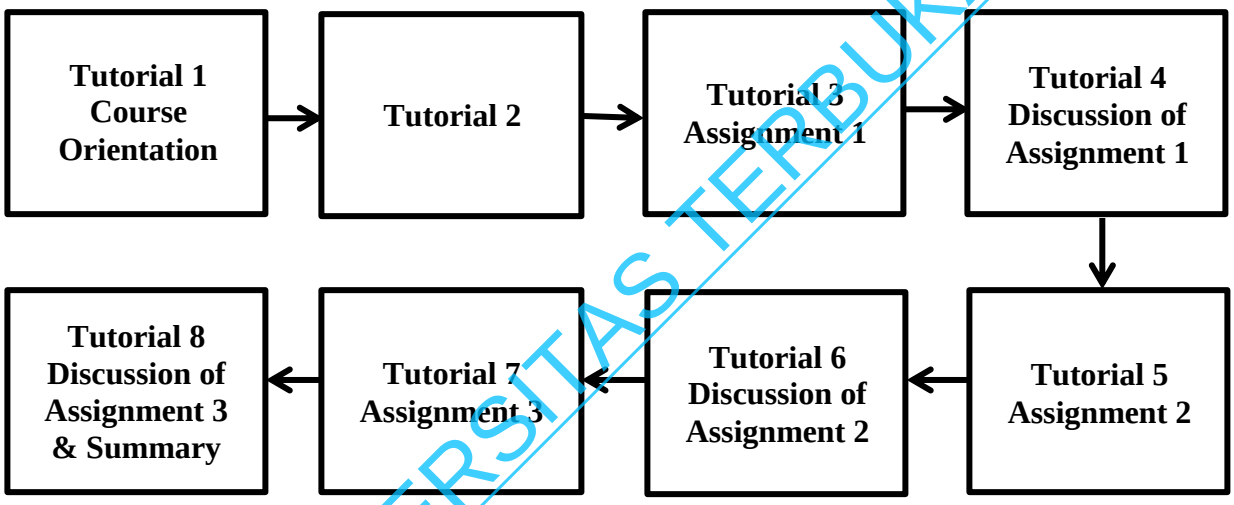

Figure 2.1: Pattern of the tutoring program
Source: Universitas Terbuka (2005)

The score achieved from tutoring has a significant contribution to student's final grade of the course (50% of the final grade). The other 50% of the final grade comes from trainee's final examination score. Tutorial scores are derived from 80% tutorial assignments and 20% student's participation. Tutors design and assess student assignments and report the trainees' tutorial scores to regional center. Significant contribution of tutorial score to trainees' final grade is expected to increase student motivation and enthusiasm for learning and improve credibility of tutors.

UT implements a tutoring program in each district capital and other places as needed. Since the students are full time working teachers, UT conducts tutoring activities mostly on the weekend or during the school holidays. Regional centers have responsibility in implementing the tutoring programs includes hiring and training the tutors, deciding tutorial sites, supervising and evaluating the program, collecting tutorial scores from the tutors, and reporting tutorial score and implementation of the program to UT head office. The UT head office combines a trainee's tutorial score with the final exam score to become a final grade and dispatches the final grades to trainees through their own regional center. Students who have access to the Internet can also obtain their final grades online.

UT Intervention Model

Before entering into the detail of the research methodology, it is critical to establish a reasonable picture of the UT face-to-face tutoring model itself. Any program evaluation, and one focused on questions of implementation in particular, must begin with a good sense of just how the program is designed to operate. A good part of implementation evaluation or research resides in a comparison between the methods and activities that were planned as means of accomplishing program goals on the one hand and those that were actually accomplished on the other. But that comparison cannot be established without a good portrait of the implementation model.

Table 2.1 below offers -- in a CIPOO-type matrix -- a rough summary of the main elements of the program model, which likewise become the principal foci of data collection. (I abbreviate the background "context" dimension from the scheme and only include consideration of "outcomes" for reference.) The next step would normally be to flesh out this scheme by adding detail on the nature and timing of the different activities required in each domain, the

parties responsible, the intermediate results expected or materials to be produced, etc. An immediate problem is posed, however, by the fact that the UT face-to-face tutoring "model" is nowhere written down or presented in these synoptic and specific terms, so one is obliged to reconstitute it at least approximately from a combination of personal experience, related documentation and chance interviews – and then to correct that approximate picture in the course of the data collection process itself, all the while remembering that program models are *never* fully explicated or carried out with 100% fidelity and those adjustments to unforeseen circumstances always happen during their implementation. That "reconstitution" is attempted in Tables 2.2 and 2.3. The first presents an overview of the entire model, whereas the second offers more detail on the particular activities and sub-objectives to be accomplished at each level.

Table 2.2 presents a first approximation of a more detailed intervention model, which can serve as a basis for the inquiry into the fidelity of implementation. As just mentioned, of course, "fidelity" is not the sole criterion of successful implementation. Project execution and administration are at the same time a *learning process*, and deviations from the prescribed methodology may very well represent important occasions when staff or stakeholders came to realize that what had been proposed would not work under real conditions, that new approaches therefore had to be adopted. However, it is precisely one of the duties and contributions of an evaluation study to "capture" these moments and document the learning that was – or should be – provided by them.

Table 2.1. Rough portrayal of the general intervention model of UT teacher trainee tutoring

CONTEXT			
Constituted by the history of Universitas Terbuka, the development of online learning and in-service teacher training in Indonesia and the evolution of teacher characteristics in the country – cast against relevant characteristics of the cultural and socio-economic environment in Indonesia.			
INPUT	PROCESS	OUTPUT	OUTCOME
1) Teacher trainee characteristics: a. Self-directed learning at home b. Frequency of attending tutorial 2) Tutor characteristics: 1) Educational background. 2) Professional affiliation 3) Curriculum design 4) Infrastructure 5) Instructional material	[Implementation] 1) Tutorial administration and scheduling 2) Tutorial organization 3) Actual instructional methods 4) Tutorial monitoring	[Learning achievement indicated by --] 1) Course tutorial score: Raw score on tutorial achieved from tutorial assignment and participation 2) Course final examination score: Raw score achieved from standardized final exam 3) Course final grade: The grade the students achieved in the course at the end of the semester	1) Teacher trainees' performance: How and to what degree the teacher trainees subsequently – a. apply the knowledge learned, b. change their performance in the classroom and c. achieve better results with their students.

Some of the terms and elements in the intervention model – and expectations regarding them – require a bit more explanation than can be furnished in the table and are therefore detailed below.

- ***Teacher trainee characteristics***: Teacher trainees' preparation before attending the tutoring would give an effect to the success of the program. UT expects the trainees to read and learn the provided learning materials at home independently before attending the tutoring program. UT also advises the trainees to attend tutoring program regularly. Their attendance to the program will correlate to the tutoring assignments accomplishment and to their tutorial score.
- ***Tutor characteristics***: UT requires that tutors be university or college lecturers holding a master's degree or have tutor certification. However, due to the limited number of tutor candidates holding a master's degree, some regional centers have in fact hired tutors with a Bachelor's degree background, some of whom are senior high school teachers. A certified tutor indicates that he or she has completed a series of training sessions provided by UT and has passed a certification examination.
- ***Tutorial administration and scheduling***: The regional center should administer the tutoring program eight times per semester for every course, two hours per meeting, in a site easily accessible to most of the trainees. Since the trainees cannot leave their teaching activities to attend the tutoring session, the regional center holds the tutorial times on Saturdays and Sundays or during the school holidays.
- ***Tutorial organization***: According to UT tutorial guidance, there are basic principles that need to be implemented in the tutoring. A tutor should organize the tutoring program based on the following principles.
    1. Interactions between tutor and tutees take place at the high meta-cognitive or cognitive level, the level of thinking that cultivates the thinking process itself, such as answering the question "why" and how it happened ".

2. Tutors carefully guide tutees in the overall learning process following the logical steps. When the tutor asked the tutees to analyze a case, the tutor should guide the tutee to the synthesis process.
3. Tutors must avoid giving the knowledge that is merely informative. Tutors should encourage the tutees to dig information from the tutors and to ask questions or problems faced in their learning process.
4. Tutors should avoid giving judgment or opinions on the quality of the tutees' comments or contributions.
5. Tutors must be able to develop discussion groups so that tutees can give feedbacks, comments, or criticize each other, and they make sure that every tutee can contribute to the group activities.
6. Tutors need to shy away from interaction that is limited to a particular tutee. Tutors should seek to involve all tutees in group activities so that they can discuss and argue with each other. When the tutee expresses the right opinion, the tutor should provide the tutee with the right emphasis and reinforcement.
7. Tutors need to create a variation in the learning activities so that the tutees do not feel bored.
8. Tutors need to monitor the quality of the tutees' learning progress by directing the study to the level of deep understanding.
9. None of the activities in the tutorial are solely the task of a tutor. Therefore, the tutor must continue to work with the tutees and always take responsibility for learning in groups. However, at any time the tutor shall be no interference if the learning process has gone well, and only intervene when necessary.

- ***Program monitoring***: The tutorial sites spread in the regency and district capitals far beyond the regional center office location. To ensure the tutoring is going well and implemented effectively in line with the established guidelines, regional centers should monitor the implementation of the program regularly.
- ***Course tutorial score***: The course tutorial score is a raw score the trainee achieved from the tutoring program, derived from tutorial assignments and tutorial participation. The tutor assigns three tutorial assignments that should be accomplished by the trainees. Tutorial score is derived from 80% tutorial assignments score and 20% from tutee's participation score. The tutorial score contributes 50% to trainee's course final grade. The tutors design and assess student assignments and participations and report student final tutorial score to the regional center.
- ***Course final examination score and course grade***: The course final examination score is a raw score the trainee achieved from the final exam. The final exam for all courses is administered at the end of the semester using a standardized test developed centrally at UT head office. Final exam score contribute 50% to trainee's course final grade. The course final grade is a grade the trainees achieved in the course at the end of the semester after participating in the tutoring and taking the final examination. UT determines the final grade based on the scores of tutorial assignments and final exam, weighting 50% each.

Table 2.2. Intervention model for program inputs.

DOM.	SUB-DOMAINE	ELEMENT	EXPECTATIONS AND SPECIFICATIONS			
			RESP	SRC	QUANTITY/REGULARITY	QUALITY
MATERIAL RESOURCES	Infrastructure	Classroom size	RC	CS	One ready for opening session	Adequate to accommodate 30 trainees without crowding
		Classroom Lighting	RC	CS	Ready for opening session	Provides good legibility for all work.
		Classroom Ventilation	RC	CS	Ready for opening session	Good air circulation, reasonable temperature.
		Classroom Cleanliness	RC	CS	Ready for opening session	Well-kept, swept and cleaned.
	Equipment	Standard furniture	RC	CS	Ready for opening session	Basic classroom furnishings (tables, desks, and blackboard) are of appropriate quantity and quality.
		Overhead projector	RC	CS	Ready for opening session	Available and in working order.
		Computer/LCD proj.	RC	CS	Ready for opening session	Available and in working order.
	Supplies	Paper/pens	Trn	CS	Sufficient for needs	Of acceptable quality.
CONCEPTUAL RESOURCES	Tutor's Manual		RC	PD	One per tutor delivered before/during tutor training	Well composed and printed.
	Curriculum		RC	PD	Specified in UT Catalog	Coherent and understandable.
	Tutorial Guidance Booklet		RC	PD	One per trainee available on site.	Well composed and printed.
	Textbooks		RC	PD	One textbook per trainee with CD available on site.	Well composed and printed.
HUMAN RESOURCES	Tutors	Ed Qualifications	RC	PD	One tutor per class	At least Bachelor degree, if possible Master's degree holder, in discipline they teach.
		Professional affiliation	RC	PD		Experience teaching the same course at least in secondary school, preferably at university
	Trainees	Occupation	RC	PD	Maximum of 30 students	In-service elementary school teacher
		Registration	RC	PD		Registered for UT teacher training program

Notes: DOM= Domain; RSP= Responsibility; SRC= Source; PD=Printed Documents; CS=Common Sense; Trn=Trainees

Table 2.3. Intervention model for program processes. It is continued on the next page.

DOM.	SUB-DOMAIN	EXPECTATIONS AND SPECIFICATIONS			
		RSP	SRC	QUALITY	QUANTITY/ REGULARITY
CLASS PREPARATION	Prepare Tutorial Concept Map	Tutor	PD	Provides a graphic representation of essential material to be covered in course	1 prepared before start of session.
	Prepare Tutorial Activity Plan	Tutor	PD	Details sequence of coverage to course substance across eight Units.	1 prepared before start of session.
	Prepare Tutorial Activity Units	Tutor	PD	Details actual subjects and activities for each week/Unit of the course. Includes assignments, worksheets and tests to be used.	8 written Units prepared before start of session.
CLASS CONDUCT	Tutorial orientation	Tutor	PD	Teacher orients students to content and operation of course.	In 1st week of session
	Presentation of essential course substance	Tutor	PD	Teacher gives a clear overview of purposes and essential substance of course.	In 1st week of session
	Organize and carry out group discussion	Tutor	PD	Teacher breaks students into discussion groups with clear instructions about process	Weekly
	Supervise reporting from groups and reinforce lessons	Tutor	PD	Teacher monitors group discussion, provides for student reporting and reinforces lessons learned while correcting errors made.	Weekly
	Present, correct and discuss tutorial assignments (home-work, worksheet or test)	Tutor	PD	Teacher presents and explains assignment on given week and discusses results on following week.	One given in weeks 3, 5 and 7; discussed in weeks 4, 6 and 8
	Present session summary	Tutor	PD	Teacher summarizes main lessons covered during the session	At the end of each session
	Monitor class conduct	RC	PD	Verify preparation and planning of tutorial and tutorial notes plus attendance of tutor	At least 3 visits by full-time professional staff per 8-week session

Table 2.3 ---continued

DOM.	SUB-DOMAIN	EXPECTATIONS AND SPECIFICATIONS			
		RSP	SRC	QUALITY	QUANTITY/ REGULARITY
TUTOR PEDAGOGY	Essential pedagogical principles to be practiced by tutors.	Tutor	PD/CS	Tutor treats adult students as peers--accepted and respected as intelligent experienced adults whose opinions are listened to, honored, and appreciated. Tutor should avoid giving judgment or opinions on the quality of the tutees' comments or contributions.	All sessions should be characterized by these practices.
		Tutor	PD/CS	Tutor's ability in creating learning environment that fosters intellectual freedom and encourages experimentation and creativity.	
		Tutor	PD/CS	The nature of knowledge presented by tutor is not merely informative	
		Tutor	PD/CS	Self-directed learning, where students take responsibility for their own learning and tutor's monitoring quality of the tutees' learning progress	
		Tutor	PD/CS	Tutor carefully guides tutees in the overall learning process using optimal pacing or intellectual challenge.	
		Tutor	PD/CS	Tutor's ability in involving all tutees in learning activities. Active involvement in learning, as opposed to passively listening to lectures.	
		Tutor	PD/CS	Tutor's ability in developing a discussion group and providing feedbacks	
CLASS WRAP-UP	Prepare tutorial notes	Tutor	PD	Tutors make notes about the implementation of tutorial sessions and important things that need follow-up	After each session
	Read & grade assignments	Tutor	PD	Tutor read and grade students' assignments in accordance with the established guidance.	After assignment and before following week
	Report assignment results to Regional Center	Tutor	PD	Tutor report students' assignments score to regional center at the end of the tutoring sessions	Before following week

Notes: DOM= Domain; RSP= Responsibility; SRC= Source; PD=Printed Documents; CS=Common Sense

CHAPTER 3

METHODOLOGY

Introduction

The main purpose of the proposed study is to evaluate the contribution of the face-to-face tutorial program to students' success in the distance education program of in-service teacher training offered by Universitas Terbuka. To achieve this objective, I examined the fidelity and quality of implementation of the tutoring program, assess the relationship between success in the program and students' results on the final course examination, estimate the relation of key tutor characteristics with these outcomes and seek the views and insights of key stakeholders concerning these phenomena. The rest of this third chapter of the dissertation will be devoted to research design and methodology.

Research Design

Acknowledgement of Limitations

The implementation and results of tutoring for in-service trainees of Universitas Terbuka are afflicted by a severe lack of data that we can only begin to address and could never entirely remedy in this particular study. Two factors explain that situation and should be kept in mind in reviewing the proposed methodology:

- The first stems from limitations on the quality and completeness of administratively-available data on the UT face-to-face tutoring programs for teacher trainees.
- The second factor is constituted by the numerous problems of validity that naturally afflict investigation of a domain as politically sensitive as the massive in-service teacher training effort of Universitas Terbuka – a domain where a great deal has been invested,

little monitoring or quality control has been carried out, rumors abound about severe shortfalls in implementation and stakeholders may therefore be hesitant to "call a spade a spade."

The design of the study is conceived to alleviate those difficulties to the degree possible and offer some understanding of the actual situation and effects of in-service teacher trainee tutoring by a mixed method approach that involves triangulating from a combination of limited direct observation and survey results, collection of secondary data on examination scores and tutor characteristics and telephone interviews with a sample of stakeholders.

As is evident in the portrayal of the implementation model of the tutoring program presented in Chapter 2, I apply Stufflebeam's classic "CIPOO" framework (Stufflebeam & Shrinkfield, 2007) – covering the Context, Inputs, Process, Output, and Outcomes of a program – to the study of UT's face-to-face tutorials for teacher trainees. This will necessarily be an instance of exploratory research, since relatively little has been written about the phenomenon. The evaluation focused on two closely related domains: the implementation of the intervention and its proximate results or "outputs," as well as initial insights about the relationship between them.

General Approach

Like most evaluations, this study employed both quantitative and qualitative data and approaches to reach its conclusions. Information on program implementation was largely observational or interview-based and therefore qualitative, though the "degree" of conformity of achieved activities with the program model can at times be expressed by quantitative indicators. Data on program results, however, consist of the test scores and grades of teacher trainees and so

are principally quantitative. Finally, overall joint analysis of these bodies of data is undertaken on the basis of the results of stakeholder interviews and their viewpoints regarding interpretation of the data.

The two types of data were synthesized in the analysis phase of the research, which were supported by the insights of program stakeholders obtained through in-depth interviewing. At the same time, the "context" and "outcome" dimensions of Stufflebeam's framework, while not the focus of this research, do enter into the picture as important elements. The culture of Indonesia and the history of UT and its teacher training programs constitute the stage on which the entire drama takes place; and anticipation of (or experience with) the impacts that improved teacher capacity can later have on Indonesian education remains a central preoccupation on everyone's – and particularly policymakers' – minds.

The balance of this chapter is devoted to discuss sequentially the underlying implementation model of UT face-to-face teacher trainee tutorials, sampling methods proposed, measures for instrumentation and data collection, the strategy for data analysis, and issues of data quality.

Sampling

Sampling concerns enter in at several levels of the proposed design: selection of sites, selection of tutoring sessions (and so the tutors in charge of them), selection of students whose scores would be examined and selection of interviewees. In an exploratory type of evaluation research like this one, we are concerned with reasonable representativeness across the various segments of the design, which provided a basis for triangulating of informative results.

Selection of Sites

The study took place at Universitas Terbuka Regional Center of Serang, Banten, Indonesia. Serang Regional Center (RC) is located 90 km west of Jakarta, the capital region of Indonesia. It is a relatively new regional center. The opening of Serang RC followed the establishment of the new Province of Banten. Previously, the territories of Serang RC were part of Bogor RC. There is one state university in Serang and some private universities. Serang RC administers four regencies (Serang, Pandeglang, Lebak, and Tangerang) and two cities (Cilegon and Tangerang) in the Province of Banten. The total number of registered students in Serang RC in the first semester of the academic year of 2012 was 15,089 representing 2.6% of the total number of UT students nationally (578,698 students). In each regional center, the number of students ranges between 2,000 and 39,000. Serang RC was categorized as a medium-size regional center because of the total enrollment at the center.

The diverse characteristics of Serang RC territories are the main reason for choosing Serang as a site for the study. Geographically, the territories of Serang RC consist of urban, rural and some remote areas. Even though Serang RC territories are adjacent to the Province of Jakarta Capital territories, there is a wide gap in infrastructure development between the regions, especially between the northern and southern parts of the territories. On one hand, the infrastructures of the northern part of the regions are relatively well developed. The existence of a toll road from Jakarta to Merak Harbor through Serang makes it easier to access these areas. On the other hand, the southern part is relatively less developed, making access more difficult.

Table 3.1: Tutorial sites in Serang Regional Center

NO.	REGENCY	TUTORIAL SITE
1.	Regency of Serang	1. Serang
		2. Pontang
		3. Ciruas
2.	Regency of Pandeglang	1. Saketi
		2. Mandalawangi
		3. Panimbang
		4. Cibaliung
		5. Labuan
		6. Pandeglang
3.	Regency of Lebak	1. Bayah
		2. Malingping
		3. Rangkas Bitung
		4. Cibadak
4.	Regency of Tangerang	1. Tangerang
		2. Balaraja
		3. Rajeg
		4. Pondok Aren
		5. Kresek
		6. Tiga Raksa
		7. Curug
		8. Serpong
5.	City of Tangerang	1. Kota Tangerang
6.	City of Cilegon	1. Kota Cilegon
Total number of tutorial sites		23

Elementary school teachers who serve and reside in the southern parts find it more difficult to reach the district capital due to limited transportation facilities. To provide better access for the teachers participating in the tutoring program, especially for those who reside in rural and remote areas, the regional center implements the program at the sub-district instead of district level. The regional center conducts tutoring at 23 sites. .

Selection of Tutoring Sessions and Tutors

For the purposes of quantitative data collection, I purposefully selected two tutorial sites in two different districts representing urban and rural sites. The urban tutorial site is located in the district capital and is relatively easily accessible from the regional center. The rural tutorial site is located in a sub-district capital quite far from the regional center and is relatively difficult to access. In each selected tutorial site, I chose two tutoring classes (sessions). The selected tutors for direct observation would therefore be those charged with teaching responsibilities in those courses.

Selection of Students

For the purpose of collecting quantitative data for program result assessment, I chose a student cohort at Serang Regional Center who enrolled the elementary school teacher training program in the academic year 2009.1 as a sample for the study. The previous education level of students (teacher trainees) who enrolled in the program was Diploma-II. As mentioned previously, trainees who register with that level of education start the program in semester 6 and end it in semester 10. At the time of data collection, these groups of students had completed the ten-semester program, participated in many tutoring sessions and worked with tutors having

various characteristics. We hoped that these students would be willing and able to provide frank and relatively comprehensive information without hesitation.

I chose four courses for the purposes of data collection: Social Science Education in Elementary School (PDGK4405/ a title later shortened to Social Science), Mathematics Education in Elementary School (PDGK4406/ shortened to Math), Natural Science Education in Elementary School (PDGK4503/ shortened to Science) and Indonesian Language Education in Elementary School (PDGK4504/ shortened to Indonesian). Each course is worth three credit hours and all are supporting courses for the comprehensive exam, compulsory exam for completing the Bachelor's degree. Representativeness of the samples is the main reason in selecting the sampled courses representing four different groups of courses: Social Sciences, Mathematics, Sciences, and Languages.

The trainees enrolled the program in 2009.One of them took Social Science and Math in semester 8 (registration period 2010.1), and Science and Indonesian in semester 9 (registration period 2010.2). There were 725 trainees enrolled at the registration period 2009.1. I included all trainees as the population of the study.

Selection of Interviewees

I used a purposive sampling strategy to select the interviewees in circumstances where random sampling was not possible, I selected twelve students (three interviewees in each of the four courses) representing low, average and high achievers on the semester final examination. Students who received a final exam score below 40 were classified as low achievers; those receiving final exam scores between 40 and 60 were considered mid-range achievers; and those

with scores above 60 ranked as high achievers. I also tried to balance gender representation in the student samples.

For tutor interviewing, I selected eight sampled tutors. The samples provided a balanced representativeness of tutors' professional affiliation (university lecturer and school teachers), their educational level (Master's and Bachelor's degree), tutorial sites (urban and rural areas), and gender. Four tutors affiliated as university lecturers and the other four affiliated as school teachers. Among four tutors in each professional affiliation, I chose two tutors with Master's degree and the other two with Bachelor's degree. Other key local stakeholder to be interviewed was the Regional Center Administrator (Head of the Center and the Coordinator of the Tutoring Program).

Data Collection and Instrumentation

Multiple methods and venues were involved in the data collection, but most had to meet one basic constraint: I could not be physically present in Indonesia for the process. I engaged a research assistant to carry out, under my direction, the actual on-site data collection. He is both a senior staff person and a tutor at Universitas Terbuka and a senior lecturer at a private university. A good portion of the interviewing and the collection of test data as well as design of the instruments were nonetheless performed at a distance by me.

Data on Program Implementation

Data were collected on the actual implementation of the tutorial program in the two sites and four courses indicated above by my Research Assistant. I prepared for him the protocol for observation of tutorial sessions. I asked him as well to try to "pick up" whatever insight he could into the actual (as opposed to the "ideal") course of implementation in the different classes at the

regional center through informal contacts and debriefed him by telephone interview and email communication upon completion of the task. The purpose of this data collection was to collect information on the fidelity of tutorial implementation in some aspects/elements that could be collected through an observation of classroom tutorial activities. Other information on program fidelity was collected through stakeholder interviews and document reviews.

Student Test Score Data

With the permission of the Rector of Universitas Terbuka, I could access student test score data for sample courses already mentioned from the existing database at Universitas Terbuka. Test score data consists of the students' (teacher trainees) tutorial scores (tutorial assignments and participation) and students' results on the semester final examinations (raw numerical scores). Both types of data and other related data such as student's demographic data and cellphone number were available at and obtained from the UT Head Office in Tangerang Selatan, Banten, Indonesia. The purpose of collecting these data was to analyze the correlation between students' tutorial scores and final exam results, and to investigate the difference between the final exam results of students taught by tutors with different characteristics. I obtained data on tutor characteristics from Serang Regional Center in Serang, Banten. Data on tutor characteristics consisted of the tutor's previous educational level, the tutor's professional affiliation, the sites where tutoring was conducted, the tutor's phone number and other related demographic data.

Interview Data

Another means of data collection was stakeholder interviews. I collected the interview data through telephone interviews with the selected key stakeholders. The first group of key

stakeholders to be interviewed was the teacher trainee samples. The purpose of these interviews was to collect information on trainees' preparation for tutoring, tutorial implementation, the impacts of tutoring, tutors effectiveness, preferred tutors characteristics, and trainees' interpretation of quantitative data analysis results. The second group of interviews was with the tutor samples. The intentions of these interviews was to gather information on tutors training and preparation, tutoring organization, the implementation of adult learning principles, students preparation and involvement, problems and deficiencies in tutorial implementation, tutors satisfaction and their interpretation on quantitative data analysis results. And the last group of interviewees was Regional Center Administrators. The reason for interviewing the center Administrators was to gain information on tutor recruitment and training, program monitoring and evaluation, tutor compensation, interpretation of quantitative data analysis results, and main problems in tutorial implementation. Data collected from the interviews were analyzed to verify tutorial implementation fidelity and quality and to elaborate quantitative data analysis results. All interviewees' identity is protected and the names included in this study are pseudonyms.

I developed themes for interviews about the following qualitative dimensions of program results: 1) Trainees preparation; 2) Trainees involvement; 3) Tutorial implementation; 4) Impact of tutoring; 5) Tutors effectiveness; 6) Tutor preparation; 7) Tutoring organization; 8) Respect of adult learning principles; 9) Tutor satisfaction; 10) Tutor recruitment and training; 11) Program monitoring and evaluation; and 12) Stake holders interpretation on quantitative results.

Data Analysis

The varied and complementary sorts of data indicated above were analyzed individually and then together in order to answer the research questions of the dissertation. Each instance of analysis is considered below before turning to the synthesis of the results.

Analysis of Implementation Data

Data on the degree and nature of program implementation take three forms: (a) completed checklists denoting the extent to which different aspects of the intervention model portrayed in Tables 2.1 and 2.2 of Chapter 2 were observed to have been realized for each class; (b) additional written descriptions from (and oral debriefing of) the Research Assistant regarding the conduct and "qualities" of the tutoring sessions observed; and (c) any related findings from the interview transcripts.

I analyzed the completed intervention model checklists first by scoring the degree of fidelity to or fulfillment of the prescribed model in the course in question on a three-point scale, varying from "1" for low; "2" for medium; and "3" for high fidelity. Then I used these numerical measures to help me determine which of the dimensions of the model were best and least enacted on the ground both within topics and across courses. Thereafter, I analyzed the free-form comments of the Research Assistant and any related findings from the interview transcripts to see what light they may throw on factors explaining the implementation record.

Analysis of Test Score Data

In order to evaluate the relationship between tutorial performance and teacher trainees' scores on the final examination, I conducted correlation analysis. I also conducted partial correlation of tutorial score and final exam scores within groups of tutor characteristics in order

to explore the possible effects of key tutor characteristics (previous education and professional affiliation) on trainees' outcomes. I used the most common correlation coefficient -- the Pearson product-moment correlation coefficient (r) -- to measure the degree or strength of the relationship (Howell, 1995).

In analyzing the difference of means between the groups defined by alternate tutor characteristics -- previous education (Bachelor's degree or Master's degree) and professional affiliation (university or high school) -- I used *t*-tests. I set alpha at $\alpha = .05$. I used a two-tailed test to calculate exam score difference of means between the groups of tutors with Master's degrees and those with the Bachelor's degree, and likewise between the groups of tutors recruited from university lecturers and those hired from among secondary school teachers. I chose to apply two-tailed *t*-test analysis because it is quite possible that the students of tutors from either group may turn out to have higher average final exam scores (Howell, 1995).

Analysis of Interview Data

In general, I analyzed the qualitative data collected from the interviews using methods recommended by Creswell & Plano (2007). The first step in analyzing the interview data was transcribing the interview results to text. Since the interviews were conducted in Indonesian language, I then translated the interview text into English. After completing the translation, I coded the data, assigned labels to codes and grouped codes into themes (categories). Finally I interrelated themes (or categories) or abstracted the categories to a smaller set of themes.

The results of the interviews, plus the debriefing of my Research Assistant after his visits to the field, offer in addition a critical means of "triangulating" on the accuracy of the implementation data and gaining a fuller appreciation of how and to what degree the face-to-face

tutoring sessions were in fact being carried out as intended and the reasons that may explain variance from the model.

Data Synthesis

In order to answer research questions on tutoring program implementation, I combined the results of quantitative data analysis with the findings on qualitative analysis using mixed-methods analysis approach. I compared, contrasted, validated, and confirmed the results of quantitative data and qualitative data analysis. I interpreted how the results of qualitative data analysis can explain the findings of the quantitative data analysis. Combining the two kinds of data analysis results should produce a better understanding of the underlying issues.

The quantitative data on tutoring results assessment were gained from the secondary data and the qualitative data collected from interviews. I validated the analysis results of quantitative data with the analysis results of qualitative data in order to confirm the findings.

Triangulation from and synthesis of the two sets of data were used to establish defensible hypotheses about implementation and effects of face-to-face teacher tutorials, their effects on teacher learning and course examination results and the impact of tutor characteristics on these outcomes. On that basis, I tried to answer the proposed research questions.

Data Quality

There are many variables that could be used in analyzing the success of the implementation of the face-to-face tutoring program for in-service teacher trainees involved in the distance education program of Universitas Terbuka. However, to collect the valid and reliable data for those variables is challenging. Teacher trainees' tutorial scores and course final examination results are already available in the Universitas

Terbuka database and can be accessed without difficulty provide official permission is obtained. Even though the evaluation methods used to gain both score are different, validity and reliability of both types of data can be assured.

Tutors themselves develop, evaluate and grade teacher trainees' tutorial assignments based on the guidelines provided by UT. Most tutors are credible in developing and grading tutorial assignments since they are university lecturers or secondary school teachers and have tutor certification from UT. On the other hand, the course final examination is a standardized test. Universitas Terbuka, under coordination of the Center for Examinations, takes care of the development, evaluation and grading of final exams using systematical methods. Therefore, the final exam grades should have an adequate level of validity and reliability.

The interview data are derived from sampled stakeholders who have participated in tutoring program for some years. Their experiences in attending face-to-face tutoring session in various courses and dealing with different characteristics of tutors should inform and provide trustworthy data for the study. The teacher trainees are adult students and served as teachers for many years. I believe them capable of providing clear, honest and valid information. Furthermore, the interviews will be conducted in Bahasa Indonesia, thus the interviewees can express their opinion without any language barriers.

The results of the study can contribute to improving the quality of the tutoring program and the trainee sample's involvement in the study will have no effect on their relation with UT. These issues will be clearly explained to participants prior to the interviews, allowing them to express their opinions honestly and without any anxiety.

Finally, as mentioned above, it is fully recognized that the problems of validity inherent in this kind of research and given the short timeframe and limited data collection possibilities constitute a real challenge to data quality, but one, I feel, that can be sufficiently mitigated by careful triangulation and good interviewing to ensure that the results of the proposed research move us ahead in our understanding of what is truly happening with UT face-to-face tutorials for in-service teacher trainees.

CHAPTER 4

RESULTS

Introduction

The study is intended to evaluate the conduct of the face-to-face tutoring program and its contribution to students' success in the distance education program for in-service teacher training (PENDAS) offered through Universitas Terbuka. More specifically, the study evaluates the fidelity and quality of the implementation of the tutoring program, assesses the effect of success in the program on students' results in the final course examination, and estimates the relation of key tutor characteristics with these outcomes. This chapter reports the results of tutoring observation, the correlation between teacher trainees' results on the tutoring and their grades on the course final examination, the effect of tutors' level of previous education and their professional affiliation on final examination results, and the interpretation of sample of stakeholders in the local operation of the program on these results and the effects of the face-to-face tutoring. The chapter is organized into three sections: the analysis results of tutoring implementation, quantitative results on teacher trainees test score analysis, and qualitative results on local key stake holders' interviews.

Tutorial Implementation

This section discusses the results of our observation of the implementation of the face-to-face teacher trainee tutorial and its degree of fidelity. As mentioned before, the observation results were based on the completed checklists for each class, additional written descriptions from and oral debriefing of the Research Assistant regarding the conduct and quality of the tutoring sessions observed, and any related findings from the interview transcripts. The observed

tutoring took place in facilities located on senior high school campuses. The classrooms used for the tutoring were adequately spacious and clean with good lighting and ventilation without air conditioning system. Classroom equipment such as tables, desks, board, office stationery, and head projector were available in adequate number and quality. There was no computer available. Based on the Research Assistant's explanation, in general the classroom conditions and equipment were relatively good so it was fit for use as a tutoring place.

The tutors started the sessions on time except for one tutor who came late due to difficulty in finding the assigned classroom. Few teacher trainees came late: in general they arrived on time for their classes. Trainee attendance was above 90 %--on average only two trainees out of thirty missed any given tutoring session. The tutoring session came to a close at the predetermined time. Results of observation and the fidelity of the tutoring process are presented in Table 4.1 and Table 4.2 immediately hereafter and then used as a basis for discussion and elaboration. I employed a three-point scale to code the Research Assistant's observations of the fidelity of different aspects of the implementation of the four sample courses. A code of "1" indicated low fidelity; "2" stood for medium fidelity; and "3" represented "high fidelity." Average ratings for the various aspects of implementation across all four courses ranged from 2 to 3 (or medium to high fidelity). There were no cases of low fidelity. The results are presented in Tables 4.1 and 4.2. However, not all elements of the tutorial implementation fidelity in both Tables could be rated through classroom observation. Some fidelity elements had to be assessed based on the results of the interviews with key stakeholders. There is little variance in fidelity of the tutorial implementation. The fidelity ranges from 2 to 3 (medium to high fidelity). This result indicates

Table 4.1. Fidelity of input implementation.

DOM.	SUB-DOMAIN	ELEMENT	OBSERVATION OF COMPLIANCE	
			RATING	COMMENTARY
MATERIAL RESOURCES	Infrastructure	Classroom size	2.75	Room size was adequate to accommodate 30 trainees without crowding
		Classroom Lighting	2.50	In general the room lighting was good except one class is a bit dark
		Classroom Ventilation	3.00	Air circulation in general was good
		Classroom Cleanliness	2.75	The classrooms used were clean enough
	Equipment	Standard furniture	2.50	In general the furniture (chair, desk and board) were available in good size and sufficient number.
		Overhead projector	2.50	Overhead projector were available in every class and work well
		Computer/LCD projector	N/A	No computer and LCD projector was available
	Supplies	Paper/pens	N/A	No paper and pencils were provided in the classrooms. Tutors and students brought their own supplies.
CONCEPTUAL RESOURCES	Tutor's Manual		3.00	All tutors have received tutor's manual prior to tutoring.
	Curriculum		3.00	UT has provided standardized curriculum used nationally. Tutors were well informed on teacher training curriculum.
	Trainees' Manual		3.00	All trainees received trainees' manual prior to tutoring.
	Textbooks		3.00	Trainees received the textbooks package in the beginning of every semester and tutors received the textbook prior to tutoring in accordance with the course they teach
HUMAN RESOURCES	Tutors	Educational Qualifications	2.50	Majority of tutors (67%) hold Master's degrees or higher and the rest (33%) hold Bachelor's degrees
		Professional affiliation	2.00	Similar number of tutors (50%) affiliated to school teachers and university lecturers
	Trainees	Occupation	3.00	All trainees were elementary school teachers, full time or part time teachers
		Registration	3.00	All trainees must registered on the semester if participating in the tutoring program

Notes: RATING: 1= low; 2= medium; 3= high fidelity; N/A= not available

Table 4.2. Fidelity of process implementation. It is continued on the next page.

DOM.	SUB-DOMAIN	OBSERVATION OF COMPLIANCE	
		RATING	COMMENTARY
CLASS PREPARATION	Prepare Tutorial Concept Map	2.50	Most tutors have provided concept maps in their related courses prior to tutoring
	Prepare Tutorial Activity Plan	3.00	All tutors have provided tutorial activity plan prior to tutoring, monitored and checked by regional center.
	Prepare Tutorial Activity Units	3.00	All tutors have provided tutorial activity units prior to tutoring, monitored and checked by regional center.
CLASS CONDUCT	Tutorial orientation	3.00	Tutors presented tutorial orientation in the first meeting of tutoring
	Presentation of essential course substance	3.00	Due limited time meeting not all material can be presented in the tutoring. Tutors presented the essential substance of the course
	Organize and carry out group discussion	2.75	To encourage trainees actively involved in the tutoring, most tutors assigned group discussion
	Supervise reporting from groups and reinforce lessons	2.75	In group discussion session, tutors asked every group to report the results. Tutors supervised and provided group reinforcement if needed.
	Present, correct and discuss tutorial assignments (home-work, worksheet or test)	3.00	All tutors assigned at least three compulsory assignments to trainees in the 3rd, 5th, and 7th meeting and corrected them. Most tutors discussed prior assignments in 4th, 6th, 8th tutorial meetings
	Present session summary	2.00	Not all tutors provided session summary, depends on the time left
	Monitor class conduct	3.00	The regional center intensively monitored the implementation of the tutoring and assigned all full time staff to involve in the monitoring activity. From three time requirement, the center monitored the tutoring four to five times in every site.

Table 4.2--- continued.

DOM.	SUB-DOMAIN	OBSERVATION OF COMPLIANCE	
		RATING	COMMENTARY
TUTOR PEDAGOGY	Essential pedagogical principles to be practiced by tutors.	3.00	Tutors realized that the students they teach are teachers. All tutors treated students as peers, listened and appreciated their opinion.
		2.50	Most tutors have the ability to create learning environment that fosters intellectual freedom and encourages experimentation and creativity
		2.50	Most tutors tried to present knowledge with deeper understanding and analysis and not merely presenting informative knowledge.
		2.50	The tutor has tried to be a facilitator--self-directed learning, where students take responsibility for their own learning and tutor's monitoring quality of the tutees' learning progress. But in the reality it is very difficult due lack of students readiness to study independently.
		2.75	Most tutors realized that the trainees are adult and working people. Most tutors tried to guides the trainees using optimal pacing or intellectual challenge in accordance with their conditions.
		2.75	Most tutors have tried to involve all trainees in learning activities by asking challenging questions, involving in discussions, and assigning individual or group works
		2.50	Almost all tutors has ability in developing a discussion group and providing feedbacks
CLASS WRAP-UP	Prepare tutorial notes	3.00	All tutors made tutorial session notes which outline the sessions and records important events and things monitored and checked by the regional center
	Read and grade assignments	3.00	All tutors read and grade the trainees' assignment. From three compulsory assignment and trainee participation contribution, the tutors decide the final grade of trainee tutorial score
	Report assignment results to Regional Center	2.50	The tutors should reports the trainees assignment results at the end of the tutoring session, but some tutors were late to make the report.

Notes: RATING: 1= low; 2= medium; 3= high fidelity

that the regional center implemented the tutoring program in a manner that closely matched the predetermined guidelines.

Additional Observer Comments

In general the students were actively involved in the process of tutoring. The tutors strove to motivate students to participate. In all classrooms observed except one, the tutor did not dominate but gave an opportunity to students to play an active role in their training. In one of the four classrooms, however, the tutor was more dominant. As a consequence, students were less active. Only a few students asked questions and the tutor did not give other opportunities for them to play active roles.

The tutors seemed to realize quite clearly the difference between tutoring and lecturing. To encourage students' participation, most regularly involved them in discussion sessions and guided them in their activities. Three of the four seemed to see themselves as facilitators more than lecturers.

The observer himself has a good understanding of the tutorial role and the challenges of session implementation since he has experience as a tutor at another regional center. He stated that the gap between the concept of the tutoring the tutors receive from the training and the implementation of the tutoring was not very wide. The implementation of the tutoring concept was quite good. Most tutors encouraged their trainees to study independently, while providing opportunities to ask questions. However, some students evidently had not reviewed the materials before attending the tutorial. Deficits in preparation are a challenge for the tutors. They have to find a strategy to encourage the students to study at home.

Results of Test Score Data Analysis

This section reports on analysis of the relationship between teacher trainees' tutorial scores and their final examination scores and on mean differences between groups defined by selected tutor characteristics.

Descriptive Statistics

As mentioned earlier, for the quantitative data for program result assessment, I chose a student cohort at Serang Regional Center who enrolled the UT Distance Education for In-service Teacher Training Program in the academic year (semester) 2009.1 as samples of the study. The students took Social Science and Math in the registration period 2010.1; and Science and Indonesian in the registration period 2010.2. Table 4.3 displays the number of trainees' enrollment, the number and percentage of tutorial participation, and the range, the mean, and the standard deviation of tutorial and final exam score.

Table 4.3. Descriptive data on trainees' enrollment, tutoring participation, and test score on tutorial and final exam for four sample courses.

Courses	Trainees			Tutorial Score				Final Exam Score			
	Nb. Enrolled	Nb. Particpt	Pct. Particpt	Min	Max	Mean	SD	Min	Max	Mean	SD
Social Sc. (PDGK4405)	725	668	92%	25	100	84.72	10.20	18	80	41.38	11.11
Math (PDGK4406)	725	661	91%	10	100	81.87	9.53	15	80	36.73	12.60
Science (PDGK4503)	725	680	94%	0	99	85.31	10.57	10	70	35.69	8.65
Indonesian (PDGK4504)	725	661	91%	0	100	84.26	12.96	14	82	43.17	10.99
TOTAL	2900	2670	92%	0	100	84.05	11.7	10	82	39.22	10.59

Notes: Nb. Enrolled = Number Enrolled; Nb. Particpt = Number of Tutoring Participation; Pct = Percent of participation

There were 725 trainees enrolled at that registration period. The numbers of trainees participating in the tutoring in four sample courses were 668, 661, 680, and 668 respectively for Social Science (PDGK4405), Math (PDGK4406), Science (PDGK4503), and Indonesian (PDGK4504). The average of trainees' participation was 92%. The means of tutorial scores are 84.72, 81.87, 85.31, and 84.26; and the means of final exam score are 41.38, 36.73, 35.69, and 43.17 for Social Science, Mathematics, 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). Students who got zero on tutorial score means that they attended the tutoring less than five out of eight sessions. In order to get the tutorial grade a trainee should participate at least in five tutoring sessions. The table also shows the standard deviations to indicate the level of variation of tutorial scores and final exam grades.

One result should be noted right away. There is a substantial difference between the means of tutorial scores and the means of final examination results. Among the four sample courses, the lowest tutorial score mean is 81.87 and the highest is 85.31, while the lowest mean of the final examination score is 35.69 and the highest is 43.17. As mentioned earlier, the trainees gained the tutorial scores from tutorial assignments and the final examination scores from participating in the semester final examination. The wide gap between average results on the two types of student assessments is not surprising because they are prepared quite differently and serve different purposes. Tutorial scores are based on assignments that are created and graded by tutors for the purpose of helping tutorial participants to improve their skills; they are formative in nature. Final course examinations, on the other hand, are devised and assessed by the national UT Examination Center using standardized tests and assessments and are more summative in nature as they are intended to provide a basis for pass-fail decisions.

Table 4.4 display tutor professional affiliation and educational level for sample courses. The number of tutor for every course was 15 and the total number of tutors was 60. The number of tutorial sites included in the study was 15, thus in every tutorial site was assigned one tutor for each course. The numbers of tutors affiliated to university and to secondary school are almost equal---29 (48%) and 30 (52%) tutors respectively. While the number of tutors holding a Master's degree twice as much as the number of tutors with a Bachelor's degree---40 (67%) and 20 (33%) respectively. The tutors affiliated to university mainly hold a Master's degree (86%). while the tutors affiliated to school have an almost equal proportion of educational level ---52% holding a Bachelor's degree and 48% having a Master's degree

Table 4.4. Tutors professional affiliation and level of education for sample courses

Course	Trainees' Professional Affiliation and Level of Education						Sub-Total		Total
	University Lecturer			Secondary School Teacher			Bachelor	Master	
	Bachelor	Master	Sub-Total	Bachelor	Master	Sub-Total			
Social Sc. (PDGK4405)	1	4	5	3	7	10	4	11	15
Mathematics (PDGK4406)	3	9	12	3	0	3	6	9	15
Science (PDGK4503)	0	6	6	6	3	9	6	9	15
Indonesian (PDGK4504)	0	6	6	4	5	9	4	11	15
Total	4	25	29	16	15	31	20	40	60
Percent	14%	86%	100%	52%	48%	100%	33%	67%	100%
	48%			52%					

Correlation between Tutorial Score and Final Exam Score

Table 4.5 displays the correlation between teacher trainees' tutorial score and final examination score by course. The values of *r* (Pearson Correlation) are 0.085, 0.052, 0.071, and 0.049 respectively for Social Science, Mathematics, Science, and Indonesian. The only correlation that even 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).[1] These results indicate that the relationship between tutorial results and teacher trainees' achievement on the final examination is very small ($r<0.1$). The teacher trainees' tutorial result is not a good predictor of the final examination grade.

Table 4.5: The correlation between teacher trainees' tutorial score and final examination score by courses

Course	Pearson Correlation	Sig. (2-tailed)	Sample Size
Social Science	0.085*	0.028	668
Mathematics	0.052	0.186	661
Science	0.071	0.064	680
Indonesian	0.049	0.211	661

*. The correlation is significant at the 0.05 level (2-tailed).

Even though the correlation between tutorial results and final exam scores 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 as shown in Table 4.6. Partial

[1] Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

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 trainees 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 Bachelor's degree and those with tutors affiliated to 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, I conducted mean difference analysis between groups of tutor characteristics and the results are presented in the next section.

Table 4.6. Partial correlation between teacher trainees' tutorial score and final examination score within groups of tutors' characteristics for overall sample courses.

Tutors Characteristics	Tutorial Score		Final Exam Score		Pearson Correlation	Sig. (2-tailed)	Sample Size
	Mean	S.D.	Mean	S.D.			
Holding Bachelor's Degree	86.27	12.523	37.33	9.654	.037	.359	625
Holding Master's Degree	83.37	11.357	39.80	10.786	.089**	.01	2045
Affiliating to School Teacher	85.32	11.014	39.33	10.765	.047	.107	1161
Affiliating to Univ. Lecturer	83.07	12.120	39.14	10.441	.077**	.01	1509
All Groups	84.05	11.703	39.22	10.582	.065**	.01	2670

**. Correlation is significant at the 0.01 level (2-tailed).

Final Exam Score Differences between Groups Defined by Tutor Characteristics

Table 4.7 displays the difference of final examination score means across all courses between groups defined by two specific tutor characteristics: level of education (Bachelor's or Master's degree) and professional affiliation (university or high school). Table 4.8, on the other hand, breaks that comparison down in addition by course.

In the overall data (Table 4.7), it is evident that teacher trainees with tutors holding the Master's degree do substantially and significantly better than those with tutors holding only the Bachelor's degree, but there is no significant difference between the groups defined by tutors' professional affiliations. When the data is broken down by course (Table 4.8), teacher education level is associated with significant mean score differences in all courses *except* Mathematics. Tutor professional affiliation seems only to have a marginally significant effect in two of the courses – Social Science and Indonesian language.

Table 4.7: The teacher trainees' final exam score mean difference between tutor characteristics for overall sample courses

Tutor Characteristics		N	Mean	Standard Deviation	Mean Difference	Sig. (2-tailed)
Tutor Educational Level	Master's degree	2045	39.80	10.786	2.473*	.000*
	Bachelor's degree	625	37.33	9.654		
Tutor Professional Affiliation	University lecturer	1509	39.14	10.441	-1.98	.632
	School teacher	1161	39.33	10.765		

*. The difference of means is significant at the 0.01 level

Table 4.8: The teacher trainees' final exam score mean difference between tutor characteristics by courses

Course	Tutor Characteristics		N	Mean	Standard Deviation	Mean Difference	Sig. (2-tailed)
Social Science	Tutor Educational Level	Master's degree	561	41.51	11.31	.80	.495
		Bachelor's degree	107	41.71	10.02		
	Tutor Professional Affiliation	University lecturer	202	43.62	12.56	3.23*	.001*
		School teacher	463	40.39	10.26		
Mathematics	Tutor Educational Level	Master's degree	496	36.69	9.59	-.155	.857
		Bachelor's degree	165	36.85	9.38		
	Tutor Professional Affiliation	University lecturer	547	37.03	9.54	1.72	.079
		School teacher	114	35.31	9.40		
Science	Tutor Educational Level	Master's degree	442	36.19	8.45	1.43*	.040
		Bachelor's degree	238	34.76	8.96		
	Tutor Professional Affiliation	University lecturer	410	35.52	7.83	-.43	.53
		School teacher	270	35.94	9.78		
Indonesian	Tutor Educational Level	Master's degree	546	43.79	11.19	3.60*	.001*
		Bachelor's degree	115	40.19	9.49		
	Tutor Professional Affiliation	University lecturer	347	44.09	10.34	1.93*	.024*
		School teacher	314	42.15	11.60		

*. The difference of means is significant at the 0.05 level

Results of Interview Data Analysis

This section reports the results of interviews with key local stakeholders (teacher trainees, tutors, and administrator of Serang Regional Center). The researcher conducted the interviews through Skype telephone and each interview lasted between 40 and 60 minutes.

Results of Interview with Teacher Trainees

The purpose of interviews with selected teacher trainees was to gather information about their preparation for tutoring, their perceptions of tutoring implementation and of the impact of the tutoring program, their opinions regarding tutor effectiveness and its relation to tutor characteristics, and their interpretation of the results of the test score data analysis.

Access to tutorial sites and trainees attendance. Trainee interviewees felt that they had experienced no significant obstacles in coming to the tutorial sites. The trainees can access the tutorial sites in less than one hour by car, motor cycles, or public transportation. The tutoring took place on school campuses, in elementary, junior high, or senior high schools. Among eight tutoring sessions, most trainee samples said that they attended almost all tutoring sessions. Tuti, who came to the tutoring site by motorcycle, explained that "I try to attend all tutoring session except when it is raining. I attended at least six of the eight sessions". As a distance education student, Edi feel that it was very important to attend the tutoring program. "As a student," he said, "I have a responsibility and it is not enough to study at home... The local manager [of the Serang Regional Center] also encouraged us to attend the tutorials". Besides the weather, however, health can also be a reason for missing sessions. "I came to all sessions, except when I was sick one day," Yuli said.

Teacher trainees' preparation for tutoring. As stated earlier, tutoring is limited to eight meetings per semester and two hours per session regardless of the number of credits of the

course. The students are expected to study at home, alone or in groups, and to prepare themselves before attending the tutoring sessions.

Most of the teacher trainees explained that in general they study alone at home. They studied in groups only when they had homework assignments from their tutors. Dian, a trainee who lives in an urban area, said that most of the time she was able to study alone at home because she already had the course materials. Adi, who lives in a rural area, explained that in the early semesters he usually studied alone. The tutors later suggested that trainees study in groups, but Adi did not attend often -- only when he needed to discuss assignments with friends.

When the trainees were asked about their preparation before attending the tutoring program, the majority of them said that they read the course materials at home before the tutoring began. Ani, one of the high achieving students, responded that she studied and read the course material carefully. If not, she said, "I could not ask questions or actively engage in the discussion." Tuti, another high achieving student provided a more detailed explanation. Before attending the first tutorial, she looked over the course materials concentrating on the first chapters.

> In the first week of the tutorial, [she said,] the tutor usually gave us a schedule of what we have to discuss from the first week until the last week. I take the textbooks everywhere I go. At least I read the book and try to answer questions on the formative tests.

Some teacher trainees study the course materials after their tutors have assigned the chapter to read for the next session, as explained by Badu and Udin.

> Badu: Usually at the end of the tutorial session the tutor assigns the task for students to read and study certain parts of the text book to be discussed in the next session.

Udin: Usually, I read the materials assigned by the tutors in the tutorial sessions. We ask questions about the contents and discuss things that I did not understand in the tutorial session.

Trainees who have double duties -- for example, both as a teacher and a housewife -- often have difficulty reading the materials every day; but they make efforts. As Yuli put it, "I am a housewife, but I manage if possible to read the book the night before the tutorial."

Tutorial implementation. This section reports teacher trainees' perceptions of the quality of tutorial implementation particularly related to the site, tutors' attendance and teacher trainees' satisfaction with program implementation in general. The regional center used elementary school, junior high school, or senior high school classrooms to conduct the tutoring program. In general, there was no complaint from the trainees about these facilities. "The building is good enough for the tutorial," Badu explains. ."We do not need too many facilities, just a way to focus on the textbooks."

Regarding tutor attendance, the majority of teacher trainees judged that it had been very good. "It was very seldom the tutor did not come," Edi said. "And if the tutor was absent, there was always somebody to replace him."

Most of teacher trainees were satisfied with the conduct of the tutoring. There was no negative response in this regard. For Nina, the implementation of the tutoring was adequate and "the services provided by the regional center were very good. They responded well to students' complaints."

The impacts of tutoring program. As previously mentioned, the main objectives of the Universitas Terbuka tutoring program are to provide students the opportunity to interact directly with the tutor and with other students in reviewing the substance of the course, strengthen

student mastery of the substance of the courses, reduce the sense of loneliness or isolation in study and increase student motivation and self-confidence (Universitas Terbuka, 2005). This section examines data on the relationship between the tutoring program and student achievement on final course exams. When asked about the benefits of the program, the trainees felt that it assisted them in overcoming feelings of isolation and helped them to solve problems that they encountered in their independent study. Quotes from two trainees illustrate this sentiment:

Udin: The tutorial does help, because we have a lot of friends [in the class] and we also already know the tutors themselves. In addition, we can discuss problems we face outside the classroom during the spare time or on the telephone.

Ani: It is very helpful. At least by attending tutorial I can exchange ideas with friends and tutors. Not all of the course materials can be understood by studying alone.

Others pointed out that the tutoring also improved their motivation to study and helped them to master the learning materials:

Sara: Yes, it creates motivation, and the tutor explains the importance of the tutoring in improving our final grade.

Tuti: In my opinion, [the tutorial] is very helpful, because you just can't understand all the material in the course. I can ask questions about difficult parts of the course content and can get satisfying explanations.

Nina: It is very helpful in the learning process. Doing tutorial assignments forces me to read the course materials.

It is very important for the tutor to encourage the students to read the course materials. It is not taken for granted the students would perform well in their final examination only by attending the tutoring. The questions on the final exam are mostly derived from the textbooks.

However, by attending the tutoring, the trainees gain greater confidence for facing the course final examination.

Dian: The course tutorial makes it easier to get a good final grade for the course because marks on tutorial participation and assignments are factored in. In a course without tutorial we have to study extra hard. …In either case, though, the most important thing is … to read the course materials.

Badu: Thank God! With the help of the tutorials, I passed all courses since the first semester and … graduated on time. I read a lot because the source of the final exam is the textbooks – and I read other books as well. … The key point is read the learning materials a lot.

Tuti: The students generally fail courses without tutorials. … In the tutorial we discuss the content of the textbooks and we practice the formative tests [found there]. In courses without tutorials, most of the students are too lazy to read the texts.

Tutor effectiveness. Almost all teacher trainees are adults between the ages of 25 and 50. In order to effectively help the students, a tutor should understand how adults learn, and especially how their needs differ from those of children (Jensen, 1998). This section examines the opinions of trainee interviewees about the effectiveness of tutor in treating their students as adult learners. Most trainees stated that their tutors treated them as peers such as stated by some trainees.

Emi: The tutors are friendly and respect the students. Moreover, a lot of students are older than the tutors.

Danu: We did not feel awkward dealing with the tutor… We regarded the tutors as peers.

As distance learners, the students must study independently. The tutor is a facilitator of learning rather than an instructor. The learning materials provide the content, while the tutors help learners to develop the abilities needed to understand, integrate and relate the different types of content to each other (Commonwealth of Learning, 2003). Interviewed trainees felt that the tutors fulfilled this function.

Emi: The tutors encouraged us to study independently. The tutor is just a facilitator and directs the student to read and to study a lot.

Udin: The tutor always asks us to study independently at home and during the tutorial session we discuss the problems found in our independent study.

Active involvement in learning, as opposed to passively listening to lectures is another principle of effective adult learning. The tutors should create learning that promote active learning and encourage the students to involve actively. Not all of the tutors were successful at this, however.

Tuti: In one class only one fourth of the students were actively involved, especially when the tutor could not motivate them to take part.

Badu: About one half of us are actively involved in discussion.

In general, the tutors manage the session by combining lecture and discussion.

Udin: After checking the attendance list, we discussed the assignments given to the students in the previous meeting. If there was no assignment to be discussed, the tutor instead told the students to open the chapters of the textbook assigned for reading at home, asked them what problems they had had with understanding the material and then offered explanations to clear up these problems. If there no

questions were posed by the students, the tutor asked them questions. There were also group discussions in certain sessions.

Emi: In the meeting there were materials that needed to be discussed. The tutor just acted as a facilitator. First the tutor gave directions while explaining the contents of the weeks' materials, after which he gave the assignments --either individual assignments or group discussion topics. Then was the time for group reports. The tutor gave feedback on these and offered a few conclusions. At the end of the session, the tutor gave homework to be discussed the following week. The homework is pretty heavy but it is very useful for me to study because it has a lot of connection with the final exam.

When I asked how effectively the tutors worked, opinions varied. A few trainees hesitated to speak frankly, like Badu, who said of their work that "it's effective enough but not too effective". This may be a way of politely critiquing the program. However, some trainees provided more honest criticisms.

Nina: Not all tutors can help effectively. About half of them are somewhat effective.

Tuti: Some just aren't effective: they are too verbal. The class isn't interesting. I hope that they learn to present things better or to present learning methods, not simply the content of the course. That should interest students more and make it easier for them to understand.

Some trainees positively responded the work of their tutors.

Adi: In general, the tutors are good, but not all tutors have experience. I give the tutors 7 out of 10 for performance.

Emi: Very effective. Fortunately, most of my tutors were very knowledgeable and energetic, which helped excite and motivate me.

Edi: With the tutorial, it is very useful not only for the grade but also, as a teacher, we can relate and apply the knowledge in the classroom. And we can share the ideas.

Tutor characteristics. UT has specified the qualifications and educational background required to be a tutor. Theoretically, all tutors should be university lecturers possessing a master's degree. However, due to the limited number of qualified candidates, regional offices are allowed to hire candidates with lower qualifications: basically high school teachers holding and instructors holding no more than a Bachelor's degree.

When I asked trainees about the effects of tutors' level of education on their achievement, almost half of the interviewees said that tutors with higher levels of education had greater impact. As Adi put it:

Tutors with Master's degrees perform better than those with Bachelor's degrees. But in some courses, tutors with Bachelor's degree also perform very well. It really depends on the individual tutor.

Opinions varied, however.

Ani: In my experience, all tutors have the same capabilities.

Edi: There are tutors with Master's degrees and with Bachelor's degrees who teach in high schools. In my opinion, if their knowledge is adequate, it is not a problem. They master the contents. Take the Statistics tutor, for example: he teaches very well even though he is a Bachelor's degree teacher. He is very good in tutoring.

A few trainees preferred tutors affiliated with the university.

Dian: I prefer the tutor with university affiliation. I find that tutors from a secondary teacher background tend to conduct the tutorial like they were lecturing.

Udin: Tutors with a university lecturer background have more experience and are better in explaining and communicating.

Edi: I have no comment about the tutor's background. For me, the most important thing is their teaching method.

When the interviewees were asked about the characteristics of the tutors that have the most impact on their achievement, they provided a variety of responses. Three characteristics of the tutors were most often identified, however: knowledge and content mastery, sense of respect, and practiced teaching methods. Content mastery and teaching method are considered equally important. The trainees favor the tutors who know how to boost their motivation to study and inspire them. They also feel more comfortable with tutors who recognize them as adult learners.

Udin: Tutors with higher education are more capable. I also prefer tutors who have a sense of humor, who aren't too serious and are familiar with the students. [There should be] no gap between tutor and students.

Nina: In my opinion, they should not just be lecturing and explaining things. Lecturing make us bored and sleepy. They need to use more various methods. Respect and care for students are also important… and a bit of generosity in their grading.

Teacher trainees' interpretation of quantitative data analysis results. The results of the quantitative data analysis show that there is a very weak correlation between the tutorial grade and final examination score. There is nonetheless some significant difference between the final exam results of students trained by tutors with Master's degree qualifications and those trained by tutors with the Bachelor's degree. There is a non-significant mean difference between

the average scores of the group taught by with university lecturer tutors and the average of those taught by tutors with high school teacher affiliation.

The reactions of the teacher trainee interviewees to these data were very diverse. However, they most frequently attributed the findings to the different nature of tutorial assignment and final course exam grading systems, as well as to the weak reading abilities of many students. Adi, who got a good score on the final course exam, explains:

> In my opinion, the final exams are taken from the textbooks. Some tutors just don't discuss that content in any depth, only on the surface. If I had depended strictly on the tutoring program, my grades would not have been as good as what I got. I read and tried to master the content of the course materials on my own.

Dian saw a related failure of tutors.

> The assignments are created by the tutor, whereas the final exam comes directly from UT headquarters. 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.

Tuti, on the other hand, referred to problems on the student side.

> UT has an item bank for the final exam and the final exam is more difficult to predict. 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 diligent they will get better grades.

There were few comments about the difference in average final exam results between groups of trainees instructed by tutors holding the Master degree tutors and those handled by tutors with the Bachelor's degree. Udin is one exception:

In general the tutor with a higher educational level will contribute more to student results on the final course exam. Sometimes there are conversations among friends taking the UT tutorial about why tutors with Bachelor degrees are hired to teach undergraduate students. The tutor's level of educational qualifications must be higher.

Regarding the effect of tutors' professional affiliation on their final exam results, interviewees found it difficult to give an interpretation. There may however be an uncontrolled interaction here with trainees' residence and SES. University lecturers are used most often with students who reside in areas surrounding the universities. On the other hand, the students who live far from the university, often in rural areas, more often end up with tutors employed in local secondary schools.

Results of Interview with Tutors

Eight selected tutors were interviewed, covering both educational levels (Master and Bachelor's degree), both types of professional affiliation (lecturer and teacher) and tutorial sites in both urban and rural areas. These interviews included the tutors' opinions on their own and their preparation, on tutoring session organization, on respect of adult learning principles, on students' preparation and involvement, on implementation deficiencies in the conduct of session and regarding their satisfaction as tutors.

Tutors' training and preparation. All interviewees declared that they received training at least once before assuming their duties. Some of them have been involved in tutor training provided by regional center more than once. Overall, they have been between five and thirteen cumulative years of tutoring experience. They explained that the tutoring concept, curriculum, syllabus, and strategies were presented during their training. They had no difficulty applying the results of the training but considered it quite useful.

Abu: The training made clear the difference between a tutorial and a regular lecture. The method was quite easy to implement.

Heru: The training really helped me know what to do in the tutorial. It was very relevant to actual experience in the tutoring sessions.

At the same time, Yana pointed out that his own prior experience as a teacher, principal and school supervisor made it much easier for him to benefit from and apply the training:

My background as a teacher, principal, and now school supervisor helps me as a tutor to understand the specific needs of the teachers and apply the training. ... I can bridge the gap between the content of handbook and the reality in the fields.

All tutors stressed that they have to prepare an instructional plan. The regional center staff carefully monitored this performance.

Iwan: I made a tutorial design and prepared tutorial program units, all complete with an evaluation system. All must be prepared because this will be monitored.

Ati: I prepared the design for all eight tutorial sessions and also created a tutorial plan unit presented for each week, plus meeting notes, the records for noting the problems the students face and the solutions. These weekly notes must be submitted to the UT Regional Center as well…

Tutoring organization. How do organize their work, from the beginning until the end of the session? Most tutors considered tutoring different from lecturing and they tried to implement what they learned in their own training.

Iwan: Because the content of the course materials is too much to cover 100%, I tend not to explain everything but put the emphasis on practice. There are already

exercises in the book but there are no answers or solutions. I guide them to work in groups and find the solutions.

Yana: Usually, is start by explaining the content and then follow with discussion before giving assignments for the next meeting. In dealing with adult students, I try to apply many strategies like discussion, mentoring and exposure. If I only lecture, it will be boring. I usually open the sessions with a pleasant atmosphere and some brainstorming. Then I stimulate them with questions taken from the books and discuss the content of learning materials. Finally I provide explanations and end up doing the test or evaluation provided in the book. If possible, I arrange a group discussion, in big or smaller groups.

The respect of adult learning principles. The trainees are teachers and most are adults. Tutors affirmed that they treated the students as peers, tried to apply optimal pacing in accordance with the trainees' ages and conditions and motivated them to study independently:

Nuri: The students their own have experience with teaching and I treat them more as peers. I often relate the tutorial contents with what's happening in the field, linking the two.

Rani: Yes, I treat them as peers but I keep control of the tutorial. I asked the students to do more practice because in Math the key for success is a lot of practice. However, their independence and self-confidence are low.

Abu: I implemented what I learned from the training but I adjusted it to real conditions. I am familiar with the teachers' life and with their duties in schools. So I try to strike a balance.

Students' preparation and involvement. It is the role of the tutors to encourage the trainees to become more active, but that is not always easy. Several tutors commented on the issue.

Iwan: Trainees' attendance rate in the tutorial is close to 100%. However, because they are from rural areas, sometimes their questions make me laugh….Their interest in reading is low and they don't dig for their own information… They are enthusiastic enough to participate in the tutoring, but on average they are lax about reading the learning materials.

Tami: Some classes are very active and others are not. The tutor has to know how to stimulate active student involvement. That doesn't depend on the age: sometimes the older students are quite active while the younger ones seem shy. But on average, the students tend to be a bit passive. This is may be because of our culture.

Nuri: If I don't create discussion groups, maybe only one or two young students get actively involved in asking questions. When I set up group discussions, however, more students get actively involved.

Overall problems and deficiencies in tutorial implementation. This section reports on the fidelity and quality of implementation of the tutoring program from the tutors' point of view. The tutors generally evaluate the quality of implementation quite highly.

Heru: The management is very friendly and helpful: so far so good.

Nuri: It works pretty well. All facilities have been well prepared by [the local Serang Regional Center] management.

Rani: In my opinion the tutoring program runs very well. Moreover, the UT Serang Regional Center staffs monitor tutor preparation and implementation quite strictly. Every week, there is a staff member from the Center waiting in the sites or observe the tutorial sessions from beginning to end.

The main problem faced by the tutors in implementing the tutorial is insufficient preparation by students.

Nuri: The main problem I found is students' lack of enthusiasm and curiosity. Because they have already been teachers, they just pursue the diploma.

Rani: There were no major obstacles. However, if I don't stimulate the students, it is hard to get them involved. We have to find strategies to motivate students.

The one deficiency of tutoring implementation most noted by the tutors was the availability of LCD-projector equipment and facilities. With that equipment, tutors can save time and present a greater variety of material.

Tutors' satisfaction. This session reports how satisfied the tutors feel with the compensation they receive from UT. Most of them, especially those affiliated with secondary school teaching, feel at last moderately satisfied. They recognize that being a tutor is not merely about pursuing money. They get more than that: things like knowledge, experience, friendship and pride. But there were some of the tutors, especially those with a university lecturing background, felt that the compensation was inadequate. They are hoping and expecting that UT will increase their salary.

Rani: "Alhamdullilah" (Thank God!). The compensation is not the only reason for tutoring. In my opinion, the compensation is enough. I gain knowledge and experience, and can build a relationship with the teachers.

Yana: It's enough. I am very happy to be a UT tutor. There are two benefits I get from being a tutor. First, I can guide the students through the tutorial. And the second benefit is to improve the quality of education especially in my own area. I can observe their progress---their knowledge improvement and their behavioral changes in teaching.

Iwan: Frankly, the compensation is insufficient. But that doesn't affect my enthusiasm in implementing the tutorial. There is a sense of pride as a tutor. Not all people can be tutors.

Tutors affiliated with universities were by and large more skeptical.

Nuri: It's all relative…. [Laughs]. If the pay could be increased why not? There should be [some extra] compensation because the tutorial takes place on Sunday, and so I have no day off. I sacrifice my family time. So far it has not influenced my enthusiasm. The compensation I receive is the same as what I receive from my university where I teach. On the other hand UT needs [university lecturer] tutors…

Tami: The compensation is too small. But the transport fees that I receive from [the Serang Regional Center and local management] help to make up the difference.

Tutors' interpretation of quantitative data analysis results. Most tutors agree that differences between the characteristics and scoring systems of tutorial assignments and the final course exam make the correlation between them very low. The assignments are devised and scored by tutors themselves and for some of the tasks students are allowed to work in collaborative groups. The final exams, on the other hand, are developed, conducted and graded centrally and no collaboration among students is allowed. Tutor interviewees also argued that

students' lack of preparation for a high-stakes challenge like the final exam is an important factor contributing to their poor grades.

Iwan: Tutorial assignments are based on the textbooks and students can open the books and the students are permitted to consult the textbooks in writing up their answers. But the final exam is closed book.

Rani: The language ability of the teachers is not adequate to understand the questions in the final exam. Sometimes the sentences are very long. The level of language on the exam is too high.

Ati: Most of the students fail the final exam, but the tutorial assignments score helps to make up the difference and get them a passing grade. That is why students take part enthusiastically in the tutorial: they use the tutorial to increase their final course grade. Only students with very high motivation can achieve a good score on the final exam itself.

The effect of tutors' educational level elicited a variety of comments.

Iwan: Students feel more confident and more motivated with a tutor who as a Master's degree. I recommend that all tutors should be Master degree graduates. They have a different approach and that can affect students' motivation.

When I asked why a Math tutor with only a Bachelor's degree had students who scored best on the final course exam, a couple tutors offered their insight.

Iwan: Maybe the tutor with a Bachelor's degree teaches more thoroughly especially in Math. In exact scientific fields, undergraduate courses are more difficult than in the graduate courses.

Ati: In Math, almost all tutors have a corresponding academic background. Someone without a degree in Math seldom serves as a Math tutor. This is quite different from other fields.

Additional tutors' comments. The researcher also provided opportunities for the tutors to express their opinions and comments that were not included yet in their previous explanations. The most common complaint is the availability of the LCD-Projector in the tutorial sites. The following are some additional comments of the tutors.

Iwan: I recommend holding a regular training for tutors to improve tutor capability.

Yana: UT course materials stress more on academic education less on character education. It is very important to integrate between academic and character education.

Results of the Interview with the Regional Center Administrator

The following is an analysis of the results of the 90-minute-long telephone interview held with the administrator of the Serang Regional Center on many of the same key topics discussed with trainees and tutors.

Tutor recruitment process. The issue of the qualifications required of tutor candidates and the characteristics most associated with student success were discussed on several occasions noted above with trainees and the tutors themselves. The Serang Regional Center Administrator had the following comments:

In recruiting the tutors we prioritize the candidates from university lecturers and those with master's degree. Since the number of the candidates with both qualifications is limited we also hired tutors with lower qualification such as school teachers and those with bachelor's degree background. We carefully scrutinize their curriculum vitae and

previous teaching experiences in related courses as a basis for recruiting the tutors. During the implementation of the tutoring, we evaluate the performance of each and every one.

Ideally, the course should match the tutor's educational background but for certain courses it is difficult to find candidates – for example in Mathematics and in the Arts. In Mathematics, for example, we hired some tutors with Statistics or Mechanical major backgrounds. We considered their curriculum vitae and teaching experience to be sure they mastered the content. And we usually hire high school Mathematics teachers to fulfill the math tutor positions in the remote and rural areas.

Tutors' training. According to the Regional Center Administrator, not all tutors have received training, due to the number of new recruits and the dispersion of their geographical residence. There are around 400 tutors spread across the entire region and the Regional Center can train about 150 every year. The regional center training is carried out in rotation in different locations that cover nearby tutorial sites, so there are some tutors have not had an opportunity to get the training. New tutors living in areas not figuring recently on the rotation plan may not yet have received training. Some also failed to attend the training program due to time conflicts with their duties at their school or university. For those who have no chance to get training, the regional center provides the written materials that can be studied independently.

Monitoring and evaluating tutors. The regional center evaluates performance of the tutors through staff monitoring and student questionnaires. In the monitoring process, the staff basically evaluates administrative aspects of the tutoring such as tutors' attendance and punctuality, tutors' material preparations, tutors' meeting notes and other aspects of tutoring such as appropriate use of tutoring time and ongoing process of tutoring. According to the center

administrator, every regional center has different policy in conducting the tutorial monitoring. For our regional center, we conduct at least six monitoring sessions from eight tutoring sessions per semester, involving all regional center staff. The monitoring is proven very effective to prevent tutorial misconducts such as tutors' absentee, inappropriate use of time, and lack of tutors' preparation. Here are excerpts of the interviews with the administrator in relation to the effectiveness of the monitoring.

> If we did not monitor the tutoring implementation, some tutors often come late or end the tutoring earlier or they did not even come at all. In some sites, when the monitoring staff came late, some classes have dismissed much earlier than the predetermined time. It seems students were also pleased when the tutors ended the class early. That is the reason why we conduct regular and more frequent monitoring.

The regular and frequent monitoring by regional center staff was also confirmed by some tutors in the previous interviews with the tutor samples.

If staff monitoring assesses administrative aspects of the tutoring, students' questionnaires evaluate the academic performance and personality of the tutors. At the end of the tutoring program, the center asked the students to evaluate their tutors' performance, especially tutors' mastery of content, their performance in the classroom, and their personality and attitude in treating the students. Based on the monitoring reports and students evaluation results, the regional center makes a decision whether a tutor can be maintained or should be replaced. According to the center administrator, the center will directly replace bad performance tutors if their replacements are available. If not, the center will inform them the results of students' evaluation or staff monitoring and remind them to improve their performance.

Tutor compensation. Five years ago UT increased tutor compensation significantly. The amount of the tutor honorarium becomes one of the attractive benefits for the tutor candidates. However, over time, some tutors, especially those recruited from among university lecturers, perceived that the compensation they receive as a tutor is not adequate anymore as reported in the results of tutors interviews in the previous section. When the researcher confirmed this finding, the regional center administrator provided the explanations as follows.

> The compensation is quite good and competitive. If there are some tutors hired from the lecturers that feel unsatisfied with the compensation tell me from what university they come from. I know very well, compared to the payments from other universities in general, UT compensation is much higher. One indication of the UT payment competitiveness is that they were fighting to become a tutor. Some tutors complain when I did not employ them anymore. Besides that, a tutor also receives a transportation fee from regional center. Some local management also provides other transportation fees especially for the tutorial sites that difficult to be accessed. It is a common phenomenon, if there is a chance to request they will ask the increase.

Interpretation of quantitative data analysis results. The researcher also requested the regional center interpretation on the results of the trainees test score analysis. Regarding the low correlation between tutorial and final exam results, the regional center administrator explained that the recent study showed that there was no correlation between tutorial score and final exam results. Even the students who did not participate in the tutoring get higher final exam scores than those participated in. The center administrator interpreted that there is an indication that the students learn more serious on the course without tutoring because the final grade is completely drawn from the final exam score. The students tend to not so intense preparing the

final exam for the course provided with tutoring. They feel confident to get the passing grade because the tutorial score contributes significantly to their final grade.

Concerning the effect of tutor key characteristics to trainees final exam grade, as commonly other key stake holders interpretations, students higher motivation and tutors' capabilities and experiences were proposed by the center administrator as the reasons for the significant mean difference of trainees final exam with master degree tutors. He interpreted the results as follows.

> Maybe because the tutors with higher level of education have more experience and capabilities and may also the students were more motivated. However, we cannot hire all tutors with master educational level.

Relating to the impact of tutor professional affiliation to students achievement, the center administrator was not surprised when the researcher explained that the students' final exam means are not significantly different between the groups of tutor professional affiliations. High school teachers recruited as tutors may have similar capabilities, teaching experience and master contents on elementary school teacher education as university lectures. The tutors hired among school teachers were highly selected due to more prospective tutors available. 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.

Main problems. Apart from the specific questions, the researcher also asked the main obstacles in implementing the tutoring and the solutions to solve those problems. The regional center administrator mainly proposed two things: difficulty in finding tutors for certain courses and lack of students' preparations. The regional center administrator explained that it is very difficult to find a tutor for the course with rare tutors such as Arts. An Arts tutor should capable to teach and perform three different areas: fine arts, dancing and singing as demanded by the curriculum. It is difficult to find a tutor that masters those three types of skills because in the tutoring the trainees need to practice those areas. Other thing is low students motivation, if we don't control the tutorial well it will not work. The lack of students' preparation and low reading habit make it difficult for the tutor to involve students actively in tutoring sessions.

When the researcher confirmed some tutors complaints about the availability of the *In-focus* (LCD-Projector), the center administrator stated that it is almost impossible to provide *In-focus* in every tutorial site classroom due to the huge number of classes. Besides a high cost need, it is difficult to control and maintain the equipment. The equipment should be recorded as inventory. However, it is fine if UT has capabilities to do that.

CHAPTER 5

DISCUSSION

This chapter will be devoted to answering the research questions posed in the first chapter. I synthesized the findings from the two types of data analysis (quantitative and qualitative) and used the results to draw conclusions about implementation of the face-to-face tutoring program, its effects on teacher learning and course examination results and the impact of tutor characteristics on these outcomes. On that basis, I tried to answer the research questions.

The findings of the study, especially those derived from the observation and interview data suggest that the regional center has been implementing the tutoring program reasonably well. The regional center planned, implemented, and monitored the program in accordance with UT tutoring guidelines. The conduct of sessions matched the intended design. There is almost no significant complaint from the teacher trainees as well as from the tutors in relation to the tutoring implementation. The tutors have done their job in accordance with the determined guidelines. The tutors encourage and motivate the students to study course materials especially by assigning additional assignments and tasks.

However, there seemed to be little relation between the moderately high fidelity of the program and the trainees' achievements on the final exam. As mentioned above, "fidelity" refers to the degree to which the program as implemented in the field actually corresponds to the methodology or model prescribed for it, whereas "quality" refers to the effectiveness of the program and the degree to which it accomplishes its objectives. Note that a program could, in these terms, have relatively high fidelity but low quality, particularly if (for example) the prescribed methodology is not adequate to achieve the desired results. In this case the way the program was implemented might fit very well with the model, and yet participants would not

achieve many needed knowledge gains or perform much better thereafter, especially when measured from their final exam achievement.

Participating in the tutoring is not taken for granted that the students would achieve better results in the final examination. Besides active participation in the tutoring, the success of the trainees in the final exam is also influenced by the time devoted to read and study the learning materials independently. Lack of trainees' preparation in facing the final exam was recognized by most tutors as well as regional center administrator. Even though the fidelity of the tutoring program is moderately high, its effect on the trainees' achievement especially on their final exam results is not as expected.

Quantitative 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, $r < 0.1$). However, the correlation in all sample courses was positive and in Social Science the correlation is significant at significant level of 0.05. The values of r for four sample courses are 0.085, 0.052, 0.071, and 0.049 respectively for Social Science, Mathematics, Science, and Indonesian. There is a substantial difference between the means of tutorial scores and the means of final examination results. Among the four sample courses, the lowest tutorial score mean is 81.87 and the highest is 85.31, while the lowest mean of the final examination score is 35.69 and the highest is 43.17.

Fidelity of the tutoring implementation may not strongly associate with the results of teacher trainees final exam. Different evaluation tools and scoring systems used to assess both assessments may cause this small correlation. As mentioned earlier, the tutoring assignments are assigned and scored by tutors while final exams are administered centrally using standardized objective tests. Tutorial score was derived 80% from three assignments and 20% from trainee's

participation, while the final exam score was 100% taken from a single test. Qualitative data analysis results can elaborate this finding. 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 tutoring they could achieve the passing grade of the course due to significant contribution of the tutoring score to the final grade. This indication could be implied from trainees' explanation during the interview.

The interview results with some trainee samples indicated that they were more intent to study on the courses without tutoring sessions because their final grade is fully determined by their final exam scores. Without intensively reading the course materials, it is hard to get a high score in the final exam since the exam questions are derived from the textbooks. On the other hand, the students must read the materials for the courses without tutorial sessions more intensively in order to achieve the passing grades since the final grade of these courses is purely determined by the final exam score. If not, it would be hard for the trainees to complete the program. The trainees' interview results also imply that most sample trainees have completed their program on time, thus they had passed all courses---with or without tutoring. Interview analysis results with tutors and regional center administrators strengthen this indication. They agreed that most students were not well prepared and tend to not read the textbooks before attending the tutoring sessions.

We cannot blame the existence of the above conditions fully on the students. The package of courses the teachers must take is very heavy. They have to register for a course package that consists of up to five courses every semester. Moreover, they have to study without leaving their teaching responsibilities. Full time teaching, family and community obligations compounded with lack of reading habits often disrupt their reading time. They are forced to find

strategies in order to be able to complete the program on time. There is anecdotal evidence that achieving a high grade was not as important for them since they have been teaching. Pursuing their degree on time is more important in order to qualify for certification especially for full-time teachers or to obtain full-time teaching status for part-time teachers. The Government policy triggers this phenomenon. Since the Government of Indonesia ratified the Law No.14/2005 on Teachers and Lecturers, all teachers must hold a Bachelor's degree in order to qualify for certification by 2015. The certified teachers will receive a substantial increase of salary.

Besides trainees' individual traits, as discussed above, certain tutor's characteristics also contribute to the trainees' achievement in final exam. Tutors with Master's degree previous education have better impact on students' achievement in final exam than their counterparts with Bachelor's degree 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 Bachelor's degree 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 Bachelor's degree background may be more patient in explaining and guiding students. This quantitative finding was confirmed by the qualitative findings. Some students stated that they did not question their tutor's educational level as long as they can understand what was explained. They often found

that tutors with undergraduate backgrounds taught very well in this field. The tutors' views of this finding are that tutors in Math related courses 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 Bachelor's degree 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.

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. From the interview results, the trainee samples 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 expressions of the tutor samples of school teachers also strengthen the finding of this quantitative inquiry. They found 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. Strictly tutor selection especially for those from high school teachers and continuous tutorial monitoring and tutors evaluation, as explained by the center administrator, make the tutors hired among school teachers have a similar performance with their counterparts recruited from university lecturers. Next I will discuss deeper interpretations of the key stake holders regarding to quantitative data analysis results.

Most teacher trainee interviewees find it difficult to express their interpretation on the results of quantitative data analysis especially on the small correlation between tutorial score and

final exam. However, the most frequent comments attributed to the findings is that the different nature of tutorial assignment and final course exam grading systems, as well as to the weak reading abilities of many students. Almost similar arguments were also proposed by tutors regarding to this result. The tutors argued that students' lack of preparation for a high-stakes challenge like the final exam is an important factor contributing to their poor grades. On the other hand the tutorial assignments are devised and scored by tutors themselves and for some of the tasks students are allowed to work in collaborative groups. A quite different views proposed by regional center administrator. He interpreted that there is an indication that the students read the textbooks more intent on the course without tutoring because the final grade is completely drawn from the final exam score. For the course provided with tutoring, the trainees tend to not prepare for the final exam as sincere as the course without tutoring. They feel more confident to get the passing grade because the tutorial score contributes significantly to their final grade. He added that it was not surprising that sometimes the trainees got higher score in final exam on the course without tutorial than that provided tutorial.

There were few comments about the difference in average final exam results between groups of trainees instructed by tutors holding the Master's degree tutors and those handled by tutors with the Bachelor's degree. However, tutors with higher level of education provide higher motivation for them to study because they believe those tutors have broader knowledge and better teaching experience. The tutors also agreed with this result. Students feel more confident and more motivated with a tutor who as a Master's degree. Some tutors even recommended that that all tutors should be hired among those with Master's degree graduates. They have a different approach and that can affect students' motivation. Almost similar reactions provided by the regional center administration in interpreting this result. The tutors with higher level of

education may have more experience and better capabilities and the students were more motivated. However, he added, the center cannot hire all tutors with master educational level due to insufficient number available.

Concerning to a non-significant mean difference between the average scores of the group taught by university lecturer tutors and the average of those taught by tutors with secondary school teacher affiliation, most trainees could not interpret this result. They find it hard to judge because their tutors usually come from the same professional affiliation. University lecturers are used most often with students who reside in areas surrounding the universities. On the other hand, the students who live far from the university, often in rural areas, more often end up with tutors employed in local secondary schools. However, the trainees agreed that tutors higher from the lecturers and those among school teachers have similar abilities. They did not concern with their tutors professional affiliation as long as they master the contents and can motivate the trainees to study. Among the tutors, there were different views concerning to this result. Those affiliated to university lecturer suggested to hiring more tutors from the university to improve the image of the program. On the other hand, those affiliated to school teachers argued that their long teaching experience in the similar subjects and their familiarity with the elementary education environment gave a distinct advantage in tutoring. However, the regional center administrator provided more reasonable interpretation on this result. He was not surprised if the students' final exam means are not significantly different between the groups of tutor professional affiliations. Secondary school teachers recruited as tutors may have similar capabilities, teaching experience and master contents on elementary school teacher education as university lectures. The key point is that the tutors hired among school teachers were highly selected due to more prospective tutors available. The center carefully looked their CV and

teaching experience before recruiting them. The center also monitors and evaluates tutors performance rigorously and regularly and the result is that no problem found with the tutors hired among school teachers. The center found no difficulties to replace low performing school teacher tutors due to the availability of the candidates. Pride being a UT tutor as expressed by some tutors affiliated to school teachers may contribute to their performance.

CHAPTER 6

CONCLUSION AND RECOMMENDATION

Conclusion

From the analysis results of the teacher trainees test scores, tutoring observation, interviews with key stakeholders, and document reviews I can conclude that the Serang regional center has implemented the tutoring program with relatively high fidelity. There was not much variation in fidelity. The fidelity level ranged between 2 (moderate) to 3 (high). The center has implemented the teacher trainee face-to-face tutoring program closely matched to its intended design. The majority of the local stakeholders, trainees as well as tutors, expressed their satisfaction with the program implementation. Almost no negative expression was conveyed by the stakeholders. However, the fidelity of the program has no significant contribution to the trainees' achievement on final exam. Therefore, the quality of the program was low measured from the trainees' final exam achievement.

There is a considerable difference between the average of tutorial scores and that of final examination results. Among the four sample courses, the lowest tutorial score mean is 81.87 and the highest is 85.31, while the lowest mean of the final examination score is 35.69 and the highest is 43.17. There was a positive correlation between the trainees tutoring results and the final examination scores but the degree of correlation was very small, with a Pearson *r* value <0.01. The tutorial score is not a good predictor for the trainees' final exam results. There is an indication that a substantial contribution of the tutorial score to trainees final grade correlates to trainees' less intense preparation for the final exam. 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, a Bachelor's degree. The final exam mean difference between a group of trainees guided by tutors with a Master's degree and those instructed by tutors holding a Bachelor's degree was significant with 0.01 levels of significance. 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. The key stake holders interpreted that tutors with higher education may have better knowledge and experience and provided better motivation to the trainees. The regional center strictly selected the tutor candidates especially those recruited from secondary school teachers and continuously conducted performance evaluations correlate to similar performance of tutors hired from school teachers and those recruited from university lecturers.

Recommendation

Based on the findings of the study I proposed some recommendations for program improvement and for future research.

The trainees' achievement on the final exam did not reflect the fidelity of the tutoring implementation. There is a substantial difference between the mean of students' results on tutorial and their final exam score and very small correlation between tutorial score and final exam results. There is an indication, that the generous contribution of the tutorial score to the trainees' final grade makes it easy for the trainees to get a passing grade and perhaps contributes to trainees' less intense preparation for the final exam. It is recommended that UT consider

reducing the tutoring score and increasing the final exam result proportion in in determining the student's course final grade in order to improve students' motivation to read the learning materials for course final exam preparation.

The low quality of the tutoring program measured by trainees' results on the final exam imply that tutors have failed to improve students' knowledge and motivation for final exam preparation. UT should improve the quality of tutor training by providing strategies in improving students' motivation e.g. by assigning additional tasks that stimulate students to read the materials more intensively. UT should provide the opportunity for the tutors to expand their insights of the final exam grid so that they have a proper knowledge and understanding in order to help students to improve their performance in the final exam. If possible, UT or the regional center should use students' final exam results as an accountability measure for continued employment as a tutor. UT should provide recognition for tutors when their students perform well in the final exam and remind them and evaluate their performance when their students perform poorly.

The study results indicate that tutors with a Master's degree have better contribution to students' final exam results compares to their counterparts with a Bachelor's degree. It is recommended that in hiring new tutors, their educational level should be put in priority regardless of their professional affiliation. If certain sites find it difficult to hire tutors holding a Master's degree or are university lecturers, with stricter and more meticulous selection, those possessing a Bachelor's degree or are school teachers could be continuously recruited. In Mathematics, tutors who hold a Bachelor's degree performed as well as their counterparts holding a Masters' degree. In Science, teachers hired from school teachers perform well because of their mastery in course contents and teaching experience.

The quality of tutors is determined by their selection process and performance evaluation. Strict and rigid selection of the tutors should be continuously conducted. The findings of the study confirm that the tutoring fidelity was relatively high but the tutoring quality was low measured from students' results on the final exam. In order to improve the quality of the tutoring program, in the selection process UT should focus more on tutors educational background and their teaching experience in related courses. It is also recommended that the regional center continuously evaluate the performance of the tutors in order to improve their quality.

Interview results with the Regional Center Administrator indicates that frequent tutorial implementation and monitoring correlate to high rate of tutor and student attendance. Even though following the tutorial guidelines, UT requires regional centers to monitor tutorial implementation three times per semester, it is recommended that the Regional Center use higher monitoring frequencies (five to six times) to make sure that the program is implemented as planned and that tutors and students attend the tutoring sessions as assigned.

Even though the results of the study show that the fidelity of the tutoring implementation was relatively high, the study was limited to one regional center and four courses. The regional center's geographical characteristics may be closely related to the fidelity of the tutoring program. It is recommended that a wider scale of evaluation should be conducted involving more of regional centers and courses in order to be able to make the findings more generalizable.

Study findings indicate that students less intense work in courses with a tutorial is due to significant contribution of tutorial score to student's final grade. Further rigorous research may be needed to investigate students' final exam achievements in the courses with tutoring and those without tutoring using both quantitative (comparison of students' final exam results) and

qualitative (in-depth interviews with students) inquiries. Findings of the study, hopefully, could answer the question whether the significant contribution of the tutoring score to course final grade contributes to students' less intense preparation for the course final examination.

APPENDIX A

GLOSSARY OF TERMS

In the presentation and execution of the study I used a number of terms. The following are definitions of the terms that are of most significance in this research, arranged alphabetically:

D-II: This term refers to Diploma 2 that is a two-year university degree.

Distance education: This term refers to formal education where the learners are separated from the teachers and institution providing the programs.

Elementary school teachers: This term refers to people hired to teach in elementary schools who have formal educational background varying from high school/teacher training school diploma to four-year university degree (Bachelor's degree). Result of the trainees tutoring is not a good predictor of the final exam grade.

Elementary school: A six years of formal schooling and its students are usually from the ages of 6 to 12.

Face-to-face tutoring: A meeting between a group of teacher trainees and a tutor in the classroom mainly assigned to help the trainees to solve the problems encountered in their independent study.

Final exam score: The raw grade, in numeric form, achieved by the trainees from the final exam.

Final examination: Standardized test that evaluates students' mastery of course materials; the items developed by the UT academic staff or by lecturers from other universities, and administrated at the end of the semester at district level coordinated by regional centers.

In-service teacher education: It is a formal education provided to teachers while on duty.

Package semester: A number of courses (4 to5 courses) assigned to be taken by the teacher trainees from the same cohort every semester.

S1: This term refers to Strata 1 or a four-year university degree (Bachelor's degree).

Teacher trainees: The elementary school teachers in Indonesia who earn a four-year university degree (bachelor's degree) through distance education at UT.

Teacher trainees: The elementary school teachers participating in in-service teacher training program through distance education at Universitas Terbuka.

Tutorial assignment score: A final raw grade, in numeric form, achieved by the trainee from tutorial assignments in a certain course.

Tutorial assignment: A tool of evaluation developed by tutor which purpose is to assess teacher trainees' competency in tutored courses.

Tutors: The local university lecturers or secondary school teachers who have been trained to provide tutoring to teacher trainees in certain courses.

Under-qualified teachers: They are the teachers who do not have a four-year-university degree.

Universitas Terbuka (UT) or Indonesia Open University: UT is one of the state universities in Indonesia which was established in 1984 using single mode distance education in delivering the programs. The main mission of UT is to provide a wider access to higher education throughout the country.

UT Head Office: The central office of UT located in Tangerang Selatan, Banten, in the Southern part of the Indonesian capital of Jakarta, which serves to control all of UT's academic and administrative activities throughout the country.

UT Regional Center: The extension of UT head office located in 35 major cities in Indonesia which provides academic and administrative support services to UT students in each region.

APPENDIX B

INTERVIEW PROTOCOL FOR TEACHER TRAINEES

Teacher Trainee Name: _____ (Names will be kept confidentially)

Gender: M / F

Tutorial Site: _____

Tutoring Preparation Questions

1. How far the tutorial site from your home?
2. Do you find any obstacles in accessing the tutorial site?
3. From eight tutoring sessions, on average how many times did you attend the sessions every semester?
4. How do you study at home? Do you study in a group or individually?
5. If you study in group, how often do you meet with your study group members?
6. Can you describe how do you prepare yourself before attending a tutoring session? Did you read the course material before attending the tutorial?

Tutoring Implementation Questions

1. Are you well informed about tutoring schedule and location?
2. Are the tutoring sessions implemented in accordance with the schedule set? If not how often they are not matched with the schedule?
3. Did the tutor start and end the tutoring session according to the time set?
4. In general, how often a tutor did not present in the class?
5. How often Regional Center staff monitor the implementation of the tutoring in one semester?
6. Do you feel convenient with the classroom and its facilities used for tutoring?

7. Are there any deficiencies in the implementation of the tutoring? Can you describe those deficiencies?
8. If there are shortcomings in the implementation of the tutoring program, are those very disturbing in achieving the purpose of the tutoring?
9. In general do you feel satisfied with the implementation of the tutoring program?
10. Can you describe in general, how well the tutoring program was implemented?

The Impacts of Tutoring Program Questions

1. By attending tutoring sessions can you eliminate the feeling of isolation as a distant learner?
2. How far the tutoring program improves your motivation to study?
3. Do you find that by attending tutoring session can help you to solve the problems face in your independent study?
4. Do you find that by attending tutoring session can improve your mastery of learning materials?
5. Do you find that by doing tutorial assignments can help you perform better in final exam?
6. Compared with the courses without tutoring provision, do you feel perform better in the final exam on the course with tutoring program?
7. Can you describe how the tutoring program influences your self-confidence in facing the final examination?
8. Can you describe how tutoring impact your course achievement and course completion in general?

Tutor Effectiveness Questions

1. Do you feel tutor treat you as peers—accepted and respected as adult students (your opinions are listened to, honored, and appreciated)?
2. Is self-directed learning, where students take responsibility for their own learning implemented in the tutoring session?
3. Do you feel that you are involved in active learning, as opposed to passively listening to lecture?
4. Does the tutor provide regular feedbacks for students?
5. Do you feel the tutor help you to solve the problems found in your study?
6. Can you describe in general how the tutor manages the session of the tutoring?
7. Do you find the tutor works effectively to help you achieve your goal?

Tutor Characteristics Questions

1. Do you think that tutor level of education would have an impact on your achievement in final examination? (Do you think that tutors with higher level of education (Master's degree) would have better impacts on your achievement than those with Bachelor's degree or vice versa?)
2. Do you think that tutor's professional affiliation would have an impact on your achievement on final examination? (Do you think that tutor hired from university lecturer would have better impacts on your achievement that those recruited from high school teachers or vice versa?)
3. Can you describe in general what kind of tutor characteristics do you think that have the most impact on your study?

Interpretations of the Result of Quantitative Data Analysis Questions

1. According to quantitative data analysis, there is a small correlation between the tutorial assignment score and the final examination results. What is your opinion about that result?
2. What is your opinion that there is a significant mean difference on final exam results between groups of tutor's with master degree and those with Bachelor's degree?
3. What is your opinion that there is a non-significant mean difference on final exam results between groups of tutor's with university lecturer affiliation and those with school teacher affiliation?

APENDIX C

INTERVIEW PROTOCOL FOR TUTOR

Tutor Name: _____ (Names will be kept confidentially)

Course : Social Science/Math/Science/Indonesian

Gender: M / F

Tutorial Site: _____

Regional Center: Serang

Tutorial Preparation and Implementation Questions

1. Did you receive training before implementing the tutorial program? If yes, how often did you receive the training?
2. Were the curriculum and syllabus of the tutoring program explained clearly on the training? If yes, did you implement them consistently in the tutoring program?
3. How long have you been a tutor? Do you have a tutor certification?
4. Could you explain your preparation before presenting a tutoring session?
5. Did the staff from Serang Regional Center monitor your tutorial preparation and implementation?
6. What do you think about students' preparation in general before attending the tutorial?
7. Did the students actively participate in tutorial activities as opposite of passive learning?
8. Did you provide guidance and strategies to master course materials and motivate them to study independently?
9. Can you explain in a brief, how did you organize the tutoring class from the beginning to the end of the class?

10. Did you apply an optimal pacing or intellectual challenge to students' ability in the tutorial?
11. How did you treat the students as adult learners?
12. What are the major problems do you face in implementing the tutoring and how to solve those problems?
13. In your opinion, what is/are the deficiencies of UT tutoring program? What are your suggestions to improve the program?
14. How satisfied are you with the compensation and other facilities you receive from UT as a tutor? If you are not satisfied, is this affecting your enthusiasm in implementing the tutoring program?

Confirmation Questions on the Résulta of Quantitative Data Analysis

1. According to quantitative data analysis, there is a small correlation between the tutorial assignment score and the final examination results. What is your opinion about that result?
2. What is your opinion that there is a significant mean difference on final exam results between groups of tutor's with master degree and those with Bachelor's degree?
3. What is your opinion that there is a non-significant mean difference on final exam results between groups of tutor's with university lecturer affiliation and those with school teacher affiliation?

General Comment

Do you have other comments, expectation, or suggestions in order to improve the quality of the tutoring program?

APENDIX D

INTERVIEW PROTOCOL FOR REGIONAL CENTER ADMINISTRATOR

Interviewee Name: _____ (Names will be kept confidentially)

Position: _____

Regional Center: Serang

Tutorial Planning, Implementation, and Monitoring Questions

1. Could you explain tutor recruitment process?
2. How far the suitability between the tutor educational background and the course they tutoring?
3. How the tutors were trained?
4. How often the tutoring process is monitored?
5. How to evaluate tutors performance?
6. What are the major problems in conducting the tutoring and how to solve those problems?
7. Some confirmation questions (will be developed based on the important findings from tutorial observation, teacher trainees and tutors interviews).

Confirmation Questions on the Result of Quantitative Data Analysis

1. According to quantitative data analysis, there is a small correlation between the tutorial assignment score and the final examination results. What is your opinion about that result?
2. What is your opinion that there is a significant mean difference on final exam results between groups of tutor's with master degree and those with Bachelor's degree?

3. What is your opinion that there is a non-significant mean difference on final exam results between groups of tutor's with university lecturer affiliation and those with school teacher affiliation?

APPENDIX E

HUMAN SUBJECTS COMMITTEE APPROVAL LETTER

FLORIDA STATE UNIVERSITY
Office of the Vice President for Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 03/18/2013

To: Anak Agung Putra

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
EVALUATING THE EFFECT OF FACE-TO-FACE TUTORING ON IN-SERVICE TEACHER TRAINEE PERFORMANCE AT THE INDONESIA OPEN UNIVERSITY

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 03/16/2014you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Peter Easton, Advisor
HSC No. 2012.8286

APPENDIX F

CONSENT SCRIPT FOR TELEPHONE INTERVIEW

Hello,

My name is Anak Agung M. S. Putra, Ed.D. Candidate in the Sociocultural and International Development Education Studies (SIDES) Specialization, Department of Educational Leadership and Policy Studies, Florida State University.

You are invited to participate in a research study of evaluating the effect of face-to-face tutoring program in teacher trainee's performance at the Indonesia Open University. You were selected as a possible participant because you are a student (or a tutor) of in-service teacher training program at Universitas Terbuka, the Indonesia Open University.

If you agree to be in this study, I would ask you to participate in an individual telephone interview about your perception of tutoring program at Universitas Terbuka. Interview will be audio taped and transcribe for analysis. The interview will last less than 45 minutes.

This study has no risk. There is no likelihood for physical or psychological harm. All the information I receive from you, including your name and any other identifying information will be strictly confidential. You will not be identified in the tape or transcriptions of the interview. After the tape has been transcribed, it will be erased.

Participation in this study is voluntary. If you decide to participate, you are free to not answer any question or withdraw at any time without any consequences.

The benefits of your participation will be a better understanding of challenges to face-to-face tutoring program in distance education, and insight into initiative that might improve the program.

If you have any questions concerning this research study, please feel free to contact me at 1-850-559- 3029 or by e-mail at ap08h@my.fsu.edu. You may contact my Advising Professor Dr. Peter B. Easton at 1-850-644-8165, email address peaston@fsu.edu.

If you have any questions or concerns regarding your right as a participant in this research study you can contact the FSU Human Subject Committee at 1-850-644-8633, or by email at humansubjects@magnet.fsu.edu.

If you agree to participate, I will start the telephone interview right now or you can decide another time convenient to you. By answering the questions I will ask means you consent to participate in this research study.

Would you like to start the interview right now?

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BIOGRAPHICAL SKETCH

Anak Agung Made Sastrawan Putra

Married to I Gusti Ayu Candra Dewi since 1997, two children, A.A. Kevin Devano Putra (son, 15) and A.A.Dhea Crystalia Putri (daughter, 13)

Education

B.Sc. in Fisheries, Bogor Agricultural University (IPB), Bogor, West Java, Indonesia, July1984

M.A. in Psychological Foundation in Education, University of Victoria, Victoria, BC, Canada May 1993

Ed.D. in Sociocultural and International Development Education Studies, Florida State University, Tallahassee, Florida, July 2013

Professional Experience

Academic Staff of Faculty of Mathematics and Natural Science, Universitas Terbuka (The Indonesia Open University), 1985-present

Head of Student Service Unit, Universitas Terbuka, 1986-1987

Coordinator of Registration, Universitas Terbuka, 1997-1988

Executive Secretary of Vice Rector on Student Affairs and Operation, Universitas Terbuka, 1988-1990

Chair of the Committee Secretariat of Universitas Terbuka 1st Graduation, 1989

Assistant of Vice Rector on Operation, Universitas Terbuka, 1993-1996

Coordinator of Final Examination Materials Preparation and Dispatch, Examination Center Universitas Terbuka 1996-2003

Head of Distribution Center, Universitas Terbuka, 2003-2005

Head of Learning Material Service Center, Universitas Terbuka, 2005-2008

Chair of the Procurement Committee of Learning Materials Dispatch, Universitas Terbuka 2004-2008

Management Representative for ISO 9001:2000 Quality Management Certification in Learning Materials Services, Universitas Terbuka, 2004-2008

ISO 9001:2000 Internal Quality Auditor, Universitas Terbuka, 2006 -2008

Secretary of the Procurement Committee of Learning Materials Reproduction, Universitas Terbuka, 2007-2008

Training

Intensive English Course, 1990, American Language Training, Jakarta, Indonesia

Leadership in Education, Camosun College, Victoria, BC, Canada 1992

Procurement of Government Goods and Services, 2004

ISO 9001-2000 Internal Auditor, Universitas Terbuka, 2005

Award

Rector Universitas Terbuka Award on the Achievement of ISO 9001:2000 Quality Management Certification, 2006

President of the Republic of Indonesia Medal of 10 Year Services, 2007

Themes

Students' persistence at and dropout from Universitas Terbuka (The Open University of Indonesia). Master thesis, University of Victoria, Victoria, British Columbia, Canada (1993). Major Professor Dr. Daniel Bachor

Evaluating the effect of face-to-face tutoring on in-service teacher trainee performance at The Indonesia Open university. Doctoral Dissertation, Florida State University, Tallahassee, Florida (2013). Major Professor: Dr. Peter B. Easton