

THE IMPLEMENTATION OF THE ICT-BASED THESIS SUPERVISION AT ONE OF POSTGRADUATE PROGRAMS IN INDONESIA

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Abstract

The development of information, computer and technology (ICT) has affected all sectors and activities including education from elementary school through university. However, even though the use of ICT has been widespread including in the University, its use in thesis supervision processes is still very limited. Only few lecturers have used it optimally. By contrast, many students and lecturers in certain universities get difficulties in determining an appropriate time for both parties because of the business of either lecturers or students.

This study is intended to find out a new effective and efficient strategy to supervise students writing thesis in a postgraduate program and to investigate the implementation of the ICT-based thesis supervision. Therefore, there are three major objectives of the research: 1. To investigate how to implement the ICT-based thesis supervision; 2. To trace the opinion of Masters students of English Education Program on the implementation of the ICT-based thesis supervision; and 3. To find a new effective way of thesis supervision. The research is qualitative by nature. The data were gathered by means of questionnaire, interview, and documents. Based on the data analysis and discussion, some conclusions are drawn. It has been found that the use of ICT in supervising students writing theses was very effective, and efficient. The students and lecturer are not limited by space and time, that is, they can communicate by means of internet anytime and anywhere; the advice that the supervisors provide is easily understandable and very neat. The students feel easy to follow what the supervisor suggests. And what is more important is that the students writing products are much better, more comprehensive, and neater.

Keywords: supervision strategy, ICT-based thesis supervision, ICT-based evaluation, and innovative supervision.

1. INTRODUCTION

Postgraduate students are expected to be able to write thesis or dissertation logically and systematically based scientific requirements. They have to be able to show their linguistic competence and communicative competence to the examiners before they are awarded a Masters degree or Ph.D. degree.

However, they frequently find some obstacles when they are writing their theses or dissertations, such as lack of mastery of grammatical structure, limited vocabulary, hard to meet busy supervisors, limitation of time to see supervisors due to their business at their offices, and living far away from campus.

What is ICT-based Thesis Supervision?

It is supervision intended for the postgraduate program students writing theses for their final examination before being awarded a Masters degree. The supervision is relatively different from the conventional one, where the supervisor and the students are present in a certain location, such as in an office or campus. However, in ICT-based thesis supervision, either the students or the supervisor or both are not present in the same place. Such situation might be due to their tasks outside campus, or the students might be on holiday, staying in their home towns. Such supervision and guidance are carried out by means of e-mails with specific features, and lay out which are prepared in such a way that the students find it simple, attractive, and easily readable.

The students were required to produce a scientifically standard quality of writing in the substance, syntactic, lexical as well as the style of writing. For clear reasons, the thesis remains the most important final writing task a graduate student produces. For many Indonesian students taking Masters Degree in English Education who have to produce thesis in English, it is very frequently the hardest part of the process of getting a higher degree. Although the students at a postgraduate level have some experiences in writing reports, and papers relating to subjects they take, many of them find thesis writing remains a hard challenge. In fact, reports, thesis and papers are similar, in the sense that they are all presenting the results of some investigation or research and the conclusions to be inferred from them (Evan, 1997, Teitelbaum, 1989). Although there some differences in lengths, readership, and purpose, essentially, those types of writing should always take the same structure, that

is, at the beginning there will be a statement of the problem under investigation, in the middle will be a deal with the investigation into this problem, and at the end conclusions will be taken.

In thesis writing, the students should pay attention to the flow of idea in each paragraph they produce. Each paragraph should contain only one idea. It should comprise one topic sentence, followed by several supporting sentences and closed by a concluding sentence (Oshima, et al., 1999). The task of the supervisor is to direct and supervise them to write their theses so that their theses will always conform to the standard required not only in substance of the writing but also in the linguistic, syntactic, lexical and style matters of writing. In line with the development of ICT, the rapid development of the e-learning and the use of learning management system (LMS) (Jati, 2012) have triggered some universities and schools in Indonesia to use and develop e-learning. However, as he further stated, most of their e-learning materials and content still underuse the powerful features available in ICT, (Jati, 2012: 2-7). Jati (2012) studied ICT from the materials and content points of views, but this current study from the process of supervision view. But the mainstream is the same, that is, the underuse of the powerful feature of the ICT. In line with Jati's (2012) idea, Albert (2012) emphasizes the use of ICT either as a major mode of instruction or as a supplement to traditional face-to-face communication. He further states that ICT is a necessity because it offers great potentials to facilitate the development of English language proficiency of EFL learners. However, although it is necessary to develop EFL learners, Ciptaningrum (2012) has found that teachers, especially who are newly introduced to the ICT, may get the benefit only for the sake of the purpose of cognitive learning and skills acquisition. They have not integrated their cognitive knowledge of ICT into the classroom practices. Consequently, changes in classroom practices after the completion of teacher professional development organized by certain LPMP in Indonesia do not take place. On the top of that, little research which has ever been published on the use of ICT to supervise students' research scripts or theses. The current study primarily deals with that issue.

Why ICT-based supervision?

This study was focused on the use of ICT-based thesis supervision due to the great benefits of the use of ICT in education, in general, and in thesis and/or research report (script) writing supervision in particular. There are many advantages of information computer technology in education including in English education.

Some of the benefits of the ICT for education are among others:

1. it may be used to improve students' understanding and mastery of teaching materials;
2. it may provide learning chances for other students in different places and times;
3. it may improve students' learning motivation;
4. it may enable students' individualized learning;
5. it may enable students to have an access to the information hard to obtain;
6. it may enable students to gather information from the past, of the information which may be too expensive to gather;
7. it may create more suitable learning atmosphere;
8. it may enable students to make or carry out too difficult, expensive, impossible or dangerous experiment if it is done in a conventional way;
9. it may improve students' creativity and imagination;
10. it may provide chance for students to learn impressively with minimal guidance; and
11. it may improve students' mastery and skills on the use of ICT.

In a general sense, Umboh (2012) states that the use of ICT in education can be put into 4 categories: tutorial, application, exploration and communication. In more specific terms, Alavi and Gallupe (2003) as Umboh (2012) quotes, have found that the use of ICT has the following objectives and/or benefits;

1. improves competitive reasoning;
2. increases brand image;
3. improves the teaching and learning quality;
4. develops students' learning satisfaction;
5. improves (teachers' and/or institution's) income;
6. expands students' basis;
7. develops the service quality;
8. minimizes the operational costs; and
9. develops new products and services

Furthermore, Intel Corporation (2012) divides the benefits of information and communication technology (ICT) into four big categories, i.e., student benefits; school wide benefits; community benefits and countrywide benefits. Each of the categories can be elaborated as follows:

Students' Benefits:

1. **Enabled personalized learning** - it is stated that learning varies for every individual. Technology can provide a personalized learning environment that is adapted to suit the students' individual differences: progression level, pace, interest, learning style and backgrounds. Technology provides the support and challenge needed to keep students engaged and motivated and empowers them to reach their potentials.
2. **Enhanced team work and cooperation** - ICT tools promote the growth of an anytime, anywhere, environment of increased students cooperation and teamwork. Likewise, the implementation of technology directs the increased collaboration and teamwork among teachers who are planning ICT integration in their curriculum.
3. **Enriched STEM learning** – The products and services of the future will depend on engineers, scientists, and technology experts to create them. ICT assists students in collaborating with peers and experts designing products, collecting and analyzing performance data, and in many cases, actually helping them build products.

School wide Benefits:

1. **Measurable Teacher Outcomes** – ICT has resulted in many powerful and striking changes in how teachers teach and how students learn. Educators use ICT to design and assess learning activities, to communicate with students, parents and community members, as well as to participate in professional development experiences.
2. **Bridging the Gender Gap** – ICT has minimized gender differences in academic achievement. Lower achieving boys have improved performance and higher test scores with ICT. Other studies recognize that ICT helps improve the performance and attitudes of female students in traditionally male-dominated fields.
3. **Increased Global Collaboration** – ICT tools allow students to connect and communicate with classrooms all over the world, resulting in increased global awareness and a sense of cultural identity.

Community Benefits:

1. **Greater Community Involvement** – Technology can help support family and community member involvement in student learning by using methods such as school websites, email, blogs, and text messaging to help keep interested parties aware and engaged in their local education system.
2. **Sound Educational Investment** – In line with the scarcity of budgets of most schools, districts and minister of education, ICT is one of the key investments that should be made that benefits teachers and students.
3. **Improved Academic Reporting** – Effective ICT integration provides educational institutions with a variety of tools that community members and educators can use to analyze data such as demographics, achievement, and budgets. These feedback and analysis loop help keep schools accountable to their community.

Countrywide Benefits:

1. **Supporting Economic Development** – Research indirectly indicates that implementation of ICT in the classroom, along with the transformation to learner-centered instruction, supports economic and social benefits throughout a country.
2. **Increased Global Competition** – Investing in technology helps schools perform better. The increasingly important role ICT plays in economic development and the rapid rate at which it changes make it difficult for schools and countries which do not invest in technology to compete globally.
3. **Fostering Workforce Development** – in both developed and developing countries, non-skilled jobs are disappearing. The rapid changes brought about by technology demand that workers learn not only how to use specific tools, but also how to implement strategies for lifelong learning in the workplace.

How is ICT-based supervision?

The ICT-based thesis supervision was implemented by using e-mails. The students send their thesis drafts to the supervisor. Then the supervisor reads it, checking the substance, style, syntactic, and lexical matters. In this supervision, the draft is checked paragraph by paragraph. When the supervisor finds something wrong or inappropriate, he would highlight the wrong item, then clicks Review in the Menu, after that he clicks New Comment. A colored line will appear on the text connecting the wrong item with a comment column to the right margin of the draft. The supervisor then types the comments and suggestions or questions on the comment column. The comments and suggestions will look very neat and tidy. Unlike the hand-writing comments and corrections, the typed comments and suggestions using the ICT-based supervision will be clearly and easily readable. Therefore, it may make the students feel more comfortable, more self confident and more enthusiastic.

2. METHODS

The objective of the study was to find out an alternative way to help students in a postgraduate program improve the quality of their theses seen from the essence of the theses, the linguistic and writing style points of views.

The research was qualitative by design. There are three research instruments used in this study: documents, interview, and observation. The documents consist of five postgraduate program students' thesis drafts under the researcher's supervision in one of universities in Jakarta. Three of them have finished their study and the other two are still in progress of writing their theses. The three students who have finished their study got A scores (ranging from 81 – 100) when they took part in the thesis examination. The interview was carried out with participants to gather their opinions about the use of ICT-based thesis supervision. The interview used open ended questions to trace wider and deeper data about their opinion. And the last instrument – observation – was used to see the participants' performance while they were having consultation showing their revisions based on the suggestions during the consultation. In line with the nature of the research, qualitative, the validity of the instruments was determined by making use of triangulation, that is, more than one type of instrument was used.

3. FINDINGS AND DISCUSSION

In line with the instruments used, the data comprise three types: document-based, interview-based and observation-based. The document-based data are made up of the products of students' thesis writing. The participants consulted their theses and were supervised indirectly, that is, by means of e-mails. This was done because some of the participants were on a long holiday at the end of the academic year 2011/2012, starting from July through September 2011 and some others were in their home towns due to their theory completion, that is, the students who have finished their theory tend to return to their home towns, such as some cities in Java, Sumatra, Sulawesi, and Ternate. This situation happens because the participants who study at the Postgraduate Program of English Education in Uhamka, Jakarta, live in different places throughout Indonesia. Some participants live in Bengkulu, Padang, Riau, Lampung, (Sumatra), some in Mataram, in Ternate, and some other in several cities in Java. Some of them are English lecturers in private universities, and some are teachers of English at SMA or SMP.

The interview was conducted with the participants to gather their opinions about the use of ICT-based thesis supervision. This sort of data is very important to make sure whether the way of thesis supervision using ICT is suitable or not for them; to see what the good points as well as weak points of such kind of supervision. Some of the interviews was carried out directly on campus while the participants were attending the campus and some indirectly while they were in their hometowns, especially for those who were not at campus while the interview was administered.

Observation (nonparticipant observation) was carried out while they were consulting their thesis revisions and while they were presenting their theses on thesis examination. This data is very beneficial to make sure whether the ICT-based thesis supervision brought about expected writing products or not, that is, concerning with writing style, the essence of the thesis, lexical choice, grammatical structures, punctuation and spelling.

In line with the results of the data analysis of the three data sources, the following findings are obtained: 1. The participants were more motivated to write their theses using ICT based-supervision; 2. They felt they were supported very much by the way the supervisor has provided suggestions and comments for them by relatively different way from the conventional ones, 3. They found that the supervisor's suggestions and comments look more professional, neater, and more easily understandable and readable, 4. They considered it very helpful and convenience because although they were on holiday, they were still able to communicate with their supervisor to consult their theses; 5. They can do the revisions faster than doing the revisions based on the conventional way; 6. Aesthetically, they considered it more professional, look better; 7. More importantly, they said that they would implement the supervision as what they obtained in the future in their institutions; 8. What is more is that the quality of their theses is much more developed not only in the essence, but also in the style of typing, syntactical, and lexical accuracy. This can be seen from the results of the thesis examination where three of the participants took part in the final examination and all of them got "A" score. This is a proof that ICT-based thesis supervision is very effective and efficient to help students develop their thesis writing skills.

4. DISCUSSION

Based on the results of the data analysis, the following discussion is presented. 1. The participants were more motivated to write their theses using ICT based-supervision. When interviewed, the participants reported that they were very enthusiastic to write their theses because what the supervisor suggested could be understood easily. Besides, the suggestions are much more direct than those using the conventional supervision; This finding is in line with what Intel Corporation has stated. Many ideas and suggestions are really new especially in what to write, how to write and why to write. The following is an excerpt from what the participant said:

The way my supervisor comments and suggests some corrections in my thesis using ICT makes me interested, delighted and diligent to revise, because it is not boring

I found it really fantastic, motivating and interesting because it was presented in a very good and systematic way. I like it very much. And I am highly motivated to continue writing.

The quotation shows how the participant's motivation to write was improved by means of the use of ICT which much simpler, and easier to follow.

Another participant responded to the question whether the ICT-based thesis supervision helped her or not stating:

Saya lebih mudah memahami kesalahan dalam penulisan thesis saya dan mengetahui bagaimana cara memperbaikinya, karena di e-mail tersebut sangat jelas disebutkan kesalahan-kesalahan yang harus diperbaiki.

Meaning: "It's easier for me to understand the mistakes in my thesis writing and to know to revise them, because in that e-mail the mistakes that should be revised were clearly stated."

The quotation shows how the ICT-based thesis supervision help the participant realized the mistakes she made and how to revise it.

Another comment came from another participant responding to the question whether the ICT-based thesis supervision was interesting or not, stating:

Tentu saja sangat menarik. Karena thesis saya kelihatan lebih rapi dan berwarna, jadi saya juga lebih bersemangat untuk memperbaikinya. Daripada di coret-pakai tulisan tangan, terkesan kurang rapi dan jadi malas untuk merevisi.

Meaning: "Of course, it is very interesting, because my thesis looks neater and colorful, so I am also more enthusiastic to revise it than when it was checked by handwriting, impressing less tidy and so makes me lazy to revise it."

The quotation depicts how the ICT-based thesis supervision changed the participant's behavior and felt very enthusiastic to revise because the ICT-based thesis supervision provide colorful comments showing mistakes and how to revise them. Compared with the supervisor's comments by means hand-writing, which may look dirty and dull, the ICT-based thesis supervision looks neater and more professional.

The following quotation shows the participant's response to the question about whether "the ICT-based thesis supervision beneficial when you are away from the supervisor (for example, when you are not at campus, but, say, in your home town.)"

Yes, it is. Saya tidak perlu keluar banyak biaya hanya untuk ke kampus, apalagi buat saya yang jauh di pulau Sumatra. Sangat tidak mungkin untuk bolak-balik Jakarta-Padang Sidempuan untuk bimbingan.

Meaning: "Yes, it is. It is not necessary for me to spend much money only to go to campus, especially for me who lives far away in Sumatra Island. It is little possibility for me to go to and fro Jakarta – Padang Sidempuan for consultation."

The quotation shows how the ICT-based thesis supervision is beneficial for the students who are away from campus. It is very cheap and much more convenient because the student is not necessary to go to Jakarta only to consult their thesis without disturbing their valuable time with their family, for example.

These findings are relevant to what some previous writers and/or researchers have stated (Afiffuddin, 2010, Intel Corporation, 2012, and Umboh, 2012).

5. CONCLUSIONS AND SUGGESTIONS

Based on the results of the data analysis and discussion, the following conclusions are drawn. The ICT-based thesis supervision was proved to have:

1. improved the supervising and tutoring quality;
2. improved the participants' motivation to write theses;
3. developed more the participants' skills and mastery of the ICT use;
4. made the thesis revision quicker than using the conventional way of supervision;
5. made the suggestions and comments clearer; more easily understandable and readable;
6. made the participants feel supported to write better theses;
7. enhanced their willingness to do similar supervisions in the future in their own institutions;
8. have improved the quality of thesis writing style (margins, font type and size, topographical accuracy, punctuation use accuracy, and spelling accuracy);
9. have developed the quality of the content or essence of the thesis;

10. have developed the accuracy of lexical choice; it was found that many students were not aware of the importance of lexical accuracy; and
11. have improved the quality of grammatical structure; many students were found unaware of the importance of grammatical accuracy.

In line with the conclusions above, the following recommendations are put forward:

1. The supervisors or lecturers are recommended to make use of ICT in teaching and learning, more importantly in supervising their students writing theses;
2. The students are recommended to make use of more ICT-based learning activities so that they become accustomed to using it to handle some problems which are too difficult to solve or little possibility when using a conventional way.
3. The students should be more motivated to improve their writing skills and abilities, which for certain Indonesian students remain hard to do.
4. There should be formal or informal workshop on how to make use of ICT for thesis supervision not only for students but also for lecturers.
5. The students writing theses should be made aware of the importance of grammatical, lexical, spelling, and punctuation accuracy.
6. Further research should be carried out on the implementation of ICT-based supervision in lower level of education, such as in junior and senior high schools, and undergraduate level students writing assignments or project reports.

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