Integrating E-Supervision in Higher Educational Learning

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Technology has contributed a lot of improvements in pedagogical aspects of education. To many educators it is believed that technology will some day control the entire activities within education. This approach which is referred to as e-learning is transforming how education is being delivered. However the e-learning approach depends on the proper integration of technology, with the existing traditional means. The technology enabled approach should be positioned to enhance and not replace the existing traditional mean. There are a lot of ways through which technology has been adopted to enhance learning and these could include content dissemination, interaction, assessment, evaluation, communication and supervision. In this paper e-supervision is discussed as one method that technology is enhancing within higher educational institutions of learning. The paper discusses a pedagogical model for e-supervision that is facilitated by the available technology. This model indicates that there are several methods that are being adopted to enhance the traditional supervision. These methods include use of e-mails, discussion boards, forums, telephony, chat rooms, wiki, blogs and e-research group. The methods can be effective in enhancing supervision but would need a strong foundation in setting up a technological infrastructure, social atmosphere, communication, solidarity, time schedule, prompt of response and respect for members.

1. Introduction

There has been great emphasis on research within higher institutions of learning for all graduate programs. The quality of research from graduate students is greatly attributed to both the supervisor’s and supervisee’s efforts to do all activities that are offered in the specific research being undertaken. In many developed countries research has been considered as the driving force for the economy and therefore taken to be an essential component for all. There are several ways through which research can be supervised using traditional means; however technology has introduced other forms of supervision. These new forms of supervision methods are currently practiced informally by different supervisors. Supervision is a form of mentorship that develops within some one after a few times of practice [Pesron and Brew, 2002]. Therefore it is a result of constant giving of constructive guidance to some one being guided and there after measure the outcome. Research has indicated that supervision is one of the major influences on the research student outcomes [Seagram et. al., 1998; Latona and Browne, 2001]. This is because it directly contributes to what students do in relation to how they have been guided. Many times the supervisors are assumed to be knowledgeable in the specific research areas hence being used as reference points by the students.
The supervisory role helps to serve as a reflective practice through which the supervisee can question and modify their activities. Therefore the supervisor has to present a positive experience which question and lead to a modification of the supervisee's activities. Both the supervisor and supervisee's experience can be undertaken through traditional and modern (technological) means. Today technology has encouraged both the supervisor and supervisee to keep in touch, manage their activities, operate effectively and share experience despite the great barriers that may exist. However before the experience can take place and be shared, both the supervisor and supervisee have to establish a personal relationship which forms the foundation for the experience [Nelson, et. al., 2001; Pearson, 2000]. With the founded relationship a teaching-learning alliance is easily created between the stakeholders and it is this relationship that contracts them to do their respective roles. It is the role of the supervisor to make sure that the supervision bond is created irrespective of the existing circumstances. This bond can be further facilitated by the constant open communication between the supervisor and supervisee. For an effective supervision process, supervisor and supervisee need to agree on the activities schedule and goals. When such an important step has been taken, there is less ambiguity surrounding the supervision process [Nelson and Friedlander, 2001]. For any effective supervision process, key factors have to be considered. A multi model for pedagogical supervision is proposed for effective supervision through technology.

2. Supervisory Process

Supervision process involves several people undertaking different tasks together at different levels to accomplish a specific goal and in guidance of each other. The supervision process involves usually the client (research funding body), the supervisee and the supervisor. These people have different roles they undertake during the supervision process which directly or indirectly affect the final goal. It is been noted by Storm and Todd [1997] that supervision will involve the supervisors safeguarding the welfare of their clients, mentoring supervisees and protecting their professional practice. Therefore the tasks undertaken by the supervisor should not conflict to hinder any of the three stakeholders. In so many scenarios supervision is initiated with the consent of the supervisor who requires commitment from the supervisee and supervision process. This could be due to the expertise possessed, supervisory model undertaken, competence to supervisee, availability of the supervisor, honesty and integrity possessed by the consenting persons.

During the supervision process, personal relationship between the supervisee and supervisor creates the foundation on which the supervision process can be undertaken [Ladny et. al., 2001; Pearson, 2001; Watkins, 1995]. When the relationship fails during the supervision process it is always advisable to change supervisors in order to protect research interests. Initiating this relationship should be done by the supervisor who clearly outlines what this bond will hold and its
boundaries [Pearson, 2001; Bernard and Goodyear, 1998]. When the supervisee notices these efforts, they take the initiative to abide with the guiding principles of the supervision process. The supervisee will always feel comfortable when their learning interests are catered for irrespective of the existing circumstances. Despite the efforts from both supervisor and supervisee to undertake their tasks more diligently, both have always fallen short of their expectations. Carlason and Erickson [1999] note that both supervisor and supervisee need to reflect on what they have discussed on attaining the research goals. During supervision the norm of saying that you should do what I say but not what I think is not right in attaining the stipulated research goals. All stakeholders need to be offered an opportunity to discuss the requirements for the research.

A more prosperous supervision process will even involve the supervisor deepening the relationship by encouraging a friendship form of relationship [Bernard and Goodyear, 1998] that contains genuineness, respect and empathy. Such a relationship will motivate both supervisor and supervisee to carry out their tasks without any fear for each other. Many times as the supervisor gets to know about the supervisee’s characters, attitudes and the desire to be supervised, the relationship blossoms and the working pace increases drastically. Open and free communication is so vital for such a process that involves two people carrying out tasks at different levels. The communication should always aim at reaching a consensus on the research objectives, goals and tasks [Vespia et. al., 2002; Nelson et. al., 2001]. When both supervisee and supervisor develop the attitude of trust between each other, they tend to accept each other’s experiences and the desire to learn from each other. This creates a deeper feeling for the supervisee that they can be helped on areas where they have challenges, vulnerable and need more understanding. Having an attitude of openness to the new knowledge being offered by the supervisor creates an avenue for effective supervision. Irrespective of human factors such as gender, age, nationalities both supervisor and supervisee need to understand their roles during supervision.

The quality of postgraduate research supervision has been questioned due to the failure by both supervisors and supervisee to undertake their roles explicitly. Research results have been questioned, discarded, work plagiarised and probably the entire process of supervision mismanaged. This has encouraged many of the higher degrees institutions to occasionally undertake research supervision audits in order to maintain the quality of the research outputs. With the advancement in technology, the roles for the supervisor and supervisee during supervision have drastically changed. Certain roles can now be shared by both stakeholders hence making the entire supervision process dynamic.

Supervision today can be undertaken through two major ways; traditional face to face and e-supervision. In many respects today both supervision ways have been utilised to increase on the chances of providing effective guidance. However e-supervision has been increasingly adopted within higher institutions of learning for several purposes. It is been adopted due to the increasing large
numbers of students, increased number of distant collaborations, availability of technology and appreciation of technology by the educational society. In order to have e-supervision effectively adopted, there is need of full commitment from all stakeholders concerned. This commitment can only be offered when the stakeholders are aware of what needs to be undertaken. In many occasions e-supervision is carried out unknowingly hence not receiving the expected and required commitment. It is from this view that a model for pedagogical integration of e-supervision is proposed for higher educational institutions.

3. A Multi-model for Pedagogical Integration of E-supervision

The Multi-Model for Pedagogical E-Supervision (MMPES) has several components that are interlinked to each other to achieve the goal of electronic supervision as described in figure 1. The model contains three main components, the users (supervisor and supervisee), prior factors and e-supervision methods (synchronous and asynchronous).

3.1. Users

The users within the MMPES include supervisor and supervisee who are continuously interacting with each other in several forms. These two types of people initiate a form of agreed upon interaction that they use during the supervision process. The supervisor has the role of initiating most of the interaction methods that could be used during the supervision process. Many times the supervisor contacts the supervisee with suggestions on how the supervision process could be carried out. The supervisor has the role of formulating and maintaining the supervisory bond, creating an orientation to the supervision process, resolve conflicts and support the supervisee in any way. The supervisee has the role of making sure that the interactions within the supervision process are effective at all times, learning
without resistance, create Collaboration Avenue, monitor progress and publish research findings. The supervisee oversees the supervision schedule so that they take more responsibility of the process. With the different roles undertaken supervision can be enhanced through the existing prior factors.

3.2. Prior Factors

Prior factors are the requirements that need to be in place for e-supervision interaction to occur in an effective format. In order to have an effective e-supervision there is need for prior planning that involves setting up a technological infrastructure, social atmosphere, communication, solidarity, time schedule, prompt of response and respect for members.

Technological infrastructure: refers to the hardware and software that are necessary for the e-supervision to occur. Before e-supervision can take place both the supervisor and supervisee should have access to a computer fully connected to the internet and containing an appropriate operating system such Microsoft Windows. Sometimes all stakeholders may utilize specific application software such as Microsoft Office, Adobe Editor for making additions, deletions to the documents.

Social Atmosphere: refers to the acceptance of use of technology for learning within the community where e-supervision is being introduced. In many societies use of technology to enhance learning has not yet been appreciated for fear of replacing the traditional teachers. Therefore for e-supervision to effectively occur the society should have good feelings about its contribution to education. Technology appreciation by the educational society can be demonstrated through its adequate adoption for both teaching and learning.

Solidarity: refers to the harmony that has been created between the supervisor and supervisee on the entire process of e-supervision. There is need of harmonizing the entire supervision activities, virtual meeting schedules, response format plus other guidelines. Without a shared vision on how to achieve the stipulated research goals, both supervisor and supervisee can hardly embark on this challenging process of supervision. Therefore it is very important for them to have a work plan that will be adhered to during e-supervision.

Prompt Response: refers to replying to your counter part in the shortest time possible when contacted. Many times communication between people at a distance fails due to late replies. During e-supervision communication between the supervisor and supervisee has to be immediate to avoid being misunderstood. When communication is not done on time, participants loose trust in the entire process.

Time Schedule: refers to the routine like forms of planned supervision meeting that are agreed upon by both supervisor and supervisee. Before e-supervision can be effectively undertaken by both the supervisor and supervisee, the need to plan when and at what time they will meet for the supervision is a critical success factor. If any of the members abuses this time schedule or violates its existence, the impactions are loss of trust and commitment.
3.3. E-supervision Methods

There are several methods that have been identified to help in the e-supervision process and can be categorised under synchronous and asynchronous.

*Synchronous* category includes all methods where both the supervisor and supervisee interact in real-time during the e-supervision. There is immediate contact and response between the supervisor and supervisee. This category has methods such as chat room and online telephone (e.g. sky pee). *Chartroom* are electronic tools for real-time communication where two or more people interactively write to each other and receive immediate response. These tools have restrictive content editors that allow a specific number of lines to be typed at a time and never store the content after the chat. *Online Telephone* is an online communication that involves two participating members talking to each other through online tools such as sky pee. This is a cheap form of communication through the internet and requires participating members to share user ids for identification.

Asynchronous category is one that involves the supervisor and supervisee communicating to each other and do not receive immediate reply. Such communication faces challenges of slowness to respond, ignoring of communication as well as members being impatient. This method has categories such as e-mails, wikis/blogs, discussion boards, forums and e-research groups. The aim of this method is for the members to contribute to the e-supervision and receive a reply at a later stage. This method is very common today and is thought to be effective especially when both supervisor and supervisee are distant apart.

A blend of the components within the model contributes to a successful e-supervision process and can effectively influence research performance. With many students today undertaking ICT related modules, it is quite easy to utilize the form of e-supervision. However the educational level at which e-supervision should be administered needs further research before a conclusion can be made. Although the youth utilize synchronous communications as a tool for their specific activities, does it indicate its significance in transmitting knowledge to them?

4. Motivation for the Mppes

This model emanates from a case scenario at the Faculty of Computing and IT, Makerere University. The faculty has seen tremendous growth in terms of graduate students and this implies increased demand on the part of the supervisors.

The categories of students who seek graduate studies in most cases are working. This implies that they are engaged throughout the greater part of the day undertaking their normal duties and will tend to be free after the normal working hours. This however implies that the supervisor has to remain at work for extra hours which has a lot of demands not only on the supervisor but on the educational system as a whole. Majority of the supervisors are teaching on the graduate programmes and hence most of the supervisory time is spent in class. This scenario implies that the research students may not have adequate supervision if they are to use traditional face-to-face supervision. Unless alternatives are made
possible it means that majority of the research student may not progress through the research stage within the required time.

The faculty of Computing and IT starting October 2007 implemented this model partially through encouraging both the supervisor and supervisee to use the existing technologies. As a pilot, students with similar research area like E-services were grouped together and were required to form a group mail of which the supervisor is a member by default. The students were encouraged to submit their work to the group mail and fellow students comment on their colleagues work. Because they were in the same research area there is sharing of information especially literature. The supervisor watches the comments or the guidance being given and will comment to clarify, refocus the research, and provide the general guidance. This has definitely yielded results in that students learn from each other and also support each other to complete within the specified time. To a large extent the e-mail approach has been predominantly used. Only in a limited number of instances the chat facilities has been used for remediation/feedback from both supervisor and supervisee. It is important to note that this was a blended approach which had both the face-to-face and e-supervision. The group was expected to meet the supervisor once a week at an agreed time and the rest of the interaction was done through e-mail.

There were over-riding assumptions with this approach; each of the group members will be expected to contribute when ever there is a submission or else the team spirit will fade, access to the internet and e-mail are assumed to be possible to ensure timely feedback by colleagues.

In general there was appreciation from the group of students who participated in this pilot model testing. This is because it provided the students with alternatives and enable self mentorship which was a new learning opportunity. It also enabled group effort to be realized. As a result this particular group has thoroughly progressed in their research.

5. Conclusion and Future Work

With the current trend that indicates higher number of graduate students enrolling for postgraduate education, institutions are faced with a challenge of educating them (teaching and supervising). Technology has contributed to several opportunities for teaching and learning which include e-supervision. The multi model for pedagogical e-supervision illustrates that there exists several electronic methods that can be adopted when supervising graduate students. It is assumed that many of these graduate students are mature and can satisfy the prior requirements for this form of supervision. With this form of electronic supervision, supervisors and supervisee are able to develop a strong attachment to each other through the constant collaboration and communication. Technology tends to create a neutral platform for all stakeholders involved in the supervision process. The supervisee and supervisor learn how to respect, appreciate and share knowledge between each other as a sign of commitment to the supervision process.
References


