Being a Competent Doctoral Student: A Reflection

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Abstract
Building a successful PhD program requires a sustained research environment. The successful completion of a PhD thesis depends on a working supervisor-student relationship built on respect, responsibility, and involvement. Supervisors who are also working researchers should get the training they need to improve their supervising abilities. They act as role models in academic life both scientifically and morally. The employment of a second supervisor in addition to the primary one is strongly advised in order to improve the effectiveness of tracking student development and resolve interpersonal problems. Regulations from the university should outline the obligations of the research supervisor. In medical education, small-group instruction and learning have achieved an admirable position and gained popularity as a way to support research students in their studies and foster deep learning. The primary qualities include active student participation throughout the whole learning cycle and a clearly defined task orientation with attainable specific goals and objectives within a set time frame. Preliminary considerations at the departmental and institutional levels, including educational strategies, group composition, physical environment, existing resources, diagnosis of the research needs, formulation of the objectives, and appropriate teaching learning outline, are crucial to the development of an ideal small group teaching and learning session. Small group instruction at medical schools boosts student motivation, collaborative abilities, knowledge and skill retention, idea transfer to novel problems, and self-directed learning. Investigating the problems enables the learner to put their higher-order thinking and skills to the test. It supports adult learning, taking ownership of one's own development, and fostering self-motivation. This research paper aims to study the scholar’s perception of effectiveness of teaching and learning process during the first and second years of doctoral study.

Keywords: small groups, supervision, learning, medical educational scholarship

1. Introduction
The core of doctoral education is research. The doctoral student becomes an independent researcher after submitting a thesis. The supervision of DSc/PhD students has a significant impact on many outcomes. During any supervision, cultural aspects frequently coexist with international research scientific procedures and traditions. In the supervision of a DSc/PhD program, the chief supervisor typically assumes a leadership position. The importance of the supervisor's role in a student's success depends on how well-suited the supervisor is to the job (Oder, 2020). In doctorate education, a productive student-supervisor connection is a crucial advantage. Respect for one another, planned and agreed-upon shared responsibility, and participation from both parties are present (ORPHEUS/AMSE, 2019). A new area of responsible learning has been imposed on both the teachers and the learners in medical universities as a result of growing medical knowledge, the recognition of problems that results from it, and the change from teacher-centered instruction to learner-centered instruction in higher education. The optimal learning method is one of the most important decisions you make (Prince et al., 2003). Most institutions worldwide are looking for improved teaching strategies to improve clinical decision-making and offer ongoing, self-centered learning. (Magnussen et al., 2000). As long as it works toward innovation, progress, and the use of new teaching and learning techniques, teaching nursing (medical health) keeps teaching with dynamic quality (Jarvis, 2005). To accomplish this, the student instructors must include modern techniques into their lesson plans for undergrads. (Loving & Wilson, 2000). In other words, one of the crucial tasks in
instructional design is choosing the optimum teaching style (Shabani, 1995). It has been discovered that effective instruction leads to effective learning (Baghaie, & ATRKAR, 2003). As of now, medical schools often teach using lectures. Digital or analog lectures are still used to exchange information due to their many advantages, including their cost-effectiveness for large populations of students. This is true even in the face of the development of modern teaching methods like the problem-solving approach, task-based learning, and the availability of computers and the Internet (Safavi, 2000). Evidence indicates that informative material and a competent presenter lead to beneficial and reasonable results (Rahmani, 2011). Even while attending lectures is a necessary aspect of every student's learning experience, it discourages students from considering them as a crucial component of learning. After eight weeks of learning, studies in the past have shown that roughly 80% of the knowledge learned in lectures is lost (Aeen, & Nurian, 2006). Educational psychologists argued that learners must actively participate in order for learning to be effective and lasting. Therefore, educators are now stressing contemporary, dynamic, learner-centered approaches for colleges (Mehrdad et al., 2011). Based on their talents, introspection, and learning how to learn, which is derived from educational purposes and objectives, e-learning helps students achieve their educational goals (Pourghaznein, et al., 2015).

E-learning is a self-learning activity that has recently been used at a number of medical universities and international education institutions. Additionally, it aids in fulfilling one of the key goals of formal education, namely preparing learners for active and independent learning (Pourghaznein, et al., 2015; Sharma, & Mishra, Eds.2006). The exponential expansion of electronic learning through e-learning and learning management system (LMS) platforms in recent years is a result of the rapid development of information and communication technologies (ICT), Internet technologies, and web-based applications (Cheng, 2011). Studies on the benefits of computer-assisted instruction have produced encouraging findings when compared to alternative approaches (Shomaker, et al., 2002). According to Chang et al. (2008), computer-based instruction cuts learning time by 60% when compared to traditional approaches. According to a study, lectures produce much better acquisition than online learning (Pourghaznein et al., 2015). On the other hand, prior research have found that lectures and online learning provide the same levels of information acquisition (Mehrdad et al., 2011; Einarson et al., 2009; Casimiro et al., 2009; Gerkin et al, 2009; Zajacsek et al, 2006; Abbaszadeh et al, 2011; Park, & Hwang, 2011). In a study by Woo and Kimmick (2000), students were found to be much more motivated while using e-learning, despite the fact that there were no significant differences in acquisition scores or satisfaction between lectures and e-learning. Nevertheless, this approach was more frequently linked to technical support and software problems.

Small-group instruction has grown in popularity at medical schools over the past few decades. It is a popular way to support research students and improve the depth of learning that occurs during research. Small group learning is described as a type of learning that occurs when students collaborate in teams of eight to ten people (Crosby, 1996; Meo, 2013). Small group sessions improve student engagement, knowledge retention, the ability to apply research findings to real-world problems, students' critical thinking abilities, teamwork skills, self-directed learning, communication skills, and peer to peer contact (Norman, & Schmidt, 1992; Euliano, 2001). Also enables the opportunity to express ideas and promote viewpoints. The likelihood of graduates being able to communicate with patients and at various academic and scientific levels is increased. Doctoral (DSc) students have a better chance to monitor their own learning through small group discussions, which helps them experience self-direction and independence from their supervisors (Walton,1997). The meeting for presentation of concept papers by doctoral students took place on 16th August 2022 at School of Medicine, Copperbelt University, followed by research guidance. Hence this paper elucidates the importance of various teaching strategies implemented for students pursuing their doctoral research at Copperbelt University, Zambia.

2. Methods

2.1 Characteristics of Small Group Teaching

The active participation of students in the whole learning cycle as researchers, a clearly defined task orientation with attainable precise aims and objectives in a set time, and reflection based on experience and deep learning were the most crucial aspects of small group instruction (Crosby, 1996).

2.2 The Advantages of Small Group Teaching

Small group instruction offers the researcher a number of benefits, including self-direction and active learning, encouragement of reflection on and control over learning activities, and the development of self-regulatory skills essential for lifelong learning. Since it promoted the growth of self-motivation and investigative aptitude, the student was able to test their concepts, hypotheses, deep learning, and higher-order processes including data analysis, appraisal, and concept synthesis. It promoted adult learning and the acceptance of individual accountability for one's own development. promoted the development of transferable skills in leadership,
teamwork, organization, setting priorities, motivating people, problem-solving, and time management (O’Neill, 2003; Steinert, 2004; Jones, 2007).

At the Copperbelt University, Michael Chilufya Sata-School of Medicine campus, a research coordination committee for small group teaching sessions was established to develop and coordinate the implementation of the research sessions. To make sure that there are enough qualified faculty members and staff available to facilitate the groups, all of the committee members were given clearly defined roles and duties. The committee's chairperson made sure that meetings encouraged a friendly, cooperative work environment. Members of the committee developed problems, came up with and evaluated potential solutions, thought through the likely outcomes of each option, and decided on the best course of action. Based on the best way to achieve the intended result, decisions were made. The sessions were created to support the anticipated outcome after the desired outcomes had been decided upon. The guidelines were clear in stating that students should be able to access electronic databases like EMBASE or PUBMED when looking for information. An strategy focused on performance was used. The intended educational results were defined in a straightforward manner. As a result, the teacher and students are encouraged to share responsibility, and assessment and evaluation are directed. Prior to the session beginning, the department authorized the faculty and comprehensive plan and ensured that the necessary resources were available. Additionally, initial sessions were planned to foster an open, beneficial, and direct relationship between supervisors and students. A welcoming environment encouraged a culture by getting to know, appreciating, and respecting all people. Research students felt more secure and could contribute more freely. The members of the small group teaching faculty worked well together with the curriculum committee, took into account the content requirements necessary for the research scholars to achieve the objectives or outcomes, and decided which subject materials to include or exclude based on the committee's decision. More practical lessons, such as those on research methods, were chosen for small group instruction. During a research project, the change from student to coworker may cause unexpected friction and disagreements that could jeopardize the thesis and performance. To cope with the non-scientific parts of the PhD program, several small universities designate a mentor in addition to the supervisor. It is not required that mentors be selected from the same school or industry as the thesis project being evaluated. As opposed to that, they should be reputable, experienced academics with a solid record of communication. Concerns about one's career and the possibility of psychological anguish that PhD students encounter may transcend beyond the supervisor-student relationship (Assembly, 2014).

3. Ending of the Sessions

The group's learning was enhanced via a post-activity debriefing. The debriefing clarifies and summarizes what has been learned. After the small group exercise, the professors assessed the session's effectiveness by asking students to report on their understanding of the topic's goals and their motivation to learn. Meaningful feedback increased researchers' awareness of their strengths and areas for development and helped them pinpoint the steps they needed to take to perform better. By receiving feedback, one can reflect on their learning experience and choose how they might enhance it the next time. The conclusion of the quarterly talks was crucial in a constructive way; summarizing the key points aided in moving on to the next topic, which reinforced direction and gave the Doctor of Science (DSc) program at Copperbelt University, an impetus. However, anyone may develop their supervision skills with the right training and practice. Good scientists do not inevitably make good supervisors. African medical institutions should provide training programs for supervisors and build up administrative frameworks to clearly oversee the monitoring process. Regrettably, medical supervision faculty must adhere to strict requirements set by doctoral universities. The majority of universities let doctoral students pick their advisors, however not every faculty member is allowed to take students unless they can demonstrate their research aptitude (Orer, 2020).

4. Conclusion

At Copperbelt University's School of Medicine, small-group teaching and learning sessions provide a beneficial academic environment and a dynamic, collaborative learning approach for both basic and applied clinical sciences. Small-group instruction encouraged active participation from research students, improved collaborative skills, knowledge retention, and the capacity to apply conceptual knowledge to fresh research problems. It also raised student interest and helped them become more independent and critical thinkers. The research academics now have a special ability to learn things on their own thanks to this. This improved peer-peer engagement and student-faculty interaction while fostering self-motivation, problem-solving, deep learning, and higher-order activities. Two crucial qualities of a doctorate supervisor are the ability to supervise others and consistent research output. In certain international medical universities, the supervisor's performance is now formally evaluated as part of standard administrative procedure. Senior faculty members may only take on new students with administration approval. Institutions must also foster a productive and efficient environment for doctorate research, provide
adequate resources for career development, and safeguard the welfare of both students and the researchers who supervise them.

5. Conflict of Interest
No conflict of interest with any institution / organization.

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References


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