Mentoring Efficacy and Mentor Professional Development: A Reflective Case Study

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Abstract
Mentoring teachers in handling classroom-based research benefits both the mentors and mentees. While mentors develop their professional skills by guiding teacher-researchers in classroom-based research, mentees learn to identify and research on various issues relating to teaching. It is worthwhile to mention that the application of various strategies to assist other teachers elevates a practising teacher to the level of a mentor. In this article, the author elaborately presents her reflective case study on mentoring teachers in their classroom-based research. Based on her mentoring experience, she proposes a Mentor Professional Development model with empirical evidence to each component of the model.

Keywords: teaching efficiency, classroom-based research, professional skills, knowledge acquisition, technology integration

Introduction
Teachers generally develop their professional skills by doing online courses, participating in conferences, and publishing research articles after completing a study. Now it has become essential for teachers to consider mentoring (other fellow teachers) as a professional development activity because in the higher education scenario, the concept of mentoring is considered as an emerging idea (Metros & Yang, 2006). Mentoring, in the context of teaching, is a professional activity that promotes not only the conduct of classroom-based research but also facilitates teacher-researchers’ teaching style. Brockbank & McGill (2006) quote Clutterbuck (1998), who describes mentoring as “one of the most powerful developmental approaches available to individuals.
and organizations” (p. 66). Chand (n.d) gives a very comprehensive definition of mentoring, in which she refers to the continued support and guidance given by a trained individual to others to promote their learning and development. It is worthwhile to mention that teachers with a few years of experience in teaching can mentor new teachers, who require assistance in handling classroom-based issues. In this process, both the mentor and the mentee get the opportunity to grow in their career.

Considering the aspect of professional development, Granowsky (2017) quotes Darling-Hammond, Hyler & Gardner to define teacher professional development as “structured professional learning that results in changes to teacher knowledge and practices, and improvements in student learning outcomes” (p. 1). It indicates the efforts taken by teachers voluntarily to enhance their knowledge, which in turn has a positive impact on students’ learning. DJOUB (2018) defines professional development as “the process of developing the necessary knowledge-base and skills teachers require to carry out their role effectively” (para. 4). She goes on to mention the need for teachers to reflect, evaluate, and analyse their practices for developing their professional skills.

The analysis of the aspects of mentoring and professional development manifests possible connections between the two aspects, as both refer to the importance and need for developing one’s capabilities. In this article, the author elaborately discusses the extent to which mentoring helps teachers to develop their professional skills, through her reflective case study and presents a proposed ‘Mentor Professional Development’ model.

**Review of Literature**

1. **Studies on Mentoring**

Research studies on mentoring have focused on various aspects of the art of mentoring and have presented a few models for future mentors. Brockbank & McGill in their book *Facilitating Reflective Learning Through Mentoring and Coaching* present a model through the research conducted by Kram (1988) in a US business context and replicated the stages given by Levinson et al. (1978). Kram has suggested the stages of mentoring relationships as Initiation, Cultivation, Separation, and Redefinition. According to her, in the Initiation stage, the respective senior manager
assists and coaches the individuals for them to realize the possibility of meeting their expectations; in the Cultivation stage, more interaction takes place between the senior manager and individuals; in the Separation stage, individuals exercise freedom in carrying out their tasks; in the Redefinition stage, a new relationship emerges. According to Kram, mentor relationships promote career development and psychosocial development of both mentors and mentees. In the current mentoring project, the mentor (the author) could build a rapport with the mentees through weekly visits to the school and that helped in guiding them at every stage of the mentoring process.

Another researcher, Schulte (2014) presents the effectiveness of the Rural Teacher Residency (RTR) programme, in which teachers were given opportunities to earn a Master’s degree in 18 months. As a planning member of involving mentors, Schulte’s main objective was to verify the impact of the resources they provided, which helped mentors to perceive their role during the research. Schulte suggests that practising teachers need to be introduced to action research and by assisting student teachers, mentors would also get new insights about teaching. It must be stated that in the current mentoring project, the research articles shared by the mentor on action research, teaching strategies, and the method of analysing qualitative and quantitative data helped her mentees to understand the concepts and progress in their action research.

2. Research on Teachers’ Professional Development
Gaible & Burns (2007) talk about a few models in their handbook Using Technology to Train Teachers: Appropriate Uses of ICT for Teacher Professional Development in Developing Countries and one such model is the ‘Site-based Teacher Professional Development’ model, which advocates teachers working with their facilitators or master teachers to enhance their mastery of pedagogy, content, and technology skills. It is believed that by working with facilitators, teachers would be able to address local issues of a classroom.

The current mentor presents the proposed professional development model to indicate how mentoring helped her to play different roles (Aslan & Ocal, 2012) that paved the way for her professional development.

Need for a Mentor Professional Development Model
With the growing need for training new teachers in advanced teaching
skills, the role of mentors is given more importance in the educational scenario. It is felt that mentors can help teachers to adapt themselves to the requirements of teaching (Poth, 2019). In an educational scenario, the goal of mentoring is to enrich the professional and personal skills (Metros & Yang, 2006) of teachers. Hudson (2013) quotes Campbell & Brummett (2007) to explain the aspect of mentoring as “a way for professional growth, rests on empowering prospective teachers to think about expanded ways of engaging in (curricula) and in pedagogy” (p. 3). His study on mentors’ professional development, presents mentors’ perspectives of their pedagogical knowledge based on their mentoring experience. The mentors’ responses indicated the need for getting training in mentoring skills and getting exposed to other mentors’ mentoring practices relating to different teaching styles.

Thus, in the light of Hudson’s suggestion, it is worthwhile to mention that a trained mentor has to offer effective academic support to other teachers, which benefits both the mentor and the mentee. To reiterate this, the current mentor proposes a ‘Mentor Professional Development Model’ for the benefit of teacher educators’ with the rationale that mentoring offers scope for

1. Guiding teachers of different subjects by learning about their research area. It is believed that the acquisition of knowledge through research articles would provide direction to the mentoring process.

2. Training teachers in integrating the use of technological tools with their teaching, through workshops during the mentoring process.

3. A mentor to reflect on her mentoring experience and share it as a reflective case study.

4. A mentor to self-evaluate her new role (to verify mentoring efficiency and her professional development) through student teachers’ formal or informal reflections and reviews.

**Methodology**

Research on mentoring teachers has been done widely in most countries, with the focus on examining the impact of mentoring on the teaching and learning process. However, there is no detailed study to show the steps involved for a teacher to achieve his professional development through mentoring.
Thus, to highlight those steps, the current mentor presents her mentoring experience as a reflective case study that focuses mainly on mentoring efficiency and professional development. The author recently worked on the Action Research Mentoring Scheme (ARMS) project sponsored by the British Council, India. With nearly three decades of teaching experience at the tertiary level, the mentor assumed this new role to find answers to the following questions.

1. How does mentoring enhance the teacher-researcher’s ability to carry out classroom-based research?
2. To what extent does mentoring contribute to the professional development of the mentor?

To begin with, four mentees were identified through the purposive sampling method for the project. These researchers were selected after the initial discussion (with four pairs of different subject teachers), about the project expectations, procedures to be followed during the conduct of action research, and their initial level of interest in participating in the ARMS project. The discussion helped the mentor to build a rapport with the teacher-researchers, find out their lack of knowledge in conducting action research and their interest in developing their teaching skills. To begin with, in the exploratory phase, the mentor conducted a workshop to highlight the importance of handling classroom-based research, the different stages of the research, the various teaching methods, different types of data collection tools for gathering qualitative and quantitative data and analysing the data. During the workshop, the mentees were asked to brainstorm the challenges that they had faced in their classrooms and frame problem-based questions. This helped them to narrow down their research topics as ‘An action research on developing students’ capacity to understand science concepts’, ‘Developing writing skills among middle school children: A study’, ‘Application of concepts in science: An action research’, and ‘Developing speaking skills among school children: A study’. In addition to this, they were shown the need for maintaining a reflective diary and recording their classroom experiences as part of the research. At this stage, the mentor created a Blog, ‘Reflections on ARMS Journey’ and started recording her reflections on mentoring, which are available at https://mentoringexp.blogspot.com/

When the mentees moved to the second phase, i.e. the Action research phase, they were given guidance to identify suitable teaching methods
that would encourage students to perform better in their learning process. To facilitate that, the mentor used the following strategies.

1. Discussed their teaching styles, which they generally used in their classrooms.
2. Provided them with web links to a few research articles that dealt with various teaching styles used by other teachers to teach science subjects and language skills.
3. Conducted individual meetings with the mentees and discussed the teaching strategies that they had learned from articles.
4. Encouraged them to write lesson plans incorporating the new teaching strategies and share with the mentor and
5. Conducted a workshop and introduced a few digital tools like Blog, Podcast, and Google documents that facilitate the use of various teaching strategies.

Based on the inputs given, the mentees submitted their lesson plans that included new teaching strategies. They also shared their reflective diary, observation notebook, and all the test materials with the students’ responses that were used during their research, with the mentor. The effective implementation of teaching methods, and the progress made by mentees in their research were reviewed periodically. The discussion with the mentees revealed that they had learned to use technological tools like YouTube (for teaching science concepts), and Podcast (for enhancing students’ speaking skills) beyond classroom teaching. However, it was found that they had faced challenges in using smartphones for recording speech activities, in using web-based tools like Podcast and Blog while teaching within the classroom, and in getting technical support from colleagues. As there were variations in the tests and activities administered by the researchers (since their topic of research was different), the mentor suggested customized rubrics for evaluating students’ performances during the face-to-face and virtual meetings (which she convened) with each researcher. In addition to this, a Monitoring, Evaluation, Accountability, and Learning (MEAL) model presented by the Open University was shared with the researchers, which helped them to compare the qualitative data with the quantitative test scores. They verified whether their results provided answers to the research questions that they had framed earlier. Finally, they shared their findings with the mentor.
Data Collection

During the mentoring process, the mentor evaluated the mentees’ level of comfort with her intervention and the extent to which her guidance helped them to pursue their research (Question 1). She prepared a set of 12 statements and asked teachers to mark each statement 0-5, with zero being ‘strongly disagree’ and 5 as ‘strongly agree’ on the rating scale.

In addition to the above quantitative data, the mentor wanted to review her role and functions such as Model, Acculturator, Sponsor, Supporter, and Educator (Adlesi & Bizjak, 2010) as listed by Aslan & Ocal (2012) in their research article. She used this input to frame the following interview questions.

1. Having done classroom-based research, how do you feel now?
2. How far do you think I have given you guidance in this research?
3. Do you think that your research work helped you to reflect on your teaching?
4. Can you mention the way I have helped you to reflect on your teaching?
5. Can you rate your level of confidence to conduct action research on your own?

The interview was conducted individually with the researchers and their responses were recorded. They were then uploaded to the mentor’s Podomatic web page. A sample recording can be accessed at the link given below.

https://www.podomatic.com/podcasts/revathiviswanath55/episodes/2020-01-31T02_06_31-08_00

Analysis and Interpretation

The analysis of the quantitative (Questionnaire) data proved that the guidance provided by the mentor at every stage of the mentees’ research, had helped them to progress consistently. The responses given by the mentees indicated the effectiveness of mentoring.
Concerning the mentor’s professional development, the mentees’ responses (qualitative data) showed the extent to which the mentor had used her teaching and research experiences in mentoring them. The collective responses of the researchers to the interview questions are given below.

**Figure 2 Researchers’ responses to interview questions**
Discussions

The experience of the mentor in guiding teacher-researchers and its positive impact on the researchers’ successful completion of their classroom-based research has led the mentor to design a professional development model.

**Figure 3 Mentor professional development model**

The description of the phases would highlight how the mentoring experience and the related research study done by a mentor paves the way for his/her professional development.
According to the model, in the first phase of ‘Building Relationship’, a teacher-mentor develops a rapport with mentees through discussions on the challenges that they come across in the classroom and finds out their willingness to take up classroom-based research. This creates an opportunity for them to know each other. After developing a healthy relationship (Alpert, 2009), both mentor and mentee arrive at an understanding and set their individual goals. The rationale behind this phase is that, when a mentor and mentees understand the strengths and weaknesses of each other, the mentees will be able to accept the leadership of a mentor. Similarly, the mentor will get the confidence in assisting them.

In the current mentor’s project, her individual goal was to offer effective guidance to mentees’ research studies and analyse its impact and the scope it offers to her professional development. In the case of mentees, their goal was to enhance their teaching strategies and students’ performance in learning.

Moving on to the second phase, i.e the ‘Knowledge Acquisition phase’, the mentor draws a plan for equipping her knowledge relating to teaching methods, tools used, and evaluation techniques demonstrated in different subject-related research. She accesses a few articles relating to the subject of research and makes a note of the above-mentioned points. The rationale behind this phase is that, only when a mentor learns about the pedagogical aspects of a specific subject, she will be able to provide customized mentoring support to mentees of respective subjects.

In the current project, the mentor (who is an English teacher) had to refer to the research articles such as ‘Teaching science’ (Alsop, S. & Hicks, K., 2012), ‘How a qualitative approach to concept map analysis can be used to aid learning by illustrating patterns of conceptual development’ (M. Kinchen & D.B. Hay, 2010), and ‘Promoting Scientific Literacy Using a Socio-critical and Problem-Oriented Approach to Chemistry Teaching: Concept, Examples, Experiences’ written by R. Marks & I. Eilks (n.d), as two of her mentees were working on the science-related research topics. While one of them dealt with ‘teaching science concepts for better understanding’, the other mentee worked on ‘teaching the application of science concepts in real-life contexts’. From those articles, the mentor could learn about the pedagogies in teaching science subjects. Similarly, for training teacher-researchers in analysing qualitative data, the mentor...
could find an evaluation model from the Monitoring, Evaluation, Accountability, and Learning (MEAL) project report dealt with by the Open University (2014). It was felt that the analysis of the model during an individual discussion with the mentees would help them to analyse their data.

In the ‘Implementation phase’, a mentor devises different strategies to educate mentees about various aspects of research. It is done by

1. Offering training adequately in much-needed skills.
2. Conducting workshops and providing hands-on experience in using new teaching and evaluation tools.
3. Providing a teaching model and forming a study group to encourage researchers to discuss the model.
4. Sharing the web links to research articles and encouraging teacher-researchers to learn teaching strategies, evaluation techniques used by the authors of those articles.

The rationale is to provide exposure to new teaching strategies and make mentees understand the implications of using a new teaching method in their classroom.

For example, the hands-on experience is given by the current mentor during the second workshop, and the individual discussions on the lesson plan and implementation of teaching methods helped the mentees to decide on using a few basic tools like Blog, Voicethread, Blog, and Podcasts during teaching. Similarly, when the mentees completed collecting qualitative and quantitative data, the mentor shared the qualitative data analysis model (MEAL) with the researchers and explained the process of arriving at a theme from the verbal codes. They were then shown the procedure to compare the theme (got from qualitative data) with the quantitative test scores. In addition to this, while training teachers for making presentations of their classroom-based research, they learned to use Canva, Microsoft Poster templates for making posters, and Windows PowerPoint slides for making presentations. The mentor felt that this would give them the preparedness to handle action research and present their findings on their own in the future.

According to the ‘Reflection phase’ of the proposed model, a mentor evaluates her mentoring contribution towards mentees’ teaching strategies, research, and professional development. She evaluates her
efficiency through self-reflection and also by getting feedback from teacher-researchers relating to the guidance given. In that process, even the researchers get the opportunity to reflect on their teaching style. The rationale behind this phase is to indicate the importance of reflecting on one’s progress at every stage of teaching practice and research.

In the current research, the feedback given by the mentees on the mentor’s mentoring efficiency proved that she was approachable, had sufficient content knowledge, was very supportive, encouraged teachers to improve on their research work, answered the queries, and suggested adequate resources for the teachers to develop their teaching strategies. Similarly, the self-reflection helped the mentor to comprehend how her training and individual guidance facilitated successful completion of the mentees’ action research relating to English language and Science teaching. At the same time, she felt that the formation of study groups could have been emphasized for the mentees to get more inputs even from other teachers.

In the final phase, i.e when a mentor completes the mentoring process and moves towards the achievement of ‘Professional development’, she self-evaluates her contribution and also uses a qualitative data collection tool, for example, an interview to analyse her professional development. The rationale behind this is that the self-evaluation and the inputs given by the mentees would help her to analyse the efficiency in the roles played by her.

Considering the various roles played by a mentor as listed by Aslan & Ocal (2012), firstly, a mentor has to be a Model in showing her professional skills and inspiring mentees. In this regard, the current mentor could motivate the mentees to use technological tools in their research, by showing her Podcasts, Blogs, and Edmodo classes as samples. Secondly, as an Acculturator, the current researcher could train teacher-researchers to get used to research culture amidst their teaching schedule. Thirdly, as a Supporter, she could provide confidence to the mentees through constant interactions. Fourthly, as an Educator, she could create an opportunity for the mentees to learn from various research articles, and emphasize the importance of their continued professional development. Similarly, the analysis of the mentees’ responses in the interview indicated that the mentor’s effective mentoring had trained them to reflect on teaching, develop confidence in handling research and become autonomous in taking decisions relating to technology-
enhanced teaching strategies. Thus, the model emphasizes the need for developing professional skills through mentoring.

Considering the aspect of professional development through research, according to the model, a mentor, who takes up various initiatives to guide her mentees, generally finds prospects of working on a research study based on her mentoring experience. She might work on her mentees’ level of motivation or mentees’ teaching proficiency or the need for teacher training and any other related issues. The current mentor could work on her mentoring efficiency and professional development and collect quantitative and qualitative data. The analysis of the qualitative data and the roles played by the mentor prove that mentoring had largely contributed to her professional development (which answers the second question).

**Conclusion**

The reflective case study has shown the possibility of mentoring teachers and encouraging classroom-based research. Similarly, the proposed model has indicated the prospects of a teacher playing different roles as a mentor and enhancing professional skills. In this context, it is worthwhile to mention that although the current mentor was not employed in the institution from which she had selected her mentees, she could successfully assist them in their classroom-based research. However, she had limitations in conducting meetings during examination times, as the researchers were busy with their schoolwork. As a result, the mentor had to conduct a few virtual meetings. This reiterates the point that an experienced teacher, who takes up the role of a mentor will be able to schedule her meetings based on the availability of her mentees. Besides this, as Morley (2019) mentions, mentors can help mentees to perceive problems and challenging situations from different angles, widen their network, prepare them to use different methods and strategies in handling work, and take decisions autonomously. Thus, it is suggested that in every institution senior teachers could be motivated to co-mentor newly recruited teachers, and also work on a research topic relating to their experience of assisting teachers.

**References**


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