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Research Article

# Implicit and Explicit Modelling: Case Study of EMU (Eastern Mediterranean University) Teacher Educators' Perceptions and Practice

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The broad purpose of this qualitative study is three-fold. One, to gain Eastern Mediterranean University (EMU) teacher educators' views on the significance of the teaching methods of implicit and explicit modelling. Two, to ascertain aspects of practice they modelled and, three, benefits and challenges associated with using the methods.

To achieve the purpose all 11 teacher educators from the faculty were asked three broad questions via a semi-structured interview protocol. Interviews were audio recorded then transcribed. The data was analysed using content analysis and the three questions as pre-set categories.

Examples of the findings include the fact that all the participants have a favourable attitude towards both implicit and explicit modelling. All regarded modelling as important for personal and professional growth. Time is the main constraint to their use of the methods, and critical friendship based on a collaborative relationship is considered to be of central importance to their engagement with the methods.

Implications of the findings for teacher education and educators include the need to encourage open discussion, reflection, the use of the methods among teacher educators, the development of a supportive environment, and the provision of continued professional development opportunities.

## Introduction

The idea of teacher educators doing—during teaching—that which student teachers are to do in their teaching and offering them access to the pedagogical reasoning, feelings and thoughts that accompany their actions, i.e., Modelling (Conklin, 2008), continues to be a point stressed by various teacher education organisations and writers. For example, the American Association of Teacher Educators (2009), Lunenberg, Korthagen, & Swennen (2007) and Conklin (2008).

While this is encouraged, Conklin (2008) points out that the implementation of modelling intentionally as a way

or method of teaching is deceptively difficult. While we agree with Conklin, we as teacher educators also know from our experience that—with some effort—it can be achieved, and that there are benefits and challenges to doing so. Given this, the broad purpose of this qualitative study is three-fold. One, to gain Eastern Mediterranean University (EMU) teacher educators' views on the significance of the teaching methods of implicit and explicit modelling. Two, to ascertain aspects of practice they modelled and how (explicit and/or implicit) and, three, benefits and challenges associated with using the methods in teacher education and training courses.

Achieving this aim is important for two reasons. Firstly, the area seems understudied (Conklin, 2008 and Lunenberg, Korthagen, & Swennen, 2007). But more importantly, there are no known local studies which address this area in North Cyprus. Therefore, this investigation contributes to filling a literary gap and makes an original contribution to knowledge (Phillips and Pugh 2000). Secondly, this paper is a useful resource for teacher educators because it makes clear potential benefits and challenges they could face as they seek to use the methods in their practice.

This research is outlined as; the review of relevant literature followed by a statement of three research questions used to guide the research, a discussion of the instrument used for data collection, and how data were analysed and in the last part the presentation and discussion of findings, implications for teacher education and educators, and conclusion.

## Literature review

The aim of this literature review is four-fold: to define implicit and explicit modelling and identify potential actions and activities indicating the use of these methods and the benefits and challenges associated with their use. We use these areas as a template to guide this review.

### *Implicit and explicit modelling: definition*

Hockly (2000) made the point that most teacher education courses include a certain amount of modelling of teaching by teacher educators. The literature highlights various types of modelling; for example, Powell (2016) highlights implicit and explicit modelling and facilitating the translation and connection of exemplary behaviour with theory. However, for this study, our focus is implicit and explicit modelling among teacher educators. Implicit modelling involves them doing or demonstrating in their practice that which student teachers are to do in their teaching. It involves a constant display of desirable practice and qualities of teaching in front of student teachers; it is subtle and embedded in content teaching and/or their daily practice (Yuan, 2018). Implicit modelling involves the demonstration of behaviours, attitudes, and values without explicitly stating them. Teachers implicitly model certain attributes through their actions, interactions, and reactions in the classroom. Teachers act as role models for students by embodying qualities such as respect, empathy, and a love for learning. Students may pick up on these characteristics by observing the teacher's behaviour rather than through direct instruction.

Implicit modelling can also encompass the transmission of cultural and social norms within the learning environment. Teachers contribute to shaping the classroom culture through their implicit actions and responses. Explicit modelling involves clear and direct communication of information. Teachers explicitly convey knowledge and skills through direct instruction, making the learning objectives and processes transparent to students. Teachers explicitly model specific skills or thought processes by demonstrating them and providing step-by-step explanations Grossman & McDonald (2008). This approach is commonly used in subjects like mathematics or science, where procedures and problem-solving techniques are explicitly taught. Explicit modelling is often associated with structured lessons that follow a clear plan, outlining what students are expected to learn, how it will be taught, and what success looks like.

In effective teaching, both implicit and explicit modelling play crucial roles. Teachers often use a combination of these approaches depending on the context, subject matter, and the needs of their students. While explicit modelling is essential for the transmission of specific information and skills, implicit modelling contributes to the development of students' values, attitudes, and social-emotional skills. Moreover, the distinction between implicit and explicit modelling is not rigid, and there can be overlaps. For instance, a teacher might explicitly state a value or principle and then reinforce it through consistent implicit modelling in their behaviour.

Ultimately, the effectiveness of teaching depends on a balanced and thoughtful integration of both implicit and explicit modelling strategies to create a rich and supportive learning environment. In addition to demonstrating and/or displaying, explicit modelling, on the other hand, involves teacher educators offering student teachers access to the pedagogical reasoning, feelings and thoughts that accompany demonstrations or displays (Conklin, 2008) by talking and being open about these during teaching sessions.

Having said this, there are researchers who do not differentiate the ideas of implicit and explicit modelling, but see all modelling by teacher educators as explicit and occurring at two levels. Level one is about teacher educators "doing" in their practice that which they expect student teachers to do in their teaching. Level two involves teacher educators offering student teachers access to the pedagogical reasoning, feelings, thoughts and actions that accompany their practice across a range of teaching and learning experiences (Loughran and Berry, 2005). While there is merit to seeing all modelling as explicit because the teacher educator is aware of the act of consciously demonstrating various aspects of

teaching, in this paper, we hold the view that there are types of modelling, not levels (Lunenberg, Korthagen & Swennen, 2007, Conklin, 2008 & Yuan, 2018).

While there is also a predominant focus on explicit modelling in the literature, there is an acknowledgement of the need for additional research into implicit modelling and its effects on student

teachers' learning (Lunenberg et al., 2007 & Hockly, 2000). Fundamental to this call for additional research is an understanding of the actions and activities that teacher educators' are required to model. This is important to create a complete picture of the area. Additionally, the information will be used to guide the construction of a semi-structured interview protocol to be used in this study.

Literature review matrix	
What is implicit modelling?	Potentially, what actions and activities by teacher educators indicate implicit modelling?
Potentially, what is/are the benefit/s of implicit modelling by teacher educators?	Potentially, what is/are the limitation/s of implicit modelling by teacher educators?

*Implicit and explicit modelling: teacher educators' actions and activities*

Teachers and Teacher educators are expected to demonstrate consistently high standards of personal and professional conduct. This is revealed in certain behaviour and attitudes (Teachers' Standards framework, 2011). The actions and activities of teacher educators highlighted by the literature can be categorised under the headings: personal and professional conduct and teaching characteristics.

*Modelling Personal and Professional Conduct*

We infer from Conklin (2008) that teacher educators should display—in speech and action—compassion for student teachers. Compassion means developing an

understanding for and being mindful of the social background or environment from which student teachers evolve. The writer also encourages teacher educators to shift collegial conversations away from what student teachers lack, towards discussing what will help them grow.

White (2011) highlights what she refers to as professional attributes and made the point that student teachers were able to recognize these being modelled by teacher educators. These were high expectations; enthusiasm; forming positive relationships with learners; calm, polite manner; engaging learners and punctuality. White (2011) attributes this recognition to the fact that student teachers may have these in mind because they were part of the standards by which they are assessed for becoming qualified teachers in the UK.



### Modelling Teaching Characteristics

The views of White (2011) make an excellent starting point. The writer states that it is possible to model many aspects of professional practice deliberately, for example, how to plan a lesson, and other practical skills and specific teaching strategies. With few exceptions, teaching characteristics that teacher educators should demonstrate or model consistently are extremely similar to those regular teachers should exhibit. For example, Conklin (2008) spoke of sharing personal stories /histories with student teachers that relate to the issue being discussed in the module or course; using assignments and activities to teach covert or unspoken aims; alerting student teachers to the emotional effect that a teaching session may cause, and the use of appropriate discourse to enhance student teachers' ability to learn and change.

Hockly (2000) speaking specifically about student EFL teachers made the point that teacher educators expose them to all of the elements that make up 'good' teaching. They do so by role-playing, where student teachers are encouraged to 'be' regular students, but at the same time to stay 'outside' of the teaching event, observing the teacher educator from afar, as it were, in order to be able to comment on the lesson afterwards. White (2011) praising the value of implicit modelling and role-play made the point that they should be seen as opposite ends of a continuum where role-play represents modelling without explanation. It seems for White (2011), role-play is a form of implicit modelling.

Yuan (2018) in displaying the actions and activities of a teacher educator stated that the educator would walk

around the classroom to interact with the students during group discussion. When she posed questions, she stepped off the podium and approached the student teachers to take immediate responses and ask questions and demonstrate the attributes of an effective language teacher in delivering knowledge, organizing activities, asking questions, giving feedback, and so on. As one can clearly see from the writers quoted here, and as indicated in the foregoing discussion, the actions and activities of the teacher educator are not dissimilar to that of the regular teacher in a classroom. As a matter of fact, they mirror those of a teacher in the regular classroom.

Hogg & Yates (2013) brings to our attention the fact that the use of direct instruction and lecture-discussion by teacher educators are also indicators of areas they modelled for student teachers. These, however, some student teachers do not readily recognise as a part of the modelling process carried out by teacher educators. The same can be said of Hogg & Yates's modelling of critical reflection, which seems to have been 'visible' to some student teachers and 'invisible' to others.

### *Implicit and explicit modelling: benefits and challenges*

Modelling benefits student teachers, teacher educators and education itself. For student teachers, a 'failed' experiment by a teacher educator (though this may seem at the time devastating to the teacher educator) will make it clear that there are risks involved in experimenting, and that failure must be expected and should be reflected on and discussed where appropriate (Lunenberg et al, 2007). Russell, (1997) reminds teacher

educators that how they teach and what they do during teaching has a much greater impact on student teachers' thinking about practice than what they teach. Modelling also gave the student teachers the confidence to try out these new strategies in their teaching practice (Hogg and Yates, 2013).

Speaking specifically to EFL teacher educators, Yuan (2018) states that it is via implicit modelling or demonstrating the attribute of an effective teacher—delivering knowledge, organizing activities, asking questions, giving feedback—that they help student teachers to experience what has been advocated in the discipline, and do so in a subtle and nuanced manner. Doing this also helps student teachers to internalise proposed teaching principles and strategies for implementation in their future classroom, thus contributing to their professional development (Korthagen, Loughran, & Russel, 2006).

For the teacher educator, modelling can also improve their teaching by helping them to add to their teaching list and to reflect on their own teaching and their teaching practice overall (Lunenberg et al., 2007). Some authors see modelling by teacher educators as a catalyst for a chain of events indirectly contributing to changes in education. This may occur when new practices introduced by the teacher educator help student teachers to become socialised in new ways of educational thinking and, by so doing, help them to improve their own practice, which—in turn—may lead to innovation in education (Lunenberg et al., 2007).

The main and only challenge attached to implicit modelling is that it seems student teachers do not often recognise it is occurring; thus, they seem not to learn a great deal from the modelling type and to apply what is being modelled to their own practice (Lunenberg et al., 2007 and Hogg & Yates, 2013). On the other hand, Powell (2016) in his study states that there is evidence that some trainees (student teachers) noticed their teacher educators' use of implicit modelling. However, some did not see it until it was pointed out to them. In our view, this is not grounds to discontinue implicit modelling by teacher educators, but a plea to combine it with explicit modelling to improve the chance of student teachers learning from teacher educators' modelling.

While this literature review defined implicit and explicit modelling, identified potential actions and activities indicating these types of modelling and their benefits and challenges, what was still unknown was the perspective of teacher educators at EMU on the significance of implicit and explicit modelling for teacher education, aspects of their practice they modelled and how (explicit and/or implicit) and the benefits and challenges of using implicit and explicit

modelling in teacher training courses. Based on these concerns, a study was launched.

## The Research

As indicated in the foregoing discussion, the aim of this research was three-fold. One, to gain the EMU teacher educators' views on the significance of implicit and explicit modelling for teacher education. Two, to ascertain aspects of their practice modelled and how (explicit and/or implicit) and, three, benefits and challenges associated with using implicit and explicit modelling in teacher training courses. To aid in achieving the aim, three broad questions were formulated and asked during interviews.

### Research Questions

1. What is the significance of implicit and explicit modelling for teacher education?
2. What are the contributions of implicit and explicit modelling for the current literature of teacher education?
3. What are the benefits and challenges associated with using implicit and explicit modelling in teacher training courses?

### Methodology and Participants' selection

In this research, a qualitative approach was used to gather data. This approach is used in order to obtain culturally specific information about the values, opinions, behaviours, and contexts of the 'teacher educators' (Silverman, 2016). All 11 teacher educators from the Eastern Mediterranean University (EMU) Faculty of Education North Cyprus were used as the population for this research.

### Data Collection

Data collection was carried out by using semi-structured interviews in Fall semester 2022-23. These were audio recorded then transcribed. Each participant discussed with the researchers times that were convenient for engaging in interviews.

### Data Analysis

The data was analysed using content analysis guided by three research questions used as pre-set categories. Powell and Renner (2003) state that pre-set categories provide direction for what to look for in the data. Through a process of careful analysis, which involved reading and rereading, highlighting key words and phrases, responses were matched with the categories or questions. The researchers at first analysed the data separately and then compared their analysis in order to

ensure the reliability and validity of the obtained data and results.

### *Ethical Issues*

Ethics forms were completed and sent to the university board of ethics in order to get permission to carry out the research. After approximately two months the board approved the research project. Also, before each interview, a consent form was given to the participants to sign which indicated their willingness to participate. It was agreed that their names would not be used in the report, so each was assigned a number, T1, T2, T3, T4 and so on.

## **Presentation and discussion of findings**

The following research questions are used as a template to guide the discussion in this section of the paper. These reflect the aims of this research. One, what are EMU teacher educators' understanding of the significance of implicit and explicit modelling for teacher education. Two, what aspects of their practice do they model and how (explicit and/or implicit) and, three, what are the benefits and challenges associated with using implicit and explicit modelling in teacher training courses.

What are EMU teacher educators' understanding of the significance of implicit and explicit modelling for teacher education?

According to the analysis of the data, the majority of the participants demonstrated good knowledge of implicit and explicit modelling. One teacher educator stated that she strongly believes in the importance of using implicit or explicit modelling during training the trainees [T1]. Another said that she thinks both model types are part of teacher training therefore they are of utmost importance [T2]. These thoughts suggest that there may be a certain amount of modelling of teaching by teacher educators occurring in the teacher education courses (Hockly, 2000). The rest of the respondents indicated that the use of implicit and explicit modelling in teacher training is significant, especially for teacher educators who were serious about their work as well as the development of the profession.

Some respondents claimed that implicit and explicit modelling was important for personal as well as professional growth or development.

I have been training trainees for 25 years. As an adult educator, I have to be well aware of the difference between pedagogy and andragogy. This could only be

achieved through constant modelling and then reflecting upon my teaching. It's very important for my personal and professional growth [T9].

Other teacher educators echoed the previous educator's view on professional development. "I believe while using implicit or explicit modelling, there are different levels of reflection, and each of which could contribute to professional development" [T 11]. "Reflection is significant for implicit and explicit modelling and for the improvement of practice" [T5]. "Both implicit and explicit modelling are a longstanding common practice for professionalism" [T3].

The literature supports the thoughts of these teacher educators regarding professional development or professional growth. For example, Lunenberg et al., (2007) made the point that modelling can improve the teaching of teacher educators by helping them to add to their teaching (grow professionally) by reflecting on own teaching and teaching practice overall.

It seems for the participants, it is by reflecting on the modelling in which they are engaged that professional growth or development takes place. Critical to this process is reflection-on action (Schon, 1983). Author (2010) argued that the act of reflecting-on-action may seem simplistic. However, the process is anything but simple, for what is required is careful consideration, together with a process of disciplined intellectual criticism combining research, knowledge of context/classroom and balanced judgment/ critical thinking (Author, 2009). Achieving professional growth or development by reflecting on modelling is not without its challenges, given that teacher educators are saddled with numerous and varied tasks. This is echoed in the thoughts of the participants, for nearly all expressed that a lack of time is a barrier to their involvement in reflection. Some respondents expressed their frustrations:

I know it very well being a teacher trainer carries an important impact to the improvement of the quality of education, but I always lack the time to reflect upon my teaching. I have to take up 24 teaching hours a week and my workload is too heavy. I'm glad that I am now seconded to the Education Department, I should have more time to reflect upon my modelling [T1].

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teaching methods of implicit and explicit modelling. Two, to ascertain aspects of practice they modelled and, three, benefits and challenges associated with using the methods.

We are always occupied by a multitude of tasks, and it's difficult to set priority. Time is definitely insufficient for the completion of all the tasks in an effectual way. It seems a matter of course to put reflection aside when there is a more urgent matter to settle. Other competing commitments of life also reduce the opportunities to reflect upon our modelling towards the trainees [T3].

One teacher educator regarded both methods important means to manage change and re-orient practice. Another revealed that by using implicit and explicit modelling one could challenge routine practice in class and help keep abreast of a rapidly-changing world. "I believe both implicit and explicit modelling could help us be conscious of the applicability of pre-set values and assumptions, as well as taken-for-granted practices in a rapidly changing world" [T11].

Another teacher educator held a similar view.

At a secular level, implicit and explicit modelling is a critical inquiry into our own practices as adult educators; at the metaphysical level, it is a drive for the improvement of mankind. It not only helps us confront new challenges; but we could also overcome human weaknesses through opening ourselves to critical inquiry. In the field of education, there are many conventional practices. As we move to the knowledge society, we have to respond promptly to a multitude of changes, at both micro and macro levels. In fact, success in change is inextricably linked to reflective practice as well [T8].

Embedded in the response of T11 above is the fact that it is by reflecting on what is modelled for student teachers that teacher educators bring to the fore their pre-set values and assumptions as well as taken-for-granted practices (Zeichner and Liston, 1996). While T8's response takes on a philosophical tone, she hints at the need for reflection—when she uses the phrase 'critical inquiry—as a means of improving practice in the field of education/teacher education.

Two teacher educators expressed the opinion that implicit and explicit modelling could be related to research. "In my opinion, implicit and explicit

modelling are not just arm-chair meditation; they could be related to action research. They are systematic, structured, scientific activities hinging upon a strategy and with a well-defined purpose" [T5]. Embedded in this response is the fact that modelling requires a conscious decision on the part of the teacher educator; it has to be structured, well thought-out and purposive. Hence, in this sense, it is similar to effective research which requires conscious decisions, structure, strategy and a well-defined purpose.

The literature highlights the fact that modelling in both forms benefits student teachers. In this regard, one teacher educator said: "Implicit and explicit modelling serves as a mirror for the trainees. Because their image as professionals develops from other people's comments—students, colleagues and teacher trainers..." [T7]. This thought is in-line with Russell (1997), who reminds teacher educators that how they teach and what they do during teaching has a much greater impact on student teachers' thinking about practice than what they teach.

### *What aspects of their practice do EMU teacher educators model and how (explicit and/or implicit)?*

All the respondents indicated that they engage in both implicit and explicit modelling over the course of their careers. They also note that the degree of rigorousness of the various forms of modelling used is—to a large extent—determined by the capacities or roles they undertake.

One teacher educator revealed that: "As a teacher, I engage in the descriptive type of reflection nearly after every lesson, and the receptive and interactive types of reflection with my colleagues comes naturally whenever we have sharing about our teaching and modelling..." [T6]. We will infer from this response that T6 modelled reflection to both students and colleagues. T4 seems to do the same when she said, "Basically, I am concerned with what happens in my classroom more than anything else. So I reflect a lot upon my teaching" [T4]. What is unclear is the actual type of modelling (implicit and/ or explicit) in which these teacher educators engaged.

Other teacher educators also stated that they engaged in both forms of modelling, i.e., implicit and explicit (T 1, 2, 3 & 4). One teacher educator indicated that she has the practice of keeping a learning journal and encourages student teachers to do the same. She said,

I write [in a] diary on my teaching every day. My motto is 'today's self is better than yesterday's, and tomorrow's is better than today's'. I enjoy recording every bit of my



reflection in the diary: the students' feedback; self-evaluation; comments from colleagues; learning from various sources, etc... [T8].

### *What are the benefits and challenges associated with implicit and explicit modelling in teacher training courses?*

Participants in this study highlight mainly challenges associated with implicit and explicit modelling in teacher training courses. For some, their roles and involvement with various facets of the university prevents them from engaging fully in modelling. One respondent said, "A willingness to model depends largely on personality and maturity and is also linked to life stages. I think other factors, such as resource support, opportunities available, and supportive mechanism in place, could also facilitate modelling" [T7].

An examination of the response of T7 reveals the fact that human factors such as personality, among others, which are also linked to life stages, can influence the use of modelling both negatively as well as positively. This idea seems to be supported by Lunenberg, Korthagen and Swennen (2007) who raised the issue that the human factor of being uneasy with the childish forms of role-playing (in which student teachers take the role of pupils in schools) can be a challenge and may even prevent the teacher educator from engaging in this form of modelling.

As researchers, we are in agreement with T7 that a supporting environment and opportunities to model would be very useful in promoting its use by teacher educators. T1 extends this idea when she said,

There should be more dialogue within and between different levels of the staff, so that we could encourage one another in implicit and explicit modelling through better communication. We have already institutionalized a number of measures which would make this possible. Like the annual Teacher Training Day/Camp for teacher trainers, assistant administrators, administrators and regular brainstorming sessions at all levels [T1].

Another teacher educator holds a similar view but defines the nature of the support that would encourage the use of modelling by teacher educators.

We do have a range of opportunities to encourage our staff to engage in both types of modelling. Depending on life

experiences and mindset, some people may need more focused activities, whereas some favour broad-based ones. However, the focus for each activity must be clear and the process more interactive [T6].

A teacher educator who is responsible for organising programmes for the purpose of teacher training expressed her views regarding support for encouraging modelling via professional development activities such as the teacher training day/camp. The point to note is that while opportunities should be provided, they ought not to be mandatory.

The contextual factor is important to promote and maintain the spirit of modelling. I am increasingly of the view that modelling must be done wholeheartedly; and it cannot be imposed. We should provide the opportunities, but it should be on a voluntary basis, and it should not be mandatory [T1].

T10 adds to the conversation the fact that measures taken to support teacher educators in the process of modelling should be concrete, organised and meaningful. Also, "the themes and tasks of these programmes must be carefully chosen. They must fulfil the needs of the participants, otherwise no significant impact will result" [T10].

A number of participants pointed out the importance of partnership in encouraging modelling by teacher educators [T1, 2, 3, 4, 5, 6, 7, 8, 10, 11].

I find it more fruitful if I could have support from my colleagues, and ideally, if we could collaborate during the course of modelling. I think modelling works best in a form of collegial partnership, and it should be much better than on individual basis [T3].

## **Implications for teacher education and educators**

Firstly, while teacher educators in our study identify the worth and importance of engaging in implicit and explicit modeling, there is the need to encourage open discussion, reflection and the utilization of the methods among teacher educators. This can be achieved through the introduction of continued professional development modules for teacher educators in this regards. This is important to raise awareness of implicit and explicit modelling and would allow these methods to become an important part of the teacher educators' teaching tool-

kit. Doing so could also help to reduce anxiety among teacher educators who do not wish to be perceived as embracing the old apprenticeship model of teacher education, which required student teachers to imitate the teaching behavior of their teacher educators (Korthagen and Swennen, 2007).

Secondly, there seems to be a number of challenges associated with implementing implicit and explicit modelling by teacher educators. Chief among these is the need for a supporting environment and the provision of opportunities for teacher educators to model, thus promoting its use by them. This suggests the need for the ethos or culture of institutions to support modelling. Developing an institutional ethos or culture which supports modelling may involve adjusting its mission, socialization process, what constitutes information, strategy, leadership, teaching practice and what learning resources are available (Tierney, 1988).

## Conclusion

The findings of this research study indicate that all the participants have a favourable attitude towards both implicit and explicit modelling. How they interpreted the teaching methods were based on understanding and knowledge derived from their practices. They all regarded modelling as an important means for personal and professional growth and pointed out that it could also help to challenge routine practice. All respondents have engaged in implicit and explicit modelling variedly throughout the course of their careers, and the use of a particular form—implicit or explicit—may be more prominently employed based on roles in which they perform. Some respondents claim that research is an effective way to facilitate modelling continuously.

Although the respondents were eager to engage in modelling, sometimes they fail to do so due to various constraints as emphasized in the findings. They regarded time as the major impediment to modelling. When there are other tasks/jobs which are more pressing, they tend to surrender to those which may include life and/or work commitments.

There are some things which impact modelling. For example, personality, maturity, life stages, resource support, available opportunities and supportive mechanism. It is generally agreed that institutional continued professional development activities and support are essential to encourage modelling. Activities should be meaningful with a clear focus and relevant, and with the purpose of collective reflection among teacher educators. Participation should be voluntary not mandatory.

The availability of critical friendship and partnership, based on a collaborative relationship, is considered to be

of central importance to modelling. This allows teacher educators to engage in critical inquiries of personal practice, sharing findings with others in a supportive environment. It is apparent that implicit and explicit modelling is a desirable professional behaviour among teacher educators; however, these do not automatically lead to improved practice. Teacher educators need support and guidance in developing appropriate strategies for modelling so as to transform it into a catalyst for professional growth and students' learning.

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