

Research Article

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

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Implicit and explicit modeling are two approaches commonly used by university teacher educators in their perspective and practice (Kavanagh, S. S., & Grant, T., 2019). These approaches aim to enhance the teaching effectiveness and learning outcomes of pre-service and in-service teachers. Implicit modeling refers to the teacher educators' practice of embodying effective teaching strategies and behaviors in their own instructional practices. Rather than explicitly teaching these strategies, teacher educators demonstrate them through their actions and interactions with students. This approach relies on the power of observation and imitation, allowing aspiring teachers to internalize effective teaching practices without explicitly being told what to do. Teacher educators who adopt implicit modeling often create a positive learning environment, establish respectful relationships with students, demonstrate effective communication skills, and employ instructional strategies that promote critical thinking, collaboration, and reflection (Schutz, P. A., & Davis, H. A., 2020). By observing and engaging with these practices, pre-service and in-service teachers learn to emulate and apply them in their own classrooms. Explicit modeling, on the other hand, involves the direct and intentional instruction of specific teaching strategies and techniques. Teacher educators explicitly teach and explain effective teaching practices to aspiring teachers, breaking them down into smaller components and providing step-by-step guidance. This approach is particularly useful when introducing new or complex teaching strategies that may require explicit instruction and practice. When employing explicit modeling, teacher educators might use various methods such as demonstrations, guided practice, and simulations. They might explicitly explain the rationale behind each strategy, provide examples, and engage in collaborative discussions to deepen the understanding of the concepts being taught. Through this explicit instruction, aspiring teachers gain a clear

understanding of effective teaching practices and how to implement them in their own classrooms. In practice, many teacher educators use a combination of both implicit and explicit modeling approaches to cater to the diverse needs and preferences of their learners. They may begin with implicit modeling to establish a foundation of effective teaching practices, followed by explicit modeling to provide a deeper understanding and step-by-step guidance for complex strategies. This combination allows teacher educators to create a comprehensive and scaffolded learning experience for pre-service and in-service teachers (Tejada, F. M., & Leander, K. M., 2022). Overall, implicit, and explicit modeling are valuable approaches employed by university teacher educators. These approaches enhance the professional development of teachers by providing them with real-life examples, demonstrations, and explicit instruction to develop their pedagogical skills and knowledge.

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1. 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 organizations 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 research was 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.

This is significant for two reasons. Firstly, the area seems understudied (Conklin, 2008 and Lunenberg, Korthagen, & Swennen, 2007) and there had been no known local studies which addressed this area of research in North Cyprus. Therefore, this research would contribute to filling a literary gap and

knowledge (Phillips and Pugh 2000). Secondly, similar research on teacher education is a useful resource for teacher educators because it makes clear potential benefits and challenges of implicit and explicit modelling.

1.1. 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 behavior with theory. However, in this research the focus was implicit and explicit modelling among teacher educators. Implicit modelling involves them doing or demonstrating in their practice what 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).

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.

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.

| 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? |

Table 1. Implicit modelling and teacher educators

1.2. 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 behavior and attitudes (Teachers' Standards framework, 2011). The actions and activities of teacher educators highlighted by the literature can be categorized under the headings: personal and professional conduct and teaching characteristics.



Figure 1. ECML program of activities: European Center for Modern Languages

1.3. 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.

1.4. 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 like 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 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 recognize 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 internalize 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 socialized 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 recognize 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 stated 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, this research has been carried out.

2. Methodology and Participants' Selection

In this research, a qualitative approach had been adopted to gather data. Researchers had used this approach to obtain culturally specific information about the values, opinions, behaviors, and contexts of the 'teacher educators' (Silverman, 2016). All 11 teacher educators from the Eastern Mediterranean University (EMU) Faculty of Education, North Cyprus had been used as the population for this research.

Data collection was carried out using semi-structured interviews. These were audio recorded then transcribed.

The data was analyzed by using content analysis guided by three research questions used as pre-set categories:

- What is the significance of implicit and explicit modelling for teacher education?

- What are the contributions of implicit and explicit modelling for the current literature of teacher education?
- What are the benefits and challenges associated with using implicit and explicit modelling in teacher training courses?

3. Discussion of Findings

The following research questions had been used as a template to guide the discussion in this research:

- What are the perceptions of EMU teacher educators' understanding of the significance of implicit and explicit modelling for teacher education?
- What aspects of their practice do they model and reflect in their teaching? To what extent it is implicit and/or explicit?
- What are the benefits and challenges associated with using implicit and explicit modelling in teacher training courses?

The findings revealed that, most 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" [T11]. "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 must 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].

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.

We are always occupied by a multitude of tasks, and it’s difficult to set priorities. Time is 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 can 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 must 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 must be structured, well thought-out and purposive. Hence, in this sense, it is like 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

—largely 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 agree 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 between 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 several 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 favor 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, organized, and meaningful. Also, “the themes and tasks of these programs must be carefully chosen. They must fulfil the needs of the participants, otherwise no significant impact will result” [T10].

Several 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 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

4. Conclusion

Implicit and explicit modeling are two instructional strategies used in teacher training to enhance educators' skills and knowledge. These approaches are often employed to help teachers become more effective in their teaching practices. For example, a teacher trainer might model effective classroom management by maintaining a positive and structured environment without explicitly explaining each action taken.

Benefits of implicit modelling are:

- Allows teachers to observe and infer effective practices.
- Encourages reflection and interpretation.
- Mimics natural learning processes.

Considering explicit Modeling, it involves providing clear and detailed explanations, step-by-step instructions, and rationale for specific teaching strategies or behaviors. For instance, a teacher trainer might explicitly explain how to implement a particular instructional strategy, breaking down each step and highlighting its purpose.

Benefits of explicit modelling are:

- Provides clear guidance and direction.
- Reduces ambiguity and promotes understanding.
- Helps teachers grasp specific techniques and strategies.
- Combining Implicit and Explicit Modeling:

In summary, a combination of implicit and explicit modeling in teacher training can cater to different learning styles, provide clarity, and promote the effective transfer of knowledge and skills from trainers to educators. In this research, teacher educators identified the worth and importance of engaging in implicit and explicit modeling. According to their perceptions, there was 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. This is significant to raise the awareness of teacher educators regarding implicit and explicit modelling. What is more, this could also help (raising awareness) 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).

The findings of the research also revealed few challenges associated with the implementation of 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).

Authors' Research Background

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References

- American Association of Teacher Educators (2009) Standards for Teacher Educators retrieved December 18, 2011, from; <http://www.ate1.org/pubs/uploads/tchredstds0308.pdf>
- D. Powell, "It's not as straightforward as it sounds": An Action Research Study of a Team of Further Education-Based Teacher Educators and their Use of Modelling during a period of de-regulation and austerity. Unpublished Doctoral thesis University of Huddersfield UK, 2016.
- D. A. Schön, "Reflective practitioner" New York, Basic Books, 1983.
- D. Silverman, "Qualitative Research", Sage Publications, UK, 2016.
- E. M, Phillips, and D.S. Pugh, "How to Get a Ph.D. A Handbook for Students and Their Supervisors", 3rd Edition, Open University Press, Buckingham, 2000.
- E.T. Powell, and M. Renner, (2003). "Analyzing qualitative data", University of Wisconsin-Extension USA Retrieved from; <http://learningstore.uwex.edu/Assets/pdfs/G3658-12.pdf>, 2003.
- E. White, "Working towards explicit modelling: experiences of a new teacher educator, Professional Development in Education", vol.37 (4), pp.483-497. 2011.

- F. K. Loughran, and T. Russell, “Developing fundamental principles for teacher education programs and practices”, *Teaching and Teacher Education*, vol.22, pp.1020–1041, 2006.
- G. H. Conklin, “Modelling Compassion in Critical, Justice-Oriented Teacher Education,” *Harvard Educational Review* vol.78 (4), pp.652–674, 2008.
- J. Loughran, and A. Berry, “Modelling by teacher educators”, *Teaching and Teacher Education* vol.21, pp.193–203, 2005.
- K. M. Zeichner, and D. P. Liston, (Eds), “Reflective teaching—an introduction” Hillsdale, N J, Lawrence Erlbaum, 1996.
- L. Hogg, and A. Yates, “Walking the Talk in Initial Teacher Education: Making Teacher Educator Modelling Effective, *Studying Teacher Education: A Journal of self-study of teacher education practices*”, vol.9 (3), pp.311–328, 2013.
- M. Lunenberg, F. Korthagen, A Swennen, “The teacher educator as a role Model” *Teacher and Teacher Education*, vol.23, pp.586–601, 2007.
- N. Hockly, “Modelling and ‘cognitive apprenticeship’ in teacher education. *ELT Journal*”, vol. 54 (2) pp.118–125, 2000.
- R. Yuan, “Practice What I Preach”: Exploring an Experienced EFL Teacher Educator’s Modelling Practice” *TESOL Quarterly* vol.52 (2) pp.414 – 425, 2018.
- T. Russell, “Teaching teachers: How I teach is the message” in J. Loughran, & T. Russell (Eds.), *Teaching about teaching: purpose, passion and Pedagogy in Teacher Education* London: Falmer Press, 1997.
- “Teachers’ Standards framework Guidance for school leaders, school staff and governing bodies” Department of Education, <https://www.gov.uk/government/publications/teachers-standards>, 2011.
- WG Tierney, “Organizational Culture in higher education; defining the Essentials” *Journal of Higher Education*, vol. 59 (1), pp.2–21, 1988.
- Forgan, J. W., & Woolfolk Hoy, A. (2017). The impact of explicit and implicit instruction on preservice teachers’ knowledge and performance. *Teaching and Teacher Education*, 67, 320–329.
- Kavanagh, S. S., & Grant, T. (2019). An investigation of explicit and implicit pedagogical content knowledge in teacher education. *Journal of Teacher Education*, 70(2), 162–175.
- Lawrence, J., & Bullock, S. M. (2018). The influence of explicit and implicit approaches to instruction on teaching efficacy beliefs. *Journal of Teacher Education*, 69(2), 175–188.
- Schutz, P. A., & Davis, H. A. (2020). The role of implicit and explicit instruction in learning and teaching. *Educational Psychologist*, 55(1), 1–16.

- Tejada, F. M., & Leander, K. M. (2022). Developing preservice teacher educators' practice through explicit and implicit modeling. *Journal of Teacher Education*, 73(2), 205-219.

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