

Building an Evidence-base for Teacher Education: Phase I

Pedagogical characterization of an initial teacher education classroom

Low Ee Ling, Ng Pak Tee, Hui Chenri and Lin Huijing Jane

THIS STUDY EXAMINED the pedagogical practice of an initial teacher education course from the diploma programme in the National Institute of Education and how it contributed to student teachers' professional growth in terms of pedagogical knowledge and skills, and professional identity as a teacher. This study made use of videographic data of 11 lessons of the course over an entire semester, and end-of-course focus group interviews with the student teachers and the lecturer who conducted the course. The findings have important implications for pedagogical practice in teacher education.

INTRODUCTION

This study represents an effort to understand the pedagogical practices in teacher education that can help student teachers develop their professional competencies and identity. It is one of the major aims of the larger project "Building an Evidence-base for Teacher Education: Phase I (OER 15/11 LEL)". The motivation for this study is the international concern over the effectiveness of teacher education, which is closely linked to the quality of school education (Darling-Hammond & Bransford, 2005; NIE, 2009; Taylor, Low, Lim, & Hui, 2013). In Singapore, Initial Teacher Education (ITE) is based on the Teacher Education Model for the 21st Century (TE21) introduced by the National Institute of Education (NIE). One of the key recommendations in TE21 is a new values, skills and knowledge model (V³SK) that not only focuses on the development of student teachers' professional knowledge and skills, but also includes a three-pronged focus on their values development. As observed by Taylor et al. (2013), the reform efforts in TE21 call for a reconsideration of the content and pedagogy of teacher education programmes so as to graduate teachers who can help children reach their full potential in the context of a 21st century workplace and society. This re-examination of teacher education pedagogy is

KEY IMPLICATIONS

- It is important for teacher educators to be living examples of values-driven education
- The pedagogy of ITE (Initial Teacher Education) needs to help student teachers examine their own and others' values, attitudes and beliefs.
- It is important for teacher educators, especially when they are teaching methodology courses, to possess teaching experience in local schools.
- The theoretical perspectives of andragogy (principles of helping adults learn) ought to be advocated in teacher education.

in line with Lee Shulman's contention that teacher education needs to design "signature pedagogies" which represent the "highest standards and levels of preparation" (Falk, 2006, p. 76). The first step would be to understand core teacher learning processes in ITE and make visible the relationship between teacher educator's teaching and student teacher's professional growth (Taylor et al., 2013). The researchers in this study worked closely with a class of student teachers and one of their lecturers to identify effective pedagogical characteristics through the examination of videographic data and qualitative interviews. It is hoped that knowledge generated from this project will contribute to the establishment of a body of evidence-based signature pedagogies for teacher education.

RESEARCH DESIGN

This study involved the coding of videographic data to provide a characterization of the pedagogical practices in 11 lessons of a Curriculum Studies (CS) course in the teaching of English language conducted by a single lecturer (August 2012 semester). The student teachers taking this course were from the Diploma in Education (General) programme in NIE.

The lecturer was selected because she had won a teaching excellence award at the university level and the aim of the study was to code the pedagogical practices of an exemplary teacher educator so that good practices can be shared and scaled up institute-wide.

In addition to analysing videographic data, we also conducted 4 focus group interviews (3 student teachers in each group, 48% of the class) and an interview with the lecturer to triangulate and complement the findings on pedagogical characterization from the coding of the videographic data.

KEY FINDINGS

Before we introduce the findings, it is necessary to briefly describe the aims of the CS course. The course aims at equipping student teachers with strategies for teaching, monitoring, and assessing reading and writing at the Upper Primary Level. Student teachers are not only expected to learn the relevant strategies and to design appropriate lesson plans, but also to understand the principles underpinning the strategies. Our interview with the lecturer revealed that she considered values as an important aim of her teaching, as she saw her role as helping student teachers become thinking professionals who are able to think critically and who

strive to make a difference in teaching and learning. The course objectives and the lecturer's perception of her role can be viewed as reflecting the philosophy of the V³SK framework, which is the foundation of NIE's teacher education programmes and courses.

It is also important to acknowledge that this course and the 11 lessons that were analysed are only from one subject discipline and therefore, do not represent the teaching and learning in all courses in the ITE programmes in NIE. The findings presented here are therefore limited to the lessons observed, and should not be generalized across the board.

Findings from the coding of videographic data

The findings on the pedagogical characterization of the 11 video-recorded lessons are organized according to the pedagogical characterization scheme developed by Taylor (Please see Taylor et al., [2013] for an introduction to the characterization scheme).

- Lesson orientation: The lecturer provided orientation that not only clearly indicated the purpose of individual tasks in the lessons, but also linked the tasks meaningfully to completed or future learning activities. Student teachers were given clear and structured guidance on the intended learning outcomes. The orientation was not limited to a particular lesson or learning activity, but was also linked to other courses in the programme.
- Andragogy (the extent to which pedagogy aligns with the principles of adult learning proposed by Knowles [1984]): In the process of helping student teachers acquire various teaching strategies, the lecturer not only often reached out to the student teachers using her own teaching experiences from schools, but also invited them to engage in the activities in a critical way by recalling their prior teaching or life experiences. She also acknowledged the student teachers' existing attitudes, beliefs and values with regard to teaching and learning, and encouraged them to align the course content with their values and beliefs.
- Meta-teaching (the extent to which the pedagogical practices are linked with student teachers' future role as teachers): One of the most salient features of the 11 lessons was that the lecturer constantly made attempts to align the course content with student teachers' anticipated teaching experiences in schools. Student teachers were given the chance to explore the alignment both independently and collectively in groups. They were asked to identify both the strengths and weaknesses of

their anticipated teaching experiences. Student teachers had ample opportunities to recall their learning or teaching experiences and link these to their future role as teachers. They were given opportunities to evaluate, critique and apply teaching skills to practice. Student teachers were also asked to identify learners' learning problems and reflect on approaches to remediate these problems. Authentic resources and examples were presented through modelling or cases, and student teachers were invited to evaluate authentic materials and adapt them to their teaching needs in a structured manner.

- Dialogic teaching: In all the lessons, students were able to articulate their ideas freely, in an environment where they felt secure. They were also involved in evaluation of ideas from the lecturer and their peers. Evidence shows that student teachers were able to initiate knowledge connections and build on each other's ideas. Therefore, there seems to be a learning community of student teachers, functioning individually and as a class, and the lecturer involved in co-constructing knowledge.
- Assessment: The lecturer gave instructions on the assignments of this course and made explicit her expectations. Assignments were also used to motivate the student teachers to focus on particular aspects of learning. There was also clear evidence of assessment for learning.

In summary, the lecturer used strategies to give student teachers a clear overview of the lessons, presented opportunities for learning that were personalized, and assisted them to integrate what they had learned in different lessons. Therefore, there was a unity of intention and achievement. The lecturer also introduced variations in activities and lessons in ways which complemented the learning goals, and promoted a sense of interest on the part of students. In addition, she used strategies to help students identify their own learning gaps at the early stage of the course, and to monitor their progress towards the closing of those gaps during the unit so that their learning became visible to themselves. There was also substantial sharing in the classroom as a learning community. The lecturer used strategies to promote student engagement with the learning goals, both in terms of their understanding of the goals, and their related skills. She was not only able to **make visible her own thinking processes through role modelling**, but also **used strategies to make student thinking visible for reflection and constructive engagement**. The lecturer **demonstrated a capacity to nurture disciplinary**

dispositions and a capacity to **bring together important ideas and concepts throughout the lesson**.

Findings from the focus group interviews

Evidence from the focus group interviews both triangulates and complements the results from the videographic coding. In general, the evidence from the interview transcripts revealed that student teachers were able to develop their professional competencies as well as identity through participating in this course.

With regard to competence, all student teachers reported that they had learned to be creative in their use of the various teaching strategies taught in the course. They reported being better equipped with strategies to engage learners and to integrate Information and Communication Technology in their teaching. They became aware of the importance of the learner's intrinsic motivation and long-term learning outcomes. In addition, student teachers reported that they had become more critical in their pedagogical thinking and had been exposed to strategies for catering to different student learning needs.

With regard to professional identity, all the student teachers reported that they had become more confident in carrying out their roles as teachers in schools. They had developed a desire to learn and to improve. Several student teachers reported that they were no longer satisfied with being an uncritical follower of the given curriculum and wished to become thinking teachers who would make a difference in students' lives.

With regard to the pedagogical practices of their lecturer, several themes emerged as having played a part in influencing the development of the student teachers' professional competence and identity. Some of these themes resonate with what we found in the pedagogical characterisation. **First**, it seems that an **effective way to develop student teachers' professional competencies is through "modelling" and "learning through doing"**. All participants emphasized the need for their lecturer to model how to apply the teaching strategies in classrooms and the necessity to engage them with hands on activities. Theory and practice were bridged in their learning when they were not only exposed to the theoretical underpinnings of certain pedagogical practices, but also asked to carry out these practices on their own so as to consolidate their understanding and mastery of the practices.

Second, the lecturer's own professional expertise and identity appears to be a particularly influential factor in shaping student teachers' professional identities. They were inspired by the lecturer's passion for teaching and her attitude of striving for excellence. To the student teachers, the lecturer was caring, honest, humble, ethical, and persistent. They saw her as taking pride in her role as a teacher and teacher educator. All the student teachers reported that they would like to develop these professional attributes in themselves.

Third, the student teachers valued the lecturer's teaching experience in schools, which enabled her to relate the course content to the realities of the classroom in school settings. The lecturer's ability to share her own school teaching experience and her knowledge of the school curriculum and context enabled her to better connect student teachers' learning in ITE to their future role as teachers, thus strengthening the theory-practice link.

Fourth, the student teachers valued the fact that the lecturer treated them as adult learners with care and respect. She was able to adapt her pedagogy to their individual differences and at the same time establish a learning community in the classroom. There was a culture of open sharing and critique among peers. In addition, the students were able to connect their learning to their prior and future experiences.

IMPLICATIONS

For practice and teacher professional development

One major implication of the above findings for teacher professional development is that **to inculcate values among student teachers, it is important for teacher educators to become living examples of values-driven education.** If student teachers are to be imbued with the values identified in the TE21 model, these values must be visibly embodied by teacher educators.

Another implication is that **the pedagogy of ITE needs to help student teachers examine their own and others' values, attitudes and beliefs.** The

pedagogy of teacher education needs to help students understand and explain why they value what they value. By encouraging student teachers to be aware of their value and belief systems, teacher educators can intervene and/or problematize students' dispositions and help them see how to act morally and effectively when they enter schools as full-fledged teachers.

Thirdly, it is important for **teacher educators**, especially those teaching methodology courses, **to have prior teaching experience in local schools.** The focus group interviews reveal the following perceptions about teacher educators' school experience: (1) student teachers generally felt that academics who had been school practitioners were more effective teachers than those who did not have school experience and/or who were largely researchers; (2) they valued the school teaching experiences shared by teacher educators as such sharing helped them to link theory to practice.

Finally, given that student teachers are adult learners, the theoretical perspective of andragogy, that is, the principles of facilitating learning in adult learners, should be advocated in teacher education programmes (Knowles, 1984; Loughran, 2006).

REFERENCES

- Darling-Hammond, L., & Bransford, J. (2005). *Preparing Teachers for a Changing World: What Teachers Should Learn and be Able to Do*. San Francisco: Jossey-Bass.
- Falk, B. (2006). A conversation with Lee Shulman—signature pedagogies for teacher education: Defining our practices and rethinking our preparation. *New Educator*, 2(1), 73–82.
- Knowles, M. S. (1984). *The modern practice of adult education: From pedagogy to andragogy*. New York: Cambridge Books.
- Loughran, J. (2006). *Developing a pedagogy of teacher education: Understanding teaching and learning about teaching*. London, New York: Routledge
- National Institute of Education (NIE). (2009). *A teacher education model for the 21st century: A report by the National Institute of Education*. Singapore: NIE.
- Taylor, P. G., Low, E. L., Lim, K. M., & Hui, C. (2013). Making learning visible in initial teacher education: a pedagogical characterisation scheme. *Educational Research for Policy and Practice*, 12(3), 193–209.

ABOUT THE AUTHORS

LOW Ee Ling, NG Pak Tee, HUI Chenri and LIN Huiling Jane are with the National Institute of Education, Nanyang Technological University, Singapore.

Contact Ee Ling at eeling.low@nie.edu.sg for more information about the project.

This brief was based on the project OER 15/11 LEL: Building an Evidence-base for Teacher Education: Phase I.

>> More information about NIE's research centres and publications can be found at www.nie.edu.sg