



The complex interplay of variables in studying teacher education

Becoming a teacher entails a complex process which occurs over time in different contexts. Teacher education (TE) plays a central role in it. Although TE has been subject to criticism in regard to its effectiveness in preparing high quality teachers, it does make a difference for quality teachers (Flores 2016). As such, it requires careful programme design, an elaborated view of the intended process of teacher learning, specific pedagogical approaches and an investment in the quality of staff members (Korthagen, Loughran, and Russell 2006). Thus, debates focusing on TE revolve around, amongst other features, its curriculum, its rationale and key components, and its impact on the education and professional learning of pre-service teachers (e.g., Darling-Hammond and Lieberman 2012; Livingston and Flores 2017). While teacher education is not to be seen as the panacea to improve education, it certainly does play a role in educating teachers to deal with the increasing complexities of teaching and learning in schools and classrooms in the 21st century. Issues such as motivations for becoming a teacher, the place of reflection in learning to teach, the formation of the professional identity as a teacher, the value of teacher education, the role of teacher educators and the importance of international and comparative perspectives in investigating teacher education are but a few examples of the complex interplay of variables in studying teacher education. The papers included in this issue investigate and discuss these aspects of teacher education.

In the first paper, 'Pre-service Teachers in Germany's Pluralistic Scholarship System and Their Motivations for Becoming Teachers', Martin Drahmann, Samuel Merk, Colin Cramer, and Martin Rothland from Germany, focus on a key dimension in studying teacher education. The authors address student teachers' motivations for entering teaching, particularly those enrolled on a scholarship programme for highly talented students. They look at differences in motivations for choosing a teaching career between supported and unsupported preservice teachers. Data were collected through a survey with 703 pre-service teachers. Results indicate significant differences between supported and unsupported pre-service teachers in terms of their motivations for becoming teachers. The authors state that these differences are to the disadvantage of the unsupported pre-service teachers, who tend to have lower degrees of intrinsic and altruistic motivation. Drahmann, Merk, Cramer, and Rothland assert that the findings relevant to research on teacher education and to the support of highly talented pre-service teachers. Implications of the findings and avenues for further research are discussed in the paper.

The second paper, 'Irish Student Teachers' Beliefs about Self, Learning and Teaching: A Longitudinal Study', by Kathleen Horgan and Fíodhna Gardiner-Hyland, from Ireland, is also related to student teachers but this time on their beliefs about self-as-teacher, learning and teaching during a three-year undergraduate programme. The authors report on a study using qualitative grounded theory analysis in order to explore the initial beliefs or personal

theories of 27 preservice teachers during their first semester. Horgan and Gardiner-Hyland used longitudinal data from 7 of these students over the three-year duration of their teacher education programme through iterative interviews and reflective journal analysis. Findings point to the expansion in preservice teachers' understandings of the teacher's role, the value of reflective practice, the differential needs of learners and approaches to pedagogy. The authors identify gaps in preservice teachers' capacity for critical reflective practice. Data suggest that classroom management concerns may lead preservice teachers to adopt more cautious and traditional pedagogical approaches, despite their espoused commitment to child-centred principles. Implications of the findings suggest the potential of guided reflection within teacher education as a means to re-shape and expand preservice teachers' beliefs about teaching and learning.

Promoting and studying reflection in teacher education is also the focus of third paper 'Supporting Collaborative Reflection in Teacher Education: A Case Study', by Marc Clarà, Teresa Mauri, Rosa Colomina and Javier Onrubia, from Spain. It aims at understanding how certain educational supports promote preservice teachers' learning to reflect in collaborative settings. The authors report on a case study on collaborative reflection among 14 preservice teachers and one teacher educator over the course of five weekly consecutive sessions. According to the authors, collaborative reflection aims to explain various situations in terms of the tensions or dilemmas embedded in them. Findings suggest that collaborative reflection may be supported by organising the process from analysis to synthesis and from open facilitation to directive facilitation. Clarà et al. identify six different types of assistance related to this dynamic and discuss implications for fostering collaborative reflection in teacher education.

The fourth paper, 'Professional Identity among Student Teachers of Physical Education: The Role of Physicality', by Jukka Virta, Päivi Hökkä, Anneli Eteläpelto and Helena Rasku-Puttonen, from Finland, looks at the role of physicality in the professional identities of physical education (PE) student teachers. The paper reports on a study of 20 PE student teachers who were interviewed during their final teaching practice. Findings suggest substantial diversity in the student teachers' conceptions of physicality and the ways in which these conceptions were embedded in developing professional identities. The authors also found that conceptions of the body and physicality represent a central element of PE student teachers' professional identity. They also discuss the relationship between conceptions of physicality and pedagogies to be implemented in the future in teacher education.

In the fifth paper, 'Teacher Education Matters: Finnish Teacher Educators' Concerns, Beliefs, and Values', Katriina Maaranen, Heikki Kynäslähti, Reijo Byman, Riitta Jyrhämä and Sara Sintonen, from Finland, also focus on teacher education but from a different angle, i.e., the teacher educators. The authors examine Finnish teacher educators' concerns, beliefs and values by means of a qualitative case study in a Finnish university. Data were collected through interviews to 15 teacher educators who volunteered to participate in the study. Findings suggest that teacher educators experienced a variety of concerns in their work. In the beginning, the focus is mainly on dealing with the position and being a novice teacher educator, and later they became more concerned with heavy workload and practical teaching-related matters. The authors also conclude that the teacher educators identified the students' education as the most important aspect of their work. In addition, they found that the research-based nature of teacher education was also considered to be very important, along with its community aspects, and their own specialisation.

The sixth paper also looks at teacher educators. In their paper entitled 'Tutors seen through the eyes of mentors. Assumptions for participation in third space in teacher education', Ingrid Helleve and Marit Ulvik, from Norway, aim at getting a deeper understanding of the assumptions for building third spaces in teacher education. They studied 15 mentors with and without mentor education through interviews focusing on tutors' (university-based teacher educators) competences and responsibilities. The authors found that mentors have an unclear understanding of who the tutors are and that experience in teaching is a key factor influencing mentors' understanding of tutors as respectful collaborators. The authors also concluded that educated mentors value theoretical knowledge and research higher than non-educated ones. In addition, the study points to the need for both tutors and mentors to possess knowledge about and respect for each-others' competence and responsibilities. Helleve and Ulvik argue that mentor education is a promising assumption for building third spaces in teacher education.

The final two papers address more general dimensions of teacher education, namely its value and connection to teacher attrition and issues of comparative studies on teacher education. The seventh paper, 'Is Teacher Attrition a Poor Estimate of the Value of Teacher Education? A Swedish Case', by Rickard Carlsson, Per Lindqvist and Ulla Karin Nordäng, from Sweden, looks at the value of teacher education in the light of a 'salutogenic' perspective emphasising attrition as active career decisions among teachers with a strong sense of agency. According to the authors, this perspective contributes to perceiving attrition as career decisions reflecting the meaning that teachers attach to their work. Data are drawn from 87 Swedish teacher graduates. The authors conclude that in order to get informative estimates of the value of teacher education it is important to consider it from different perspectives and to look at attrition in association with the total working time spent in educational settings across a career rather than percentage leaving teaching after a set of years. In other words, Carlsson, Lindqvist and Nordäng argue for the need to discuss teacher education from a different viewpoint, which is dependent not only on whether the prospective teachers remain in the teaching profession but also on what they are occupied with while not working as teachers and how they have made use of their teacher education.

In the final paper, 'The promises and limitations of international comparative research on teacher education', Hilde Wågsås Afdal, from Norway, argues for the need to revisit methodological perspectives on international comparative research on teacher education. She looks at the benefits and problems of comparative educational research methodologies as well as on the methodological aspects associated with designing and carrying out international comparative studies. Afdal examines the need for rigorous planning, review and performance of comparisons, as well as transparent accounts of the methodologies used when communicating the results of comparative research. The author highlights the importance of explicit clarifications of studies' motivations and purposes, underlying norms, principles and approaches, design, conditions and comparisons in each international comparative study on teacher education. The paper concludes with the potential and limitations of international comparative research on teacher education.

Overall, the papers included in this issue illustrate the broad and complex nature of the variables embedded in teacher education from different angles but they also point to key features that deserve further attention in future investigations.

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