



Student teachers' conditions for professional learning on and across the learning arenas of teacher education: A theoretically grounded account

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Abstract

Teacher education is supposed to be able to offer student teachers professional learning that will enable them to deal with the academic and social needs they may be confronted with in school. This calls for teacher education based on a coherent and meaningful division of labour between the learning activities that take place on campus and in placement schools. This has proved difficult to achieve. Research shows a significant gap in the way teacher education is organised. The purpose of this article is to contribute to the development of a theoretically grounded account of the so-called “theory-practice” gap in teacher education, which can move us beyond the simple dichotomies that currently seem to annoy much research and practitioners' interest in this field. We argue that achieving such an account will require the expansion of more equal and mutually negotiated professional learning in teacher education, that can contribute to enhancing student teachers' professional learning, on and across the various learning arenas of teacher education. We seek to achieve this objective by following a theoretical line of inquiry, supported with empirical data. Our theoretical rationale is based on socio-cultural learning theory, where coherence, transboundary translation, and re-contextualisation are important subordinate theoretical-analytical terms.

Keywords: student teachers; learning on and across learning arenas; tensions; coherence

Introduction

The legitimacy of teacher education depends on its ability to offer professional learning that will enable student teachers to meet formal requirements as well as taking good care of the actual academic and social needs they are to face in school. This invokes a teacher

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education based on a coherent and meaningful division of labour between the learning activities that take place on campus and in placement schools. This has proved difficult to achieve in practice. Norwegian as well as international research has shown that in this respect, there is a significant gap in the way education is organised.

Many dilemmas seem to be at stake. The purpose of this article is to contribute to the development of a theoretically grounded account of the so-called “theory-practice” gap in teacher education, which transcends the simple dichotomies that seem to plague much research and practitioners’ interest in this area. We are in this respect particularly concerned with identifying educational approaches, which can be essential for enhancing student teachers’ professional learning, on and across the various learning arenas of teacher education. We argue that facing such challenges will presuppose the expansion of more mutually negotiated and coherent professional learning in teacher education. The objective of this article we seek to achieve by following a theoretical line of inquiry supported by empirical data. Our theoretical reasoning is founded on socio-cultural learning theory. The Norwegian education system is our entry into these issues about conditions of professional learning.

The official structure, goals and tasks of the Norwegian teacher education system have many similarities with international teacher education systems, especially those in Europe. The Norwegian system has the international education guidelines as a core reference (EQF, 2005; UHR, 2019a, 2019b; Ministry of Education, 2019). Like the international guidelines, the Norwegian guidelines establish that research-based and experience-based knowledge is to be the basis for the development of student teachers’ professional competence. A research-based approach is to be embedded in the courses taught on campus as well as in the students’ placement studies. Furthermore, a characteristic of Norwegian, as well as international educational programmes, is that they are founded on a heterogeneous, multidisciplinary knowledge base, including a complex set of contexts, where the academic learning on campus and the practical professional learning in schools often are in conflict.

A backdrop – dilemmas and contradictions

A lot of dilemmas and contradictions seem to be at stake. In Norway, as well as internationally, research has shown that there is a significant gap between the actual state of education and what teacher education officially is expected to achieve. Education authorities emphasize the importance of maintaining a coherent and well-functioning teacher education. In practice, however, the situation is different; here we find fragmented cooperation. Teacher education is often organised so campus teachers set the premises for how academic knowledge should be included in education. The placement teachers’ job is to show student teachers how the subject knowledge should be applied in practice, while no one has the overall responsibility to ensure that there is a mutually agreed dialogue between these two dimensions (Raaen, 2018; Furlong et al., 2006). Accordingly, Joram

(2007) concludes that there is a distinct epistemological contradiction between placement teachers' and campus teacher educators' beliefs about what counts as legitimate knowledge in education and how that knowledge may be obtained. Furthermore, the partners seem to have difficulty seeing and recognising each other's perspectives on knowledge. Moreover, studies have shown that the meeting places between university and placement schools are often too few and/or too rare to develop the cooperation that is necessary to create an adequate coherent education (Heggen & Raaen, 2014; Heggen & Thorsen, 2015). This suggests that there is limited facilitation for the student teachers' professional learning on and across the learning arenas of teacher education (see also Korthagen, 2007). This conclusion has received additional support in meta-studies, which indicate that, in general, teacher education has failed to bridge the gap between the expectations officially placed on students' achievements and the results students achieve (Cochran-Smith & Zeichner, 2005; Zeichner et al., 2015). To be able to determine more precisely what an alternative might look like, additional knowledge is needed, that is, knowledge of how the various partners experience the situation, how the mentioned dilemmas and contradictions affect the professional qualification offered, what eventually needs change and, if so, according to what principles.

In the first place, we limit our comments to a backdrop and start with the partners' opinions. In short, student teachers mostly describe the academic and theoretical knowledge they learn on campus as being too abstract (Rosaen & Florio-Ruane, 2008; Hobson et al., 2006; Cochran-Smith & Zeichner, 2005). For their part, university teachers in their lectures predominantly rely on their academic knowledge (Gjems & Vinje, 2015), admitting that they possibly do not know enough about how theories and research results in meaningful ways can be recontextualised into a school context. In turn, placement teachers mainly describe the academic knowledge that students have been exposed to on campus as out of step with what is needed in an actual classroom (NOKUT, 2006; Thorsen, 2016; Zeichner, 2005).

Overall, these studies indicate that there are major shortcomings in student teachers' professional learning, on and across the different learning arenas of teacher education, and they convey how the dilemmas and contradictions affect the professional qualification offered. However, the above-mentioned studies do not provide sufficient explanation about what prevents teacher educators on campus, placement mentors and student teachers from developing a more unified and relevant professional learning programme, and as such more coherent education. We argue that this requires a reframing of the conventional way of approaching the learning gap.

Theoretical framework

Over the last two decades, an international discussion on education policy has focused on how to improve the quality of teacher education. By giving greater emphasis in the guiding prescriptions, courses and programs of the curriculum, how collaboration between the

professional learning on campus and in placement schools can be made more meaningful and coherent (Hammerness, 2013; Darling-Hammond et al., 2012; Zeichner, 2010; Buchman & Floden, 1991).

However, as briefly commented earlier, it is not necessarily coherence between the guiding prescriptions, which is enshrined in the formal curriculum, and what takes place in practice. Research has shown that in practice, the importance and relevance of coherence have mostly been a matter of discussion among campus-based teacher educators and placement teachers/placement mentors. While student teachers' experiences – and their conceptions and opinions of what it takes to provide a coherent and meaningful teacher education – have been left out (Heggen & Raaen, 2014; Kosnik & Beck, 2009; see also Hatlevik & Havnes, 2017). Thus, making it impossible for all the partners equally to explore disputable and probably important issues concerning the student teachers' professional learning. Such conditions call for other ideas about what kind of visions and organisational conditions teacher education needs if the education is to be more inclusive and dynamic.

Based on these assumptions, we will expand our approach. First by discussing and demonstrating how conceptual and structural coherence, each in their own ways, may contribute to our understanding of how to develop more inclusive and dynamic professional learning. This will be done briefly. The limitations of each of these forms of coherence will also be discussed, as well as how they may complement each other. Then, these two terms will be reframed within a broader theoretical approach, thus adding to the discussion about how to bridge the teaching gap. Subsequently, further theoretical concepts will stepwise be introduced and provide additional perspectives on how training and learning in teacher education may help to revitalize professional learning.

Conceptual coherence

In teacher education, conceptual coherence concerns the conceptual consistency of the visions, key ideas and goals of the programs, on and across the different learning arenas of this type of institution (Hammerness, 2006).

Hagger and McIntyre (2000) illustrated how to establish conceptual coherence in meaningful ways in teacher education and discussed how their suggestions may promote the development of more professional learning. Their point is that the cooperation between campus teachers, placement mentors and student teachers needs to be organised so that these partners can continuously share their various ideas and hypotheses about what works. They argued that it thus may be possible for the participants to work together to examine what has an effect, and why. This is important. However, as we see it, such an approach only addresses part of the problem of coherence, namely the need for conceptual coherence. Hagger and McIntyre's (2000) discussion did not take into account that in practice conceptual coherence can only be established if there is also an appropriate structural coherence – that is, rooms, meeting places and occasions that can make it possible

to exercise conceptual coherence.

Structural coherence

Structural coherence occurs when initiatives are taken to regulate the framework or content of teacher education. In teacher education, it may concern the organisation of a program, courses in the program of study, and the sequencing and relationships that exist between those courses.

Grossman et al. (2009) offered a comprehensive framework for establishing structural coherence in teacher education. They noted that there is a need for a re-arrangement and re-conceptualisation of teacher education with more focus on the clinical routines of teachers' practice. This implies a shift from a curriculum organised by knowledge domains to a curriculum organised around mastering core practices of the profession. They argued that teacher educators on campus and in placement ought to help student teachers develop and refine a set of core practices for teaching that can help student teachers broaden their understanding of what it means to act as a teacher and develop an emerging professional identity around these practices. Unlike Hagger and McIntyre (2000), Grossman et al. (2009) focused heavily on the conditions for establishing structural coherence in teacher education, organisationally and logistically. Implicitly assuming that this will safeguard an adequate conceptual coherence among the partners in their visions, key ideas and programs. Which, in our opinion, may be possible under certain circumstances. However, that will obviously not necessarily have to be the case, because the individual participants quite often will have room for discretion.

In the following section, we will further expand these perspectives on how conceptual and structural coherence can contribute to the development of professional learning, by reframing these concepts within a socio-cultural approach to professional learning. Thus, turning focus more towards overriding regulatory conditions for professional learning and hence more in-depth explore the cultural barriers as well as possible meeting points for the development of more relevant professional learning. Thereby bringing attention more towards the possible dynamic interplay between conceptual and structural coherence in professional learning, on and across the different learning arenas of teacher education.

Professional development on and across learning arenas – a transboundary view

The previous research findings we have presented above show how, over time, the relationships and boundaries between different partners and activities in teacher education may be established and stabilised in specific forms of cooperation and relationships. Thus, setting the conditions for how the partners may be able to act and interact. Furthermore, the studies above have shown how the established practices and terminology on each

learning arena may be shaped by the specific knowledge resources, people and activities, which, at any given time, are brought together to explore, negotiate and conduct specific teaching and training activities. Thus, the partners' different practices turn out to be created and reproduced in the dynamics between established cultural practice and possible impulses for change, in the individual situation. Mostly manifested, as we have seen, as a distinctive gap between "theory" and "practice"; between academic learning on campus and practical learning in placement. While this approach to professional learning does not function satisfactorily in practice, it has not been abandoned. Instead, it seems to have been reinforced. This has been endeavoured both nationally and internationally, as our previous discussions and review of research have shown. Which indicates that a more productive and meaningful form of coherence will require new forms of exchange between academic knowledge and experience-based, practical knowledge. As we see it, this may be possible to achieve by focusing on people rather than on systems. To initiate culture-enhancing learning that can balance the interests of all stakeholders, making people acknowledge that they can change their environments (Schein, 1985).

Based on such an approach, the focus can shift more towards how knowledge and learning are embedded in the language, the culture and the community to which the individual belongs. Which means that the differences and boundaries between the partners of education no longer primarily are to be regarded as barriers that must be overcome. Rather, they will be seen as meeting points; meeting points that may provide opportunities for mutual exchange and expansion of practical and theoretical knowledge and learning (Akkerman & Bakker, 2011).

With such a theoretical backdrop, the idea of knowledge as something that can be directly transferred from a university teacher to a student teacher for direct use in practice will be criticised. Because it does not adequately consider that the making of knowledge requires complex interactions between partners on different learning arenas. Partners that must constantly deal with both theoretical and practical issues, which most often are based on different assumptions and expectations.

With such a backdrop, the campus is no longer merely to be seen as an arena for the acquisition of scientific knowledge and skills, and the practice placement institution as a place only to apply what is learned. Rather, the partners will see both fields as arenas for mutual exploration, negotiation, training and learning. A main theme will here be how each partner can contribute to the development of a more professionally relevant knowledge base in teacher education, on and across each of the arenas of teacher education. We will refer to this as a transboundary translation, which could emerge in a conversation between different interpreters about what is to be interpreted, as a mutual hermeneutic process. That could inspire discussions about what will give a more meaningful conceptual and structural coherence for the partners, and thereby contribute to a renewing of teacher education.

Professional learning as a reciprocal translational work – practical illustrations

The following section will provide concrete examples of how teacher educators on campus – through the work of transboundary translation – rooted in socio-cultural learning theory – can inspire student teachers to see practical implications and create practical meaning of the academic knowledge conveyed to them. The references will be to the Norwegian research project, TPQ, (Teachers' Professional Qualification project) (Raaen, 2018) as well as international research.

The first study presented here is meant to illustrate how university teachers can facilitate teaching based on a combination of structural and conceptual coherence, and where student teachers are involved in the process of creating awareness about such learning conditions. In this study, university teachers made the student teachers aware that education on campus and training in placement schools had different functions and, consequently, operated from different functional logics and different languages. In the project, a point of discussion was how this was displayed in different vocabularies on teaching, training and learning, on campus and in the training in placement schools. The study showed how this information for student teachers made it easier for them to understand how the gap between the teaching on campus and the training in placement schools could be interpreted and resolved (Christensen et al., 2014). This work seemed to succeed because the conceptual differences in the use of language between the different partners were made explicit. As a result of this, the student teachers were able to reformulate and translate the knowledge in both directions, thus unifying the analytical, universal and research-based knowledge learned on campus with the normative, particular and experiential, practical knowledge learned in placement schools (see also Bulterman-Bos, 2008). In Stenhouse's (1975) terminology, this use of science could be described as an interplay between an exploratory teaching principle (enquiry-based teaching) and a discovery motivated teaching principle (discovery-based teaching).

In an international study, Dennen (2004) used a different approach showing how, through a work of translation, placement teachers can stimulate student teachers to create reflective practical meaning of the professional knowledge conveyed to them. In that study, the focus was on how the workplace may be an important reflective community of learning for student teachers. Dennen (2004) demonstrated how student teachers can be challenged to strengthen their professionalism by taking on certain roles and positions that allow for different perspectives on the teacher's work. This was accomplished by organising the educational practice so the student teachers could switch between observing and imitating their supervisor's practice, followed by correction and counselling from the supervisor. Furthermore, the study showed how the supervisor could expand the student teachers' perspectives by instructing them on how they can reflect on and compare how they solved activities with how others solved them. This arrangement made it possible for the student teachers, together with their fellow students and the placement teacher, to explore the academic and ideological basis on which the existing professional practice

was founded, on campus and in placement. With the support of Collins et al. (1989), Dennen (2004) described this ground-breaking and transboundary relationship as a cognitive apprenticeship. That according to Collins et. al. (1989, p. 456) is to be seen as a “learning-through-guided-experience on cognitive and metacognitive, rather than physical, skills and processes”. Moreover, demonstrating how conceptual coherence in teacher education can be practised in yet another way.

Research shows how a transboundary approach may further be expanded by allowing student teachers to relate practical issues in placement to the educational topics addressed on campus. Thus, enabling the student teachers to explore whether academic knowledge can help shed light on the practical professional challenges they face in their placement (Christensen et al., 2014). Accordingly, pedagogy teachers on campus prepared student teachers for the placement by discussing with them the implications of theory and research for practice, combined with practical exercises in the classroom on campus (see also Gjems & Vinje, 2015). Thus, translating and re-contextualising into practical exercises what they academically had discussed. Other similar examples may include animations, simulations and virtual experiments that can help student teachers on campus translate theoretical and methodological knowledge into practical use, and help them visualise, conceptualise and reflect on processes, which, in authentic situations can be difficult to detect (Wang & Hannafin, 2005). Similarly, through research-based and theoretical analyses and critical discussion of case studies, it may be possible to elucidate how concrete teaching dilemmas can be handled in practice, thus re-contextualising them in relevant ways (Shulman, 1996). The translation and re-contextualisation of knowledge between and within the different learning arenas can also take place, in more pervasive ways (Raaen, 2017), which the following case illustrates.

In a kindergarten-based teacher education programme, the training was organised so that the part-time student teachers always returned to the kindergarten after short periods on campus (Furu & Granholt, 2014). The manager of the kindergarten then challenged the student teachers to share the new themes, theories and concepts they had learned on campus with their colleagues in the kindergarten, and discuss what they regarded as the practical relevance of these issues. In this case, the transboundary translation and re-contextualisation of the knowledge acquired on campus into practice were further strengthened when the manager shared relevant research literature with her colleagues. The colleagues were even more informed when the campus teachers gave lectures in the kindergarten followed by discussions with the staff. Thus, the kindergarten as part of teacher education showed how it could be possible to develop a science-informed arena for expansive and transformative learning, not just for the student teachers but also for all the other partners involved. This emerged when their various perspectives on knowledge were exposed, confronted, discussed and further developed (Furu & Granholt, 2014; see also El Kadri & Roth, 2015). For the campus teachers, this organisation of professional learning implied a redefinition and expansion of their role as campus teachers. Which took place when they were engaged as co-teachers on and across the various learning

arenas of teacher education, including in the field of practice. Thus, the campus teachers also illustrated how it can be possible to contribute to the development and institutionalisation of a new, hybrid form of teaching and training, thus making way for a “third space” for professional learning (Grudnoff & Williams, 2010). Thus, also in yet another way exemplifying how structural and conceptual coherence can contribute to the expansion and reformulation of professional learning on and across the established learning arenas of teacher education.

Summary and conclusion

The previous cases are meant to illustrate how student teachers' professional learning may take place in a transboundary translation and re-contextualisation of knowledge, on and across the different learning arenas of teacher education. As such, it entails both relational, situational and contextual concerns. The learning processes are manifested in the participants' competing ideas, in their willingness to take another person's perspective, in their exchange of hypotheses, in their experimentation with different perspectives on learning, and in their ability to tolerate living with dilemmas and tensions, thus displaying an expansive type of learning (see also Tuomi-Gröhn, 2007).

These cases show the practical relevance of applying socio-cultural learning theory and show how it can be possible to handle and overcome the contradictions and dilemmas, on and across the different learning arenas of teacher education. From this point of view, the differences and boundaries between the partners of teacher education are not primarily to be regarded as barriers that must be overcome. Rather, as it has turned out, they are to be seen as meeting points that may provide opportunities for mutual exchange and expansion of practical and theoretical knowledge. Focus is on how knowledge and learning are embedded in the language, the culture and the community to which the individuals belong. Furthermore, such an approach assumes that all the partners are considered to be learners, not just the student teachers (Bloomfield, 2009, which is also illustrated in the cases. As shown, this implies that structural and conceptual coherence in this context assumes a somewhat different identity than it usually has. Illustrative is the above-mentioned collaboration between different partners, which succeeds because it provides tasks, space and practical opportunities for all partners to engage in. Which in turn makes it meaningful for the partners to acknowledge and recognize that they are jointly committed and dedicated to exploring and negotiating common visions for an educational institution that they consider themselves to be part of. Furthermore, following socio-cultural theory of learning, the above-mentioned cases show why the partners do not consider their differences primarily as barriers that must be overcome but rather as potential meeting points for mutual exchange and the development of knowledge and learning (Raaen, 2017; 2018). We are here dealing with a type of coherent cooperation that may further be enhanced if the partners keep on looking for better priorities and better institutionalised

arrangements for cooperation and, if necessary, seek to renegotiate their institutional understandings (Nguyen, 2009; Grossman et al., 2009). We have argued for the relevance of placing such dynamic learning styles within a theoretical framework that allows for transboundary translations and re-contextualisation of knowledge. Where conceptual and structural coherence in a dynamic interplay mutually may reinforce each other, in a shared professional learning and decision-making (see also van Kraayenoord et al., 2011). Within such a scenario, coherence is not primarily assumed to be based on a kind of agreement that makes sense as something uniform; such as a monolithic view and a corresponding practice. Rather, coherence is meant to be seen as a shared opinion or a common cause, and as such, it may contain a wealth of variations on a theme. Thereby possibly giving rise to both pleasant and challenging tensions (Schollaert, 2011).

As will be seen, within such a context, there may constantly be room to develop completely new constructions of knowledge and ever-new hybrid arenas for cooperation, in what we previously have named “third spaces for learning” (Klein et al., 2013). Characteristic of such communities of inquiry is that everyone is considered capable of learning, exploring, seeking insights and addressing issues that maybe no one else has previously considered or addressed. This kind of learning process – which consists of continuity, interaction and negotiation to promote further growth and richer experiences – seems to coincide with what John Dewey (1938) described as educative experiences.

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