Talk about Field Placement within Campus Coursework: Connecting Theory and Practice in Teacher Education

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Abstract

Worldwide, scholars and policymakers have called for teacher education to link fieldwork and coursework. This article examines teacher candidates' opportunities to talk about field placement within their campus coursework as one way of doing so. It reports on survey data ($n = 270$) and observation data ($n = 52$ hours) from three teacher-education programs in Norway, Finland, and California in the United States. Findings suggest that candidates have extensive opportunities to talk about field placement. However, the characteristics of the talk, the degree of specificity and detail provided, and the level of complexity and connectedness to theory vary extensively. The article argues that, to be generative for professional learning, talk about field placement needs to be systematically scaffolded within a pedagogy of teacher education.

Introduction

Scholars and policymakers have called for greater connections between theory and practice, coursework and fieldwork, in teacher education (British Educational Research Association [BERA], 2014; Darling-Hammond et al., 2017; Donaldson, 2011; Moon, 2016; Munthe & Rogne, 2016; National Council for Accreditation of Teacher Education [NCATE], 2010). Researchers have argued that fieldwork and coursework should be closely connected, allowing beginning teachers to learn from both arenas (Darling-Hammond, Hammerness, Grossman, Frances, & Shulman, 2005; Grossman, Hammerness, McDonald, & Ronfeldt, 2008). Different organizational models addressing ways of connecting theory and practice have been tried out, ranging from residency programs and community-based programs, to teacher training colleges and “traditional” university-based programs (Organization for Economic Co-operation and Development [OECD], 2005; Tatro et al., 2012). Worldwide, educators have aimed to create stronger partnerships between universities and schools. Burn and Mutton (2015) pointed to the Oxford Internship Scheme (UK), Professional Development Schools (US), the Melbourne Master of Teaching program (Australia), and Authentic Teacher Education (Netherlands). Norway has university schools (Lund & Eriksen, 2016), and Finland has a long tradition of laboratory schools (Toom et al., 2010). Evidence has suggested such efforts have an impact. In a study surveying nearly 3,000 beginning teachers in New York City, Darling-Hammond, Chung, and Frelow (2002) found that teachers reporting a higher perception of preparedness to teach (e.g., developing curriculum, teaching subject matter) were from two programs that offered “extensive, carefully supervised clinical work [...] tightly linked to coursework” (p. 293).

While these connections to practice seem to matter, we have little knowledge about how such connections are made in the coursework on campus, indicating a need for research on

instructional practices in teacher education (Cochran-Smith et al., 2016; Munthe & Haug, 2009; National Research Council [NRC], 2010).

This paper is situated within a larger international comparative study (cf. Hammerness & Klette, 2015) exploring the instructional practices of teacher education to describe the opportunities teacher candidates have to connect to practice within their coursework. It includes classroom observations, interviews, surveys with candidates, and analyses of program courses and program design from eight programs in Finland, Norway, California (US), Chile, and Cuba (Hammerness & Klette, 2015; Klette & Hammerness, 2016).

Initial data from this study revealed that the candidates have extensive opportunities to talk about their field placement experiences (Canrinus, Bergem, Klette, & Hammerness, 2015; Jensen, Klette, & Hammerness, 2017). The finding prompted us to delve into the characteristics of the talk, as the features and purpose of such talk can matter for candidates' learning, and may vary greatly by program and course. In this paper, we report on findings from these analyses, drawing on observation data ($n = 52$ hours) and survey data ($n = 270$) from three teacher-education programs in Norway, Finland, and California, US. To better understand the nature of this talk, we ask: (a) *How do teacher candidates, across and between programs, perceive the opportunities they have to talk about field placement within their campus coursework?* (b) *What characterizes these opportunities?*

Connecting Theory and Practice in Teacher Education

Scholars have highlighted the importance of supporting teacher candidates in making sense of their field placement experiences (Darling-Hammond, Hammerness et al., 2005; Kriewaldt & Turnidge, 2013; McIntyre, 1993; Schön, 1983). Darling-Hammond, Hammerness et al. (2005) emphasized that structured opportunities to reflect on field placement experiences are critical in constructing sound experiences for teacher candidates. This emphasis corresponds with terms like “reflection-in-action” (Schön, 1983), “practical theorizing” (McIntyre, 1993), and

“clinical reasoning” (Kriewaldt & Turnidge, 2013). Worldwide, research has emphasized the role of reflection in teacher education, and many studies have investigated how mentor teachers or supervisors support teacher candidates’ reflection during field placements (Hobson, Ashby, Malderez, & Tomlinson, 2009; Mullen, 2012). Scholars have also looked at the role of reflection in teacher education in general. In the Netherlands, Korthagen and Kessels (1999) argued that a new, realistic approach to teacher education could use reflection to overcome the traditional “application-of-theory-model” (p. 5). In Finland, reflection is highlighted as a research-based model of teacher education, aiming to create autonomous professional teachers, inclined to make independent pedagogical judgments (Kansanen, 2004; Toom et al., 2010). In Norway, reflection in teacher education has long been associated with scholars like Handal and Lauvås (1983), who emphasized the tacit and personal knowledge of the teacher (candidate) and reflection’s role in helping teachers articulate their practical theory. In the US, the reflective practitioner has been held as an ideal (Zeichner & Liston, 2014), and Valli (1997) identified five types of reflection in American teacher education (e.g., technical reflection and reflection-in and -on action) that contributed to creating teachers who can give reasons for their choices and actions in immediate, complex classroom situations.

In this article, we are interested in reflective talk about field placement during coursework that connects theory and practice, the characteristics of this talk, and the role of the teacher educator in scaffolding this kind of talk. An established body of research has examined the nature of talk and the teacher’s talking moves in the K-12¹ classroom (Cazden, 2001; Edwards & Mercer, 1987; Mehan, 1979; Myhill, 2006; Nystrand, Gamoran, Kachur, & Prendergast, 1997; Resnick & Hall, 1998), but less research exists on talk in the teacher-education classroom. Although dialogues are an important teaching method in higher education, little research has investigated this area (Dysthe, 1996), especially in teacher education. With the

¹ K-12 signifies “Kindergarten – 12th grade, primary and secondary schooling, or the first 13 years in school.

exception of one dissertation (Eriksson, 2009) and a study by Lampert, Ghouseini, and Beasley (2015) investigating accountable talk in the teacher-education classroom, our search for relevant literature revealed few results.

Characteristics of Talk about Field Placement Underpinning our Analytical Framework

Within the literature on accountable talk (cf. Resnick & Hall, 1998), Little and Horn (2007) analyzed professional learning opportunities in teachers' talk at the workplace. Their framework offers the categories *normalization*, *specification*, and *generalization*, which seemed useful for analyzing teacher candidates' talk about field placement in pre-service training. These three concepts move from general talk about practice toward talk that links practice and theory, making the talk 'accountable'. Little and Horn (2007) found that talk amongst teachers was often characterized by *normalization*. The participants provided emotional support and understanding of the other's situation. While this served to build trust, this kind of talk did not encourage in-depth conversations about teaching and learning (Little & Horn, 2007). Little and Horn (2007) nevertheless showed how normalization could be a starting point for deeper discussions characterized by greater *specification*, more generative for professional learning. The teachers would ask questions to get detailed information on the complexity of the situation, which made these conversations longer, more complex, and analytic (Horn & Little, 2010). Little and Horn (2007) argued that specific talk could lead to *generalization*. In that case, the teachers offered generic teaching principles based upon their teaching experiences, and these principles were re-contextualized and applied to the situation at hand (Little & Horn, 2007, p. 88). The talk would thus alternate between teaching principles and the given situation, i.e., "linking work" (Little & Horn, 2007, p. 88), rather than allowing for generic teaching principles to function as practical tips for teaching.

Scaffolding Accountable Talk: The Role of the Teacher Educators

Because Little and Horn created the framework for in-service teachers, they did not discuss the role of teacher educators. In pre-service teacher education, the teacher educator plays a decisive role in facilitating talk. To further adapt the categories for our study, we examined research on the teacher educators' role and how they scaffold and support talk about field placement within the three categories.

Nelson, Deuel, Slavit, and Kennedy (2010) found that, without strong leadership, teachers' talk at workplace avoided controversies through "polite sharing" and superficial, simplified talk about teaching and learning unsupported by empirical evidence. Research in pre-service teacher education has found that teacher candidates receive limited or positive feedback (Valencia, Martin, Place, & Grossman, 2009) to sustain the personal relationship between candidates and cooperating teachers (Clarke, Triggs, & Nielsen, 2014). The teacher educator may thus help create a safe environment for the talk, contributing to talk characterized by normalization, in Horn and Little's (2007) terms.

However, the teacher educator could also make the talk more specific (Horn & Little, 2007) through carefully designed assignments or using talk moves. Many scholars have argued that descriptions from field placement should be as concrete and specific as possible (Kriewaldt & Turnidge, 2013; Tigchelaar & Korthagen, 2004; Zhang, Lundeberg, & Eberhardt, 2011).

Nelson et al. (2010) suggested "collaborative norms, protocols, and group-generated sets of questions" (p. 176) to move beyond superficial talk. Others have described how specific assignments such as interviewing pupils during field placement (Downey & Cobbs, 2007; Moyer & Milewicz, 2002), writing weekly letters to pupils (Crespo, 2003), or using a ready-made task pool with scaffolded prompts while in placement (Sleep & Boerst, 2012) can help teacher candidates see links between coursework and fieldwork. Lampert et al. (2015) highlighted that talking moves generated from research on classroom talk (Mercer & Dawes,

2014) and accountable talk (Michaels, O'Connor, & Resnick, 2008) can be adapted to the teacher-education context, as strategies for teacher educators to scaffold talk. Finally, research has found that, in the process of generalization, teacher candidates need support to integrate theory in their discussions (Tigheelaar & Korthagen, 2004), to see connections between ideas, situations, and principles (Zhang et al., 2011), or to seek and use evidence (Many & Aoulou, 2014). Whipp (2003) found that introducing critical readings enhanced her candidates' reflection in their email discussions about field experiences. Based upon this research, we adapted an analytical framework from Horn and Little (2007), which we summarize in the methods section.

Methods: Data Sources and Research Design

Design and Sampling

Drawing on data from a comparative, international study, this paper looks at talk about field placement across three teacher-education programs in Finland (P1), Norway (P2), and California, US (P3). These settings are recognized for paying attention to teacher education and creating connections between theory and practice, which was relevant for our purpose. Finland is highly recognized for its longstanding emphasis on teacher preparation and a well-skilled teaching force including master-level teacher training in all subject areas and grade levels (Niemi & Jakku-Sihvonen, 2006; OECD, 2014; Sahlberg, 2011). Finnish teacher education has been the subject of considerable interest due to the consistently strong performance of Finnish students on PISA. Features of Finnish teacher preparation include a focus on an academic, research-based curriculum; an emphasis on research, inquiry, and analysis of teaching and learning; and a focus upon "teacher training schools" as carefully developed sites for learning to teach (Kansanen, 2003; Toom et al., 2010). Despite a less-developed tradition for research on teacher preparation (Munthe & Haug, 2009), Norway is undergoing substantial reform of teacher preparation. The first PISA results in

2000 showed that Norwegian pupils had not performed as well as many had expected.

Authorities considered a weak system of teacher education to be a contributing problem. As a result, the nation has invested substantial resources and efforts in teacher education and teacher quality (Munthe, Malmo, & Rogne, 2011), developed a new national curriculum framework for teacher preparation (Munthe, Malmo, & Rogne, 2011; Norwegian Agency for Quality Assurance in Education [NOKUT], 2006), established master-level requirements for all teachers from 2019, and extended the required amount of field placement in all teacher preparation programs (e.g., National Regulation for Teacher Education (level 8-13), 2013). Similarly, the US has increasingly focused on the nature of teachers' preparation. Over the last two decades, policymakers and educators have experimented with multiple pathways to teacher preparation, and programs vary considerably in terms of the curriculum and opportunities candidates have to learn. Likewise, the length and intensity of clinical work vary. More importantly, programs differ in terms of when candidates are recognized as “teachers of record” and are fully responsible for pupils in the classroom (Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Zeichner, 2016).

Across these contexts, we chose programs that were: (a) university-based teacher-education programs that (b) prepared teachers at the secondary level (grades 8–13), (c) were situated in urban areas, and (d) were rather selective, with low acceptance rates. All programs also (e) combined coursework with field placement in schools. Within P1 in Finland, teacher candidates seeking secondary school certification typically applied for pedagogical studies in the fourth or fifth year of their master's level program, and the common duration of the studies was five years, although there were other paths to apply to the program. The studies had three main categories: studies in education, studies in subject didactics, and studies connected with teaching practice. The practice periods took place in “teacher training schools”

and other collaborating schools. The practice was divided into three periods, adding up to 540 hours in total. The intake for the program was 410 teacher candidates.

Reflective of the larger national effort to strengthen teacher preparation, P2 in Norway has undergone a series of curricular reforms, beginning in 2010. The redesign of the program emphasized program coherence and connectedness to practice. It was structured around four professional practices—observation of teaching, management, differentiation, and assessment of learning—which served as organizing practices that the teachers learn over the course of the program each semester. In the one-year program, practice was arranged in three intervals (1+3+8 weeks) totaling 480 hours, taking place in a network of collaborating- and university schools. There were 160 teacher candidates studying in the program.

P3 in California was a one-year master's level program. The teaching practicum consisted of an average of four hours each day at the school site and a weekly seminar on campus, adding up to approximately 780 hours in total. Teaching responsibilities gradually increased during the year, and the field-practice was arranged concurrently. The program had systematically developed over the last decade to emphasize a clear vision, coherence between the program's constituent parts, and close connections between coursework and fieldwork. There were 72 teacher candidates studying in the program. See Table 1 for a summary of these program features.

Table 1

Characteristics of the Sampled Programs

Program (country/ state)	Organization of fieldwork		No. of fieldwork hours	Acceptance rates in %	No. of candidates
	Intervals	Concurrent			
P1 (Finland)	x		540	10–40 ^a	410

P2 (Norway)	x		480	20.5	160
P3 (California, US)		x	780	- ^b	72

Notes. ^aDepending on subject. The acceptance rate seems high, but this is because there are three different types of teachers in the Finnish education system: subject teachers, class teachers, and special education teachers. Our sample is from subject teachers, and here the acceptance rates are higher than with the other teacher-education programs because these candidates have already gone through one university acceptance process when initiating their major studies. ^bThis data was not obtained from P3.

Comparative research is demanding, as the three countries constitute different national historical contexts of teacher education (Blömeke & Paine, 2008). We nevertheless believe that our sampling has provided us with cases that are similar *enough* to be compared, while entailing a variety that constitute rich sources for understanding the complexity of this instructional practice in teacher education (Stake, 2006). Our main interest has been to focus upon the *opportunities* the teacher candidates have to talk about their field placement, despite the programs' different models and organizational structures.

Data Sources: Survey Data and Observation Data

We collected survey data and observation data at all programs. The first author collected data at P2, while trained, local research assistants collected data at the other sites (see Klette and Hammerness (2016), for the methodology). We surveyed the teacher candidate cohorts cross subject areas ($n=270$). The survey built on the New York City Pathway Study (Boyd et al., 2006) instrument² and measured the teacher candidates' perceptions of coherence between

² See Canrinus et al. (2015) for information on the design and structure of our survey.

their program sites and of opportunities to connect to practice within their coursework. We distributed the paper-and-pencil survey near the programs' end to capture the opportunities the candidates had experienced throughout the program. For our analysis, we focused on items that shed light on the candidates' opportunities to talk about their field placement experiences and link this talk to theory (see Table 2).

Table 2

Selected Items from Survey

Item	Description
1i	Thinking back now about this particular course, how much opportunity did you have to discuss experiences from your own student teaching (fieldwork) in your university classes?
1n	Thinking back now about this particular course, how much opportunity did you have to use theory that you are reading in class, to analyze or examine your own experiences as a classroom student-teacher?
2e	Thinking back now over the course of the entire program so far, how much opportunity did you have to make connections between educational theory and the actual classroom teaching you were engaged in?

The questions were phrased in the following way: "Thinking back now about this particular course/over the course of the entire program so far, how much opportunity did you have to do the following?" and were rated on a scale of 1–4 (1=None, 2=Touched on it briefly, 3=Explored in some depth, 4=Extensive opportunity).

Table 3 outlines the number of participants and gender distribution across programs.

Table 3

Number of Participants and Distribution of Gender

Program	Participants	Gender (% male)
1	74	32
2	119	42
3	71	35

The low response rate from P1 (see Table 3) occurred because there were no mandatory courses for all candidates. Still, all candidates present at one course participated in our survey, and the respondents' answers had no indications of systematic bias. We thus view the information from our Finnish participants as satisfying³.

To get in-depth understanding of the characteristics of the candidates' opportunities to link to practice in their coursework, we collected observation data in the methods, or subject didactics, courses. We focused on language arts and mathematics methods courses because these subjects represent priorities for quality teaching in most countries and have garnered considerable policy attention (OECD, 2014).

A three-week period of observation at each site, consisting of at least 10 hours in each course at each program, resulted in a total of 52 hours. Trained, local research assistants were instructed to capture as much detail as possible in their notes, including spoken dialogue and exact quotations. On average, research assistants completed 10–15 pages of notes per observation, which constitute the data for our analysis. The substance, detail, and length of the notes allowed us to capture key dialogue and discussion. We supplemented written fieldnotes with related artifacts including assignments, PowerPoints, and teacher candidates' work collected during the observations.

³ See Canrinus et al. (2015) for more on the response rate.

Analysis of Survey Data

We used analysis of variance (ANOVA) to investigate whether the three programs differed significantly in how much their teacher candidates could discuss fieldwork experiences, use theory to analyze these experiences, and make connections between educational theory and their classroom teaching. We used Levene's test to check, per item, whether the variances of the three programs were similar (Field, 2009). Levene's test showed that variances were not equally distributed for item 2E, so we used Welch F for the overall comparison and Games-Howell as a post-hoc test.

Analysis of Observation Data

We conducted observation data analysis in two steps. We first categorized the teacher candidates' opportunities to talk about field placement, which we defined as "the extent to which candidates have opportunities to discuss or relate what they are discussing or doing in class to their own fieldwork or student-teaching." Using HyperResearch 3.5.2, we tagged every opportunity the teacher candidates had to engage in this kind of talk. For example, a teacher educator may have planned an assignment asking the teacher candidates about their own fieldwork experiences with teaching methods related to the topic of the class, or a teacher candidate may have made a brief, spontaneous connection. Both instances would be categorized as "talk about field placement."

This initial analysis revealed that the talk varied in terms of connectedness to theory and degree of detail. Accordingly, we examined the observation data more closely to capture these aspects. Based upon previous research and the framework by Little and Horn (2007), we developed an analytical framework (see Table 4).

Table 4

Analytical Framework

Category	Subcategories	Description, examples	Reference
Normalization	Emotional support	Talk that supports the “normality” of the experience, understanding the other’s situation	Horn and Little (2010); Little and Horn (2007); Nelson et al. (2010)
	Superficial and simplified talk about teaching and learning	Talk that is not necessarily supported by empirical data or does not build on each other’s statements; feedback that is missing or supportive	Clarke et al. (2014); Horn and Little (2010); Little and Horn (2007); Nelson et al. (2010); Valencia et al. (2009)
Specification	Detailed descriptions of the specific situation	Empirical descriptions followed by questions from teacher educators or teacher candidates to get more information on the complexity of the situation	Horn and Little (2010); Kriewaldt and Turnidge (2013); Little and Horn (2007); Mercer and Dawes (2014); Michaels et al. (2008); Tigchelaar and Korthagen (2004); Zhang et al. (2011)
	Sustained at length	Talk that has more than three follow-ups	Horn and Little (2010); Little and Horn (2007)
	Complex talk	Deeper discussions and analysis, namely “detailed	Horn and Little (2010); Little and Horn

		descriptions” that are “sustained at length”	(2007)
Generalization	From practical experiences to theoretical principles	Talk about teaching experiences that raises awareness of pedagogical principles, talk that connects to ideas and principles; experiences based in evidence, theory, or readings	Horn and Little (2010); Little and Horn (2007)
	From theoretical principles or concepts to practical experience	Talk that connects ideas, concepts, principles, theories, or readings to situations or practical experiences	Many and Aoulou (2014); Tigchelaar and Korthagen (2004); Whipp (2003); Zhang et al. (2011)

Note. Categories and subcategories are displayed with descriptions and respective references

The main analytical concepts are *normalization*, *specification*, and *generalization* with related subcategories. To adapt Little and Horn's framework to teacher education, we supported it with research on the teacher educators' role in scaffolding this talk. Our empirical data revealed that generalization talk often involved connecting theoretical concepts to practical experiences, so we added a subcategory of generalization. This reflected similar findings from other literature (Many & Aoulou, 2014; Tigchelaar & Korthagen, 2004; Whipp, 2003; Zhang et al., 2011).

We defined the limits of a segment by identifying when a conversation about a topic started and when it changed to another topic. For example, if a teacher candidate explained how technology was used in his or her placement, any follow-up questions and answers about the teacher's role in technology use were coded as "detailed description" (*specification*). If the next sequence of questions concerned what kind of equipment the pupils had, we would code this as a new segment and another instance of "detailed description."

We used the definitions of the categories (see Table 4) to decide which category applied to a specific segment. If the conversation on one topic had more than two follow-up questions and answers, we coded it as "sustained at length." Finally, the total segment would be categorized as "complex" if it was characterized by detailed descriptions that were sustained at length.

Throughout the categorization, we quantified the data by counting instances of the subcategories. We also counted the numbers of lessons including talk about field placement; instances of this talk in total; instances of planned talk lasting more than 30 minutes, between 10 and 30 minutes, and less than 10 minutes; and instances where the teacher candidates took the initiative to talk about field placement.

The categorization of our observation data is high-inference coding. Although the first author conducted all the coding, we increased its reliability through continuous joint collaboration amongst the co-authors (Hammersley, 2010).

Findings and Analysis

Extensiveness of Talk about Field Placement

From the survey data, teacher candidates reported similar opportunities to talk about field placement across the three programs; however, these opportunities varied in their relation to theory (items 1n and 2e, see Table 5).

Table 5

Mean Score per Program per Selected Opportunity

Program	1i – opportunity to discuss experiences from your own student teaching (fieldwork) in your university classes	1n – opportunity to use theory that you are reading in class, to analyze or examine your own experiences as a classroom student-teacher	2e – opportunity to make connections between educational theory and the actual classroom teaching you were engaged in
1 (n=76)	3.16 (.78)	2.22 (.84)	2.37 (.85)
2 (n=122)	3.22 (.70)	2.88 (.73)	3.02 (.75)
3 (n=72)	3.44 (.67)	3.38 (.68)	3.57 (.63)
Total (N=270)	3.26 (.72)	2.83 (.86)	2.98 (.87)

Note. Standard deviation in parentheses; *n* represents survey responses.

As Table 5 shows, teacher candidates in all programs reported that they had extensive opportunities to talk about field placement (item 1i), even though P1 candidates reported significantly fewer opportunities than those at P3 (*Mean difference* [*M*]=.29, *SD*=.12, *p*<.05). Furthermore, differences arose when linking this talk to theory in terms of their opportunities

to use coursework readings to analyze their fieldwork experiences (item 1n: $F[2,265]=44.45$, $p<.01$) and to make connections between educational theory and their classroom teaching across the entire program (item 2e: *Welch* $F[2,157.08]=48.72$ $p<.001$). The P3 candidates reported significantly more opportunities to link talk to theory than candidates at P2 ($M=.49$, $SD=.11$, $p<.01$ for 1n and $M=.56$, $SD=.10$, $p<.01$ for 2e) and P1 ($M=1.16$, $SD=.12$, $p<.01$ for 1n and $M=1.22$, $SD=.12$, $p<.01$ for 2e). Additionally, the P2 candidates reported significantly more opportunities than P1 candidates on both items ($M=.67$, $SD=.11$, $p<.01$ for 1n and $M=.66$, $SD=.12$, $p<.01$ for 2e).

These findings prompted us to look more systematically into the observation data and qualitative analysis of the characteristics of this talk. We found opportunities to talk about field placement experiences in all six lessons observed at P3, in two of five lessons at P2, and in three of 16 lessons at P1 (see Table 6).

Table 6

Analysis of Observation Data

	Program			Total
	P1	P2	P3	
Number of hours observed	24	10.5	17.5	52
Number of lessons with talk about field placement	3/16	2/5	6/6	11/27
Instances of talk about field placement	3	10	19	32
Planned assignments for talk about field experiences (>30 mins)	2	1	5	8
Planned assignments for talk about field experiences (<30>10 mins)	1	0	1	2
Planned assignments for talk about field experiences (<10 mins)	0	0	2	2
Initiatives to talk from teacher candidates	0	9	11	20
Normalization				41
Emotional support or understanding the other's situation	0	0	4	4
Superficial and simplified talk about teaching and learning	17	13	7	37
Specification				49
Detailed descriptions of the specific situation	9	0	26	35
Sustained at length	0	0	7	7
Complex talk	0	0	7	7
Generalization				31

From practical experiences to theoretical principles	0	0	0	0
From theoretical principles or concepts to practical experiences	7	0	24	31

Note. The talk is quantified according to specific aspects in the first seven rows, displayed per program. Then the number of instances of coding of the different subcategories are displayed.

Table 6 reveals that we categorized more instances of talk about field placement at P3 (19), compared to P2 (10) and P1 (3) during the observations. Most instances of teacher candidates taking initiative to talk about field placement occurred at P3 (11 of 19 instances) and P2 (nine of 10 instances). However, observation data also revealed situations with more structured and more sustained talk. We identified some longer, planned sequences (>30 mins) in five of 19 instances at P3, two of three at P1, and one of 10 at P2. For instance, P3 teacher candidates had almost weekly workshop-time during their methods courses where they divided into smaller groups of 3–4 teacher candidates and one teacher educator. These workshops were devoted to planning and designing unit plans, assignments, and rubrics; thus, they were not necessarily devoted to talk about field placement. Still, since P3 candidates had concurrent field placement, these workshops were related to the classes they were teaching. We thus chose to code these instances as “talk about field placement.” P1 and P2 candidates had field placement in intervals; still, we identified two instances of coursework at P1 where most of the lesson concerned talk about field placement.

What do the Opportunities to Talk about Field Placement Experiences Look Like?

As described, we use the terms *normalization*, *specification*, and *generalization* to analyze the characteristics of talk about field placement within coursework. The following excerpts illustrate what typically characterized the talk within these categories.

Examples of Talk Characterized by Normalization

Like Little and Horn (2007), we found many instances of *normalization* in our sample (17 at P1, 13 at P2, seven at P3; see Table 6). Excerpt 1 provides an example of the subcategory emotional support (four instances in total). In this situation, they discussed precision in teaching mathematics, and one teacher candidate described his or her experience:

(1) Teacher Candidate (TC) 10: This came up in my class earlier this year with “no real solutions” and “undefined.” At what point are you picky about that with real numbers? I mean, in first grade, you say “no solutions” when it involves negative numbers.

(2) Teacher Educator (TE) 1: Yeah, we have a problem with that. [All laugh].

(Excerpt 1: Mathematics methods course, P3)

Although vague, the teacher educator’s emotional support and the laughter (2) illustrate how a supportive climate might be an important aspect of talk about field experiences. The conversation was nevertheless not extended through questions to explore the described situation.

We found many instances of *normalization*, but that talk was most often categorized by the subcategory superficial and simplified talk (37 instances). In Excerpt 2, the teacher candidates completed a warm-up activity by discussing in groups their observations of teaching oral skills.

(1) TC1: We had whole-class discussion [...] where the two other [teacher candidates] led the discussion with our supervisor, but I did not participate. But that was all that I saw.

(2) TC2: We also, we had a rubric about the use of voice that was handed out, divided into low, middle and high degree of achievement. The pupils received only positive feedback in plenary, and that was nice, because it was the first time, but the teachers filled out the rubric, and the pupils also assessed themselves related to the learning goals in a rubric.

(3) TC3: We did the same.

(4) TC1: We, after every lesson, we examined who had been orally active, and who had not been, to register.

(5) TC2: I think they did the same at my placement, but to evaluate. Some pupils thought: “Yes, oral grade!” But there were few that were orally active.

(Excerpt 2: Language arts methods course, P2)

The teacher candidates shared their experiences of oral skills teaching, building on each other’s statements with expressions such as “we did the same” (2, 3, 5) without asking follow-up questions. Their statements were vaguely grounded in empirical evidence (4, 5). The conversation was thus superficial and simplistic, but nevertheless functioned as a starting point and a way to orient the teacher candidates (cf. Little & Horn, 2007).

Example of Talk Characterized by Specification

We found 26 instances of the subcategory detailed descriptions at P3 and nine at P1 (see Table 6). This subcategory often involved follow-up questions prompting more detail. Excerpt 3 illustrates this talk when the teacher candidates had returned to coursework after observing and teaching in schools. The teacher educator had prepared an assignment based upon the candidates’ written reports on their observations. The teacher educator had picked eight themes from the reports, which he or she wrote on the chalkboard before asking the candidates to discuss their experiences in groups. We followed the conversation as one group discussed their experiences related to the theme “motivation”:

(1) TC2: Well, generally, based on my observations in [name of school], I would say that the pupils are pretty motivated. They took several optional courses in high school, in arts and crafts, music, handicraft, and the kind. There was no need for any particular motivation because all pupils participated actively in any case. But, on the other hand, I observed many lessons on foreign languages that included a lot of motivation.

(2) TC1: Was the motivation achieved through appealing to practical utility, that the pupils will need the skills or knowledge later on in their life? I find it really hard to invent means for motivating pupils.

(3) TC2: Well, not really. In one German lesson, there were visitors from Germany, but I did not hear anyone talk about working life.

(4) TC1: But maybe the best way to motivate them is to connect what is studied with practice? And, of course, it is important that the teacher is enthusiastic.

(Excerpt 3: Language arts methods course, P1)

Compared to Excerpts 1 and 2, this exhibits a greater tendency toward *specification*. The candidates asked follow-up questions (2, 4), rather than continuing to share their own experiences. The excerpt also tends towards more *generalization*, as they related the concept of pupils' motivation to teacher enthusiasm (4) and the importance of connecting schoolwork to pupils' everyday lives (4). The assignment requiring candidates to focus on eight themes might have prompted this focus. Although candidates had much time (35 minutes) for conversation, the talk was never sustained at length (three or more follow-ups). The candidates briefly discussed one theme before moving on. Specific situations were never analyzed in depth. The assignment may have been too extensive, and the eight themes were not unpacked to illustrate what candidates should address. Finally, the teacher educator rarely interacted with the observed group, asking only a question to monitor their progress. Nevertheless, we found seven instances of sustained talk that could be characterized as complex (see Table 6). All these instances occurred at P3, five during workshop time and two during regular coursework (see Excerpt 4). The teacher candidates shared experiences from their teaching when they struggled with the issue of "telling versus not telling"⁴ when

⁴ "Telling versus not telling" addresses the dilemma of providing the pupils with the direct answer to a question or providing scaffolding (e.g., follow-up questions, hints) for them to find the answers themselves.

teaching mathematics. The class was divided in two, with one teacher educator and 7–8 teacher candidates in both groups. The discussion below follows one group:

(1) TC1: Well, I have a dilemma from yesterday. We were hoping to discover e by using the formula for compound interest and making it really, really large so that the inside equaled e . We took one time equation and expanded it to the whole equation, and I asked them how to set it up for 10 times, and so on. But then we ran into the problem that they couldn't get answers from their calculators. There was a lot of frustration – they didn't know what to do – and I didn't know what to do. So I ended up telling them what it should have been, and it defeated the purpose of having them find out what e actually is. It didn't naturally come out. The affordance was that it saved time, but the negative impact was that the whole point didn't happen.

(2) TE1: Yeah, the discovery nature. Questions or follow-ups?

(3) TC6: Makes sense. I'm sorry. [All laugh].

(4) TE1: If you were in that situation, what would you do?

(5) TC6: Well, it reminds me of my lesson where pupils were comparing quadratics and getting all the constants wrong. It just defeated the whole thing, and I ended up giving up. I don't know.

(6) TC3: So one of the problems was inputting the numbers in the calculator? [Yes]. So how would you feel about giving them the sequence of buttons to push?

(7) TC1: I think that would be good, but that was only part of the problem. To make the equation work, I had to make a complicated equation even more complicated; I had to add more variables. So it looked really scary, and they thought it was a lesson about compounding interest.

(8) TE1: It sounds like the complexity took over your learning goal. So what do you all think would help so that the story doesn't overwhelm the story of compounding interest?

(...) Have you thought about using other technology besides the calculator, like Excel, to show how the pattern works? I mean, not to show them, but they could do it in Excel too. What do you all think? Better to push through on the calculators, or maybe do a demonstration?

(9) TC8: I feel like the excitement comes from putting in numbers: “Let’s put in this one! Let’s put in a bigger one!” You could keep that excitement as long as you were still getting the numbers from the pupils and putting it on the projector.

(Excerpt 4: Mathematics methods course, P3)

TC1 provided a detailed picture of the situation connected to the concept of telling versus not telling (1), and the other candidates contributed to *specification* by asking follow-up questions (6, 8). The assignment was specific, focusing on a limited aspect of mathematics teaching and helping the candidates to make *generalizations* by connecting experiences from field placement to the pedagogical issue of telling versus not telling (1). The teacher educator supported the conversation and contributed to specification by encouraging other candidates to comment (2, 8). The conversation had aspects of *normalization*, as candidates provided emotional support by acknowledging TC1 had been doing difficult work (3, 5). Overall, the talk went slightly deeper into the problem experienced by TC1, as compared to previous excerpts, perhaps because this conversation included more than three follow-up questions. This excerpt illustrates how the combination of *generalization*, *specification*, and sustainment at length contributed to aspiring analytic and complex talk about teaching and learning.

Example of Talk Characterized by Generalization

Excerpts 3 and 4 illustrated the category *generalization*. The high degree of talk coded as *generalization* in our material was always coded as the subcategory making connections from theoretical principles to practical experience (24 instances at P3, seven at P1; see Table 6) with the teacher educator providing the theoretical concepts. In Excerpt 5, the teacher

educator provided a targeted task, relating field placement experiences to the class's topic (differentiation). The educator asked the candidates to write down one thing they did to help a pupil academically the previous week, and provided further scaffolding by specifying that they should think about the pupils' learning profiles and ways to differentiate (i.e., content, process, product, or affect/environment). When asked to share their experiences, three candidates did:

(1) TC13: For English language learners, we started reading [unclear], which involves language they don't use every day. One pupil always asks, "What does this word mean?" and can't focus on the text. So I bolded the words in the texts and put footnotes with definitions. So I guess it's about content.

(2) TE1: Also about readiness and process, letting them handle it on their own.

(3) TC9: I had pupils write cover letters this week. One of my pupils has a hard time getting settled, like your example. I had his friend move away from him, and he was away for vacation for a while. (4) So I asked him a lot of questions as he was writing his draft, more than other pupils, because sometimes he'll do things a little quickly and thinks he can't do analytical thinking and gives up a bit. (5) And with the product, he has an [Individualized Education Program] and works with someone first period, so I accepted a handwritten one instead of a typed one because I know that he works on it then.

(6) TC5: We have a narrative essay due, and I came in an hour early on a Friday and made the pupil come in. I told him I'd kill him if he didn't show [laughs]. He was writing about a run-in with the police, and he was afraid we were going to turn him in to the police. (7) We also learned that he can't type, so he talked and I typed. (8) And I asked about what he said, what his friend said, what things smelled like, etc. And at the end, we

had half of a narrative done. We got a lot done, (9) but it also let him know that he could write about something he was interested in

(Excerpt 5: Language arts methods course, P3)

The assignment pointed to the concept of differentiation, helping the teacher candidates make *generalizations* from a theoretical concept to practical experiences. The teacher educator further scaffolded the talk by pointing to the decomposed term *process* (2), and the teacher candidates did the same (4, 6, 8). The teacher candidates used the decomposed terms *content* (1), *process* (2), *product* (5, 7) and *affect/environment* (3, 9) to structure their talk. However, the conversation was brief in this warm-up activity. Although the teacher candidates provided detailed descriptions of their experiences, no follow-up questions delved deeper into the situations and the candidates did not explicitly build upon each other's observations. Hence, the connections made between theoretical concepts and practical experiences were brief and superficial. We found no instances where the talk about practice experiences generated (theoretical) principles of teaching, the other subcategory of generalizations.

Discussion

This article has examined what characterized the opportunities teacher candidates have to talk about field placement within their campus coursework. In the survey data, the teacher candidates at all three programs reported extensive opportunities to talk about field placement. However, we identified differences between the programs, in both survey and observation data, related to the characteristics and quality of these opportunities.

Importance of Different Categories of Talk

We found talk in the category *normalization* frequently across the three programs (see Table 6). This type of talk is important in teacher education, as emotional support helps create a sharing community (Little & Horn, 2007). Recognition of their struggles might aid the teacher candidates' development at this early stage when they are preoccupied with themselves and

their teaching (Fuller & Bown, 1975; Timperley, 2010). In that respect, it is somewhat surprising that we did not find more of this kind of talk, and it also contradicts the findings from our pilot study (Klette & Hammerness, 2012). We found substantially more superficial talk about field placement, which might be significant in warm-up activities to tune into a new topic. Nevertheless, one might argue that talk must continue beyond a stage of *normalization* towards *specification* and complex talk, to become generative for professional learning (Little & Horn, 2007).

Previous studies have found that occasionally teachers generate principles of teaching from their experiences (Horn & Little, 2010; Little & Horn, 2007). This *generalization* is the most advanced kind of talk in Little and Horn's (2007) framework, constituting a complex, demanding task for teachers. We found many instances of talk characterized by *generalization*, especially in P3 and in P1 (see Table 6). However, we coded these instances in the subcategory connecting *from* theory *to* practice, unlike the reversed generalizations made by teachers in Little and Horn's work. The lack of teacher-candidate-driven generalizations from practical experience to theoretical principles of teaching in our material indicates this *could* be a characteristic of being a novice teacher. Teacher candidates and professional teachers come at talk about the profession from two different points of view. In Little and Horn's (2007) case, the talk occurred in the teachers' workplace. The conversations arose from a shared frame of reference allowing teachers to move to generalization; however, teacher candidates and teacher educators might lack this frame. Teacher candidates may not have a sufficient context to make the leap to generalization on their own. This could be why, in the context of teacher education, generalizations are made *from* the theoretical concept provided by the teacher educator *to* specific experiences related to this concept. Moreover, we found that generalizations were often realized through a simple, quick connection that did not necessarily

lead to deeper discussions. Thus, these generalizations are superficial and similar to talk characterized by *normalization* in Little and Horn's (2007) framework (see Excerpts 3 and 5). Nevertheless, if teacher candidates lack professional experience, offering them these brief opportunities to connect theoretical concepts and field experience may be the best teacher educators can do for teacher candidates. These brief connections constitute important opportunities for the teacher candidates to link coursework and fieldwork. In our view, this interplay between practical, personal experiences and theoretical, generic principles is vitally important for the profession. Kvernbekk (2014) highlighted a danger in the educational sciences that practice is viewed as a personalized, individual term, where teachers or teacher candidates are to create their own understanding of practice – their own practice theory. Like Kvernbekk, we believe that theory must function as professional and shared generic standards, upon which teachers reflect and evaluate their own experiences.

Assignments and Scaffolding

While we did not find complex talk frequently in our data (see Table 6), this talk may occur in their placements with their mentor teachers, and teacher educators may see this as a reasonable division of labor (Darling-Hammond, 2006). Still, research has shown that fieldwork is among the most variable and challenging components of teacher education programs (Darling-Hammond, Hammerness et al., 2005; Grossman et al., 2008). Coursework, with teacher educators as experts, is thus an important site for making connections between specific situations and generic principles (Horn & Little, 2010).

Our findings indicate that the lack of sustained talk around specific practical experiences, may limit the degree of analytic talk. However, we know that in-depth learning is important (NRC, 2000; Sawyer, 2005), which in our context demands targeted analytical focus and *time* to investigate different aspects of a situation. It follows that the teacher candidates' thinking and talk must be scaffolded to make the talk more analytic and thus "accountable" (Resnick &

Hall, 1998). Like in the study by Nelson et al. (2010), our data revealed that the teacher educator's assignment played a vital role in making the talk generative for professional learning (e.g., compare the assignments given in Excerpts 3 and 5). Similarly important was the scaffolding provided during the talk. For instance, the teacher educator at P3 asked follow-up questions or prompted teacher candidates to ask follow-up questions (see Excerpt 4), similar to techniques used in K-12 classrooms (Mercer & Dawes, 2014; Michaels et al., 2008) and highlighted by teacher-education scholars (e.g., Kriewaldt & Turnidge, 2013). The teacher educator at P3 also noted connections between the practical experiences of the teacher candidates and the theoretical concepts in focus (Excerpt 5), as highlighted by other scholars (e.g., Zhang et al., 2011). The findings from these three programs suggest that systematic work to scaffold the talk about teaching and learning might be a key challenge for teacher educators.

Differences between Programs: Opportunity to Learn across Contexts

Even though candidates across all three programs reported in the survey data that they had extensive opportunities to talk about field placement, candidates from P3 in California reported more opportunities to connect talk about field placement to theory than candidates from P1 in Finland and P2 in Norway (see Table 5, items 1n and 2e). The observation data revealed less extensive opportunities' to talk about field placement, especially at P1 and P2. We found more instances of talk, longer talk, and more talk initiated from the teacher candidates at P3 (see Table 6). The talk at P3 also tended to be more *detailed* and *complex* than at the other programs, and the teacher educators from P3 played a vital role in scaffolding the talk. Given the importance of opportunities for candidates to talk about practice within their coursework so they can make connections between theory and practice (Darling-Hammond, Hammerness et al., 2005), the differences between these programs are intriguing.

Perhaps these findings are unsurprising, given how differently these programs are organized. Not only did the P3 candidates have more practice in hours than their peers in P1 and P2, but their coursework and fieldwork were also organized concurrently, instead of in intervals, as is the case in P1 and P2. One might question whether this influenced the way they talked about practice. The P3 candidates might have had a better understanding of their experiences because they practiced and completed coursework every day, while the candidates at the other programs were seldom in their placements and likely had more distant relationships with their pupils – and a less present connection to practical experiences related to the particular topic addressed in class. Combined with the different program sizes, P3 being a small program, and P1 and P2 being large, public mass education institutions, this might also have influenced the knowledge the teacher educators had about their candidates' placements. Even though P2 in Norway had established closer relationships to about 20 University schools (Lund & Eriksen, 2016), the program had about 100 additional collaborating schools, where their candidates might be placed. Even though Finland has a long tradition with laboratory-schools (Moran & Clarke, 2012), the situation in P1 was somewhat similar, as the candidates would normally only spend one of their placement periods in these laboratory schools. Sääntti, Rantala, Salminen, & Hansen (2014) actually argues that the explicit focus on research in Finnish teacher education might have undermined a focus on fieldwork and practical skills. They show that the amount of practice and the amount of tutoring during practice has deteriorated from 1982 to 2006, and has been replaced by more self-studies (Sääntti et al., 2014). The teacher educators and schools might thus have closer connections at P3, improving the teacher educators' ability to scaffold the talk in a generative way (cf. Brouwer & Korthagen, 2005; Darling-Hammond et al., 2002). Additionally, our data revealed that the teacher educators at P3 often organized their coursework in practical workshops with 3–4 candidates. This arrangement was never observed at P1 or P2. This arrangement at P3 might allow modeling of

how to talk about field placement experiences (e.g., how to encompass theoretical principles), and the P3 candidates might bring that into the coursework classroom whenever they talk about practice. Finally, our material uncovered a tendency for the assignments provided by the P3 teacher educators to support the complexity and the quality of the talk (see Excerpts 4 and 5).

Limitations, Implications and Concluding Remarks

Talking about field placement is an important, accessible way to connect theory and practice in teacher education. However, our findings revealed that talk is not automatically effective, and there might be potential for improvement.

Three weeks of observations is a limited time, but observational studies from K-12 classrooms have suggested that four consecutive lessons provide sufficient information to get an overview of teaching quality (Ball & Hill, 2009; Klette, 2009). We estimated that three weeks of teaching in a teacher-education classroom would be sufficient. Although a longer observation period might have offered more certainty, we also found that our observations covered important aspects of talk about field placement, as this was specifically on the agenda during our observations. Further, conducting comparative research brings challenges, in our case regarding the extent to which the programs are indeed comparable (Blömeke & Paine, 2008). Despite these limitations, we agree with Ball and Cohen (1999) that a major undertaking stands before teacher educators to create a pedagogy of teacher education, and we believe our findings can have an impact on teacher education in this respect. They provide insight into principles of organizing talk about field placement that could be incorporated in a pedagogy of teacher education, and we believe that these are not necessarily exclusive to smaller, privileged programs such as P3. First, our data indicated that the talk about practice could be scaffolded through *specific assignments* and questions as well as through *techniques* during coursework discussions, and we saw several examples of this across the programs,

especially within the coursework at P3. Research on classroom talk (Mercer & Dawes, 2014) and accountable talk (Michaels et al., 2008) has provided teachers with discursive tools (e.g., how to pose questions) and different talk moves (e.g., re-voicing, recapturing). Talk about field placement in the teacher-education classroom demands similar tools, which teacher educators may not yet have. Our study suggests that the framework adapted from Little and Horn (2007) might function as a starting point for developing these tools. Second, our data indicate that *more time* must be spent talking about one specific instance from field placement for candidates to engage in complex, analytic talk. Perhaps the democratic sharing of time among candidates in large teacher education programs is not the most generative way to enhance professional learning; in fact, more analytic and complex talk might occur if more time was spent on a single candidate's story every lesson.

Further research should examine these issues, to develop a pedagogy of teacher education for talking about field placement. We recommend research that delves into the role that the organization of field placement might play in this respect, and we would like to encourage research based upon audio or video data to fully capture the details of the talk and the teacher educator's scaffolding efforts.

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