Novice Teachers and how they cope

Abstract

Teachers often describe their first teaching job following graduation as a shocking experience. This description raises several questions: Do novice teachers actually have a lower level of coping than experienced teachers? Are there also factors in the work environment that make coping difficult for all teachers at a school? This paper compares the ability of novice and experienced teachers to cope with their work, and how this ability is affected by the level of collegial and superior support and collaboration offered. Although we find few differences between novice and experienced teachers' coping level, these two groups of teachers do differ in terms of the levels of collegial and superior support and collaboration. In addition to receiving a lower level of professional support from their superiors, novice teachers generally lack ways to articulate their own needs to colleagues. The ability of novice teachers to cope with their work should be considered a collective responsibility in schools rather than the fate of the individual teacher. This paper is based on observations, interviews and survey data from Norwegian schools.

Keywords: practice shock; novice teachers; professional development; coping

Joakim Caspersen, Nordic Institute for Studies of Innovation, Research and Education, . Joakim.caspersen@nifu.no (corresponding author).

Finn Daniel Raaen, Centre for the study of professions, Oslo and Akershus University College of Applied Sciences. FinnDaniel.Raaen@hioa.no.

Introduction

The period as a novice teacher is a vulnerable one, and the attrition rates of novice teachers are of global importance (Organisation for Economic Co-operation and Development [OECD], 2005). According to international research, novice teachers experience various challenges when trying to cope with their new role as professionals. In teacher research, several different labels have been applied to this phenomenon, including 'reality shock' (McCormack & Thomas, 2003), 'cultural shock' (Wideen, Mayer-Smith & Moon, 1998) and 'practice shock' (Jordell, 1986, 1989; Monsen, 1970). Although different in content, these labels often describe the same phenomenon. Yet another label that has been applied is 'transfer shock', defined by Cejda (1997) as a changeover period caused by the move from a familiar setting to one that is less familiar. The ability of novice teachers to cope (i.e., their feeling of certainty and self-efficacy) can be adversely affected by this type of transfer and their lack of experience, which in turn might lead to burnout and stress (Schwarzer & Hallum, 2008), attrition (Le Maistre & Paré, 2010) and even a negative outcome for their students (Midgley, Feldlaufer & Eccles 1989; Ross, 1992). Are these forms of shock for novice teachers primarily the result of a lack of relevant practical preparation in teacher education - or are they rather the consequence of inadequate opportunities in school for collegial support and learning? In this paper we address this question by focusing on learning opportunities for newly qualified teachers in school and discuss the relevance of such opportunities for their coping, while also discussing how our findings are relevant for the professional preparation of teachers. Disentangling how schools as organizations accommodate for novice teachers' coping is a question of relevance for researchers, novice and experienced practitioners, as well as teacher educators struggling to find out how teacher education can be made more practical and relevant for coming teachers.

In this paper, both qualitative and quantitative methods are used to examine how novice teachers cope with their work. Based on previous research and theory, we put forward a hypothesised model of the roles of collegial and superior support and collaboration for building teacher self-efficacy and teacher certainty. These two dimensions constitute our quantitative operationalisation of coping. We gathered survey data from a sample of Norwegian teachers and used structural equation modelling (SEM) to test and develop the model. The findings are triangulated and discussed using material from an interview and observational study conducted in Norwegian schools. The included variables are possible to change within the school as an organisation; hence, they are especially policy-relevant in attempting to enhance the ability of novice teachers to cope with their work.

Extensive research in various Western countries have revealed that novice teachers primarily want help with solving practical and technical problems in their work (e.g., handling 'problem children'), understanding the timetable, setting grades, dealing with groups of children with great variation in knowledge and skills and using pedagogical methods effectively (Cains & Brown, 1998; Stukát, 1998). However, help and support from colleagues and school leadership are often lacking. Teacher collaboration has been described by many as rare and, when occurring, non-binding (Hargreaves, 1994; Little, 1990). In comparison to other professional groups, novice teachers report substantially lower levels of follow-up at their work. Although teacher collaboration has been on the political agenda for many years now, it remains restricted, and collegial feedback on teachers' work is rare (Caspersen, 2007;OECD], 2009). Teachers are considered one of the most powerful influences on student learning. Their sense of control in the classroom greatly influences student outcomes (Hattie, 2009, p. 117). The ability of novice teachers to cope, as well as the factors that affect this ability, therefore represents an important research topic (Hamilton & Clandinin, 2011). Despite the degree of importance given to the topic, international studies have found that

across OECD countries, 29% of teachers work in schools without a formal induction process for novice teachers and that 25% work in schools without a mentoring programme for novice teachers (OECD, 2009, p. 70). The main challenges facing novice teachers seem to be growing as the complexity of the work situation of teachers increases (Le Maistre & Paré, 2010). The situation has been described as remarkably similar across countries (OECD, 2005, chap. 4). However, close examinations of specific countries have revealed great and interesting differences in teacher induction (Wong, Britton, & Ganser, 2005).

Being a novice teacher

Research has suggested that the experiences of teachers in their professional education differ from those in the workplace. This difference might be overwhelming for novice teachers and manifest itself in certain behavioural patterns. One behavioural pattern that has been reported throughout the literature is the tendency of novice teachers to be rigid and to carry out rule-governed practices (e.g. Huberman, 1989; Kuzmic, 1994; Ritchie & Wilson, 1993). This behavioural pattern exhibited by novice teachers can be related to uncertainty in their role as teachers (Merry, 1995; Munthe, 2001a, 2001b, 2003). They are expected to be fully responsible for their job performance; however, in contrast to their more experienced colleagues, novice teachers cannot draw on their own experiences as teachers.

There are several indications that a lot of the skills and knowledge necessary for coping with work as a teacher are better learned as part of a continuing work experience. Socialisation into teaching cannot be viewed as a passive, gradual transition into an existing school context. It must be regarded as an interactive process of interpretation between the novice teacher and the school context, as well as between the novice teacher and the school as a collective (Beijard, Meijer, et al., 2004, Kelchtermans & Ballet, 2002; Kuzmic, 1994). The first few years of teaching are characterised as a two-way struggle, where 'teachers try to create their own social reality by attempting to make their work match their personal vision of how it should be, whilst at the same time being subjected to the powerful socializing forces of the school culture' (Day, 1999, p. 59). Practice shock is not limited to the teaching profession. Many professions, including physicians (Flynn & Hekelman, 1993), nurses (Halfer & Graf, 2006), engineers (Riordan & Goodman, 2007) and social workers (O'Connor & Dalgleish, 1986), have their own descriptions of a troublesome first encounter with work. These findings have indicated that practice shock is not something that is specific to teaching but rather is a somewhat universal phenomenon that can be addressed.

The first three years represent a distinguishable period in the professional development of teachers (Day, Sammons, Stobart, Kington, & Gu, 2007, pp. 66–74). During this period of commitment, support and challenge, teachers' self-efficacy beliefs are malleable. From a research perspective, this three-year period – when practice shock is most likely to occur – can be divided into two phases. The first phase is the immediate reaction that teachers have when encountering work for the first time. During this phase, which lasts from the first few weeks and months through the first year, everything can seem unfamiliar and strange (Cains & Brown, 1998; Ginns & Watters, 1996; Onofowora, 2005.). The second phase covers a longer time frame of one to three years after graduation. During the second phase, attention is directed towards coping with the teaching situation, perceiving the opportunity to influence the everyday work of the school and the pupils (Skaalvik & Skaalvik, 2007; Yost, 2006) and understanding how coping is related to burnout and stress (e.g., Friedman, 1993, 2000; Gold, 1985). These issues of coping and stress are sometimes further related to turnover and occupational dropout (Grant, 2006; Yost, 2006). In this study, we emphasised the second phase – that is, the first three years of work of teachers – rather than the initial encounters

with the teaching position, although teachers with only a short time of service were also included in the data.

Measures of coping: Perceived self-efficacy and teacher certainty

From our point of view, and based on the literature reviewed in the previous section, practice shock experienced by novice teachers is characterised by their inability to act and their lack of opportunity to control the situation that they face. This type of experience implies that novice teachers lack the coping skills necessary to fulfil their teaching roles. Several empirical approaches to the measurement of coping have been adopted in research on perceived self-efficacy and teacher certainty. In self-efficacy research, the focus has been on how individuals feel they can influence the day-to-day realities of school. Teachers' perceived self-efficacy involves the teachers' judgement of their own capabilities to bring about desired outcomes of student engagement and learning. Research has showed that teachers' perceived self-efficacy positively affects how teachers teach, their degree of persistence in their work and student achievements and motivation (Tschannen-Moran & Woolfolk Hoy, 2001). Bandura's work (1977, 1997; Bandura, Barbaranelli, Caprara, & Pastorelli, 2001) and Rotter's (1966) research on the internal locus of control and the external locus of control are the two main traditions in this research, although many different operationalisations and measures have been previously presented (see Tschannen-Moran & Woolfolk Hoy, 2001, for an overview). The Bandura tradition defines *perceived self-efficacy* as the belief in one's own abilities to organise and carry out the actions necessary to achieve certain desired goals (Bandura, 1997, p. 3). According to the Rotter tradition, coping and control are related to teachers' beliefs in how education can affect pupils. Teachers' belief in their own influence is greater when education is assumed to have a greater influence on students than do student abilities and home environment (Skaalvik & Skaalvik, 2007, p. 612).

Whereas teacher efficacy is an elusive concept (Tschannen-Moran & Woolfolk Hoy, 2001), teacher certainty has been studied in many different ways (Munthe, 2001a, p. 167). Munthe (2001b, p. 357) argued, with reference to a study by Lange and Burroughs-Lange (1994), that uncertainty in the role as a teacher must be seen as legitimate and natural rather than as a shortcoming of the teacher, and that it can supply and elaborate upon the more often used concept of self-efficacy. She further described uncertainty as an inherent aspect of teaching. Learning to deal with this uncertainty is an important part of professional development as a teacher (Munthe, 2003, p. 801). Teacher certainty consists of three dimensions that all relate to working with students: didactic certainty, practical certainty and relational certainty (Munthe, 2001a). Younger (and less experienced) teachers are less certain than older (and more experienced) teachers; however, certainty also seems to diminish in the final stages of the professional career (Munthe, 2001b, p. 363).

Teachers' certainty also influences how teachers teach. Uncertain teachers tend to follow a routine and are less likely to take risks (Lortie, 1975; Rosenholtz, 1989). As previously mentioned, this type of behaviour is similar to that exhibited by novice teachers. Past and recent research studies have both demonstrated a positive relationship involving teacher certainty, feeling of control in the classroom and student academic outcomes (Hattie, 2009; Rosenholtz, 1989).

Collaboration and social support as preconditions for coping

Perceived self-efficacy and teacher certainty are not simply personality traits that are stable across time and different situations. They are also situational and affected by context (Bandura, 1977; Skaalvik & Skaalvik, 2007, 2009). Teacher collaboration, particularly the

mentoring of newly qualified teachers by experienced teachers, has proven important in helping newly qualified teachers to cope with their work (Yost, 2006). Novice teachers benefit from involving themselves in collaborative teaching (Ginns & Watters, 1996). On average, higher perceived self-efficacy exists in small schools with a supportive superior, and induction programmes are claimed to provide important and useful support (Ginns & Watters, 1996). Teachers who report having an ability to cope with their work and high levels of perceived self-efficacy are better suited as mentors. Several studies have showed that a lack of support from colleagues has a negative impact on perceived self-efficacy and is associated with burnout, and that teacher collaboration is important in reducing burnout for all teachers (Brouwers, Evers, & Tomic, 2001). Support from superiors yields a similar outcome. Teachers who participate in programmes of cooperative learning report higher levels of coping than those who do not participate. This finding also applies to those teachers who collaborate with colleagues (Shachar & Shmuelevitz, 1997). Correspondingly, participation in research projects with colleagues as a strategy for professional development has a positive effect on coping (Henson, 2001). According to Ross's (1995) review, the following are positively related to coping: positive feedback, collaboration with other teachers, active engagement by parents in their children's school and a unified understanding and management of pupils' behaviour at school. Teachers' collaboration with mentors from the same school or other schools also has a positive impact. Unsurprisingly, difficult pupils reduce teachers' ability to cope (Brouwers & Tomic, 2000), whereas perceived self-efficacy and social support can help reduce stress in the teachers' workplace (Van Dick & Wagner, 2001).

Self-efficacy might also be seen as something more than an individual phenomenon. Research has made it possible to distinguish between individual and collective self-efficacy (Skaalvik & Skaalvik, 2007). As team work and collaboration have become more common in Norwegian schools – similar to what has occurred in schools in many (if not most) countries (Hargreaves, 2000; OECD, 2009) – expectations about what individuals can achieve together have been steadily increasing. Collective self-efficacy, described as an anticipation of what one can accomplish as a collective or a team in a school, seems to be a common normative expectation of individual teachers, which encourages them to strive to achieve ambitious goals. A positive relationship between individual and collective self-efficacy has been found (Skaalvik & Skaalvik, 2007). Edwards (2005) highlighted the importance of *relational agency* in teacher professional learning and action, especially for inexperienced teachers, emphasising the joint action of teachers so as to promote the work in schools.

It could be argued that what happens during the process of collaborating with colleagues (i.e., the degree of involvement and commitment) has a greater effect than the collaboration itself (Havnes, 2009). One can distinguish amongst the following: (1) team teaching, where joint planning and preliminary presentation of subject matter take place, followed by a delegation of responsibility for different aspects of the teaching; (2) complementary teaching, where one teacher presents the content and another teacher complements with 'how' and different learning activities; and (3) supportive learning, where one teacher organises and teaches the subject matter whilst another teacher develops and implements different learning activities with the intention of enhancing, enriching and expanding student understanding (Bauwens & Hourcade, 1995). Little (1990) distinguished amongst the following modes of teacher collaboration based on increasing involvement and commitment: storytelling, aid and assistance, sharing and joint work. Correspondingly, one can distinguish amongst various forms of collaboration, in which teachers collaborate by doing the following: (1) divide what needs to be done amongst themselves; (2) make plans and implement these plans in accordance with school traditions; (3) plan, implement and evaluate in common; or (4) engage

in a systematic sharing of experience (Duncombe & Armour, 2004; Hargreaves, 1994; Moos & Thomassen, 1994).

A postulated model for coping with teaching

Teachers' personal beliefs and the social environment of which they are a part seem to affect how they behave. Previous research has suggested that self-efficacy and teacher certainty can be used to assess the ability of teachers to cope with their role. In addition, the teachers' work environment – in terms of support from colleagues, collaboration with colleagues and professional and relational support from superiors – appears to have an impact on the ability of teachers to cope. The literature review provides the foundation for a hypothesised causal model for coping with teaching (Figure 1).

Figure 1 about here

Each of the ellipses in the model indicates a set of variables intended to measure a certain dimension. Coping with the role of a teacher (perceived self-efficacy and teacher certainty) is described as being influenced by support from, and collaboration with, colleagues and superiors. The single-headed arrows indicate a causal relationship. The double-headed arrows indicate a correlation between the variables (between self-efficacy and teacher certainty, between professional and relational support from superiors, between planning and deliberation on teaching and its consequences, between planning and support from colleagues and between deliberation on teaching and its consequences and support from colleagues). Because this model is also a structural equation model, it is tested and developed in the following sections. The single-headed arrows from self-efficacy to students' learning and students' motivation indicate that they are separate dimensions of self-efficacy (i.e., self-efficacy is a second-order factor). In the hypothesised model, only the latent variables are shown. We used confirmatory factor analysis (CFA) to test each latent variable with its respective manifest variables. In Table 1, all dimensions are presented with means, standard deviations, probability of significant difference between novice and experienced teachers, Cronbach alpha values, number of items and model fit measures for each 'cluster' of dimensions. It is assumed that the dimensions are correlated within each cluster (cf. Figure 1).

Table 1 about here

Data and methods

The empirical material in this paper was taken from a quantitative survey and a qualitative study based on observations combined with semi-structural interviews of teachers and school leaders. Each novice teacher was registered by a constant "shadowing" in all their school activities during a week. Furthermore, the novice teachers were video-filmed during their lessons. Based on the videos each teacher's practice was scored according to a standardized procedure (CLASS) for mapping school teachers' emotional behavioral support, class room management and instructional support (Pianta, La Paro, & Hamre, 2006). The results were then discussed with the video filmed novice teachers followed by interviews with them about the relevance of this kind of mapping of their activities for teacher practice. Questions were also raised about whether they had learned about these matters in teacher education or in school, eventually how and by whom. Subsequently, we carried out semi-structured interviews with the superiors and experienced colleagues to investigate also their opinions and experiences concerning classroom management, team work and the importance of school leadership.

The qualitative data, consisting of a small sample of teachers and school leaders, revealed how these individuals act and reason about their work in their respective schools. However,

what the teachers said and did was not always in accordance with what our larger quantitative material generally showed. Because we wanted to make generalizations, we excluded qualitative results in our study that were not explicable according to our quantitative data. Furthermore, we included in the interpretation of our qualitative material only data that could uncover the social and cultural discourses of which each of our teachers' and school leaders' actions in their respective schools are a part. We endeavoured to make sense of the qualitative material by generalizing *within* each school rather than *across* schools, resulting in the creation of a 'thick description' of the teachers' school behaviour (Geertz, 1973). However, having made such thick descriptions of each school in turn made it easier to understand whether similarities and differences between novice teachers' behavior had something to do with the particular contexts they were part of. Two novice teachers will especially be referred to in this paper. Their behaviors are representative for the general patterns we have observed among novice teachers.

This emphasis on context and the understanding of the school as an important accommodator of teachers' coping implies that less emphasis is placed on variation within the teaching profession in terms of e.g. gender, ethnicity and social background and recruitment. These issues could very well be related to coping. However, previous research on teacher certainty in Norway (Munthe, 2001b) revealed no significant gender differences, although some small gender differences have been found in job-satisfaction and burnout (Skaalvik & Skaalvik, 2009). Moreover, since the survey material did not include questions about issues considered sensitive[1] by the Norwegian Data Protection Official for Research, it is not possible to examine variation within the teaching profession on these topics in the quantitative analyses. As previously stated, we have excluded qualitative results in our study that is not explicable according to our quantitative data. Thus, gender and ethnicity are not discussed here, but the relation between these characteristics and coping among novice teachers is an important topic to address in future research.

One of these novice teachers is from an elementary school in a rural area (school A). Thor is a 28 years old male teacher. Thor teaches most of the subjects in school to his students. The other one is a female teacher, Jorunn. She is from a lower secondary school in an urban area (school B). She is 26 years old. Jorunn also teaches most subjects to her students.. The rural school where Thor works is situated at the western coast of Norway, the urban school where Jorunn works is at the south-eastern part of the country. The rural school where Thor works has 34 teachers and approximately 400 students. The urban school where Jorunn works has 40 teachers and about 450 students. In both schools there is an additional two (school A) and three (school B) novice teachers. Common for both schools are that most of the teachers as well as the principals are concerned about the relevance of being updated on new teaching material. In Jorunns' school the principal and teachers have been attending several courses about class room management. The teachers at all the schools in our material have in common that they work in teams. Although the teachers in our material are employed at different schools and working with students of different ages, there are many similarities in how they deal with their work. Most of them manage quite well to deal with the challenges they are faced with in their daily work. Even so, we often see them in a hurry – walking fast from one class to the other, sometimes to the third, teaching different subject, switching between class- and group activities, media library and computer room. They report often being disrupted in their teaching, for instance by a resource-teacher coming into class rooms, classes that are to be merged during the lessons, students that interfere with their teaching etc. Even so, as we

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[1] "Information relating to racial or ethnic origin, political, philosophical or religious beliefs, that a person has been suspected, charged or convicted of a crime, health, sex life, and union membership" retrieved from http://www.nsd.uib.no/personvern/en/about/faq.html?id=10 (09.01.2013)

will show, novice teachers are clearly facing some peculiar problems that distinguish them somewhat from their more experienced colleagues.

In our study, combining quantitative and qualitative data implied making a comparison between questioning and observing – that is, relating what people say they prefer to do with what they actually do. This approach also led us to look for consistencies and discrepancies and for explanations of why these consistencies and discrepancies exist across the qualitative and quantitative samples.

The quantitative material comprised a survey of teachers in 111 schools that were used as arenas for practical training in teacher education. The survey was distributed by e-mail during the winter of 2008, generating a response rate of 62%. A novice teacher was defined as a teacher with less than three years of teaching experience. Of the 2,205 teachers who participated in the survey, 218 teachers (approximately 10% of the respondents) were considered novice teachers in accordance with this definition. By comparison, 485 teachers who participated in the survey had 7 to 10 years of teaching experience and were expected to be more established as teachers and to have more stable attachments to teaching and their work. According to Day et al. (2007), the professional life phase from 8 to 15 years is characterized by increased work-life tension and heavy workloads that decrease teaching effectiveness, although a majority of teachers experience increased self-efficacy and sustained commitment during this period.

The quantitative analyses involved performing SEM to analyse the covariance structures. SEM is carried out when one simultaneously wants to test the plausibility of a causal structure with both manifest (observed) and latent (factor) variables. The postulated structure should be derived from theory and/or previous research, as is the case with Figure 1. The model in Figure 1 was tested for both groups and was modified to obtain a good fit for each group separately. Assessment of fit was determined from multiple criteria reflecting statistical, theoretical and practical considerations. First, additional causal paths and correlations were included using the Lagrange multiplier test (Tabachnick & Fidell, 2001, pp. 721–723), focusing on those that would contribute significantly to a better model. Once the best fitting model was determined, non-significant parameters were removed so as to obtain the most parsimonious model with the Wald test (Tabachnick & Fidell, 2001, pp. 723–728) (i.e., one variable was removed at a time whilst making sure that the model did not generate a significantly worse fit). Fit indices for each final model are presented in Figure 2. This procedure can be described as a model-generating procedure of SEM, the purpose of which is to develop a model that is theoretically sound and has a reasonably good statistical correspondence with the data (Kline, 2005, p. 11).

The structure of each latent variable was established using CFA and was tested across the three included groups. As indicated in Figure 1, coping with the role of teacher includes three dimensions: self-efficacy beliefs concerning students' learning, self-efficacy beliefs concerning students' motivation and teacher certainty. The two self-efficacy dimensions were based on six different items, which were partially derived from the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development.[2] Both dimensions refer to classroom practice and working with students. One dimension concerns the degree of influence the teacher has on students' learning. (Example item: 'How much can you influence students' remembering and making use of what they have previously learned?') The response alternatives ranged from 0 (no influence) to 5 (very large degree of influence). The other dimension concerns the degree of influence that the teacher

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[2] https://secc.rti.org/publications.cfm (Retrieved 4 May 2011 from the National Institutes of Health Eunice Kennedy Shriver National Institute of Child Health & Human Development Web site).

has on students' motivation (cf. also Munthe & Thuen, 2009). (Example item: 'How much can you influence how students engage themselves in the classroom?')

Four items were used to measure teacher uncertainty. (Example item: 'I am certain that my knowledge of teaching is sufficient for teaching well'.) The response alternatives ranged from 0 (totally disagree) to 5 (totally agree). The questions represented an abbreviated set of questions that was derived from a larger set of questions on teacher certainty (Munthe, 2001a).[3]

The role of colleagues was evaluated based on two dimensions measuring collaboration and one dimension measuring support from colleagues. Collaboration consists of joint planning and deliberation on the consequences of teaching. Joint planning refers to a less binding form of collaboration between teachers than deliberation on the consequences of teaching. The items were derived from a study by Munthe (2003). Joint planning consisted of two items. (Example item: 'We develop educational materials together'.) The second dimension involved deliberation on the consequences of teaching. (Example item: 'We discuss our own teaching and pedagogical practices'.) The four items were stated as frequencies, with response alternatives ranging from 1 (never) to 6 (often). The dimension measuring support from colleagues consisted of three items. These items were taken from the school environment surveys that were conducted by the Centre for Behavioural Research in Stavanger, Norway.[4] (Example item: 'I frequently ask colleagues for advice'.) The response alternatives ranged from 0 (totally disagree) to 5 (totally agree).

The role of superiors was assessed based on two dimensions. One dimension measured relational support, and the other measured professional support. The dimension measuring relational support consisted of three items that were developed specifically for this survey. (Example item: 'It is easy to talk to my closest superior'.) The dimension measuring professional support consisted of three items that were derived from the study by Starnaman and Miller (1992) and used in the study by Midthassel, Bru, and Idsø (2000). (Example item: 'My superior gives me feedback on my work with the students'.) The response items ranged from 0 (totally disagree) to 5 (totally agree).

The interview and observational materials were gathered from a total of four schools - two lower secondary schools (7th–10th grades) and two elementary schools (1st–6th grades). These grades constitute the entire compulsory education system in Norway. The schools had 30 to 40 teachers and 300 to 500 students. 8 novice teachers were selected to be key informants. In addition experienced teachers and school leaders were interviewed. 2 schools were located in an urban environment and 2 in a rural environment.

We used the expansive qualitative material to discuss and elaborate upon the survey material. The qualitative material was also of importance in the quantitative analyses and in theory development and identification of relevant research. The inclusion of different forms of teacher collaboration in the quantitative analyses might be illustrative. Teacher collaboration was originally included in the quantitative analyses as one variable describing the degrees of collaboration, not the forms of collaboration. From the interviews, it appeared that different forms of involvement and commitment in collaboration might be important. We then directed our attention towards previous research studies that described different forms of teacher

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[3] Missing information on single items in the survey was estimated with the expectation-maximisation (EM) imputation, and used for the CFA (Little & Rubin, 1987; Tabachnick & Fidell, 2001) so as to obtain modification indices from Amos (i.e., Lagrange multiplier test). Little's missing completely at random (MCAR) test supported the assumption that the missing information was completely at random (i.e., no systematic patterns were found in the missing responses). The empirical analyses were performed on the material without estimation, and the results with and without estimation were compared afterwards. No estimates changed from a significant result ($p < 0.05$) when the data without estimation were used (when the number of respondents decreased), and any changes in effects were at the third decimal place (1/100).

[4] http://saf.uis.no/forskning/laeringsmiljoe/(Retrieved 2 June 2011

collaboration, and CFA indicated that models distinguishing between types of work had better fit than models with only a degree of collaboration. Inconsistencies in the quantitative and qualitative material also made us aware that even our respondents' seemingly straightforward answers should not simply be taken at face value. The qualitative material prompted us to search for alternative explanations. For instance, novice teachers in the survey insisted that they received less support from their superiors than their experienced colleagues; however, the qualitative data clearly indicated that novice teachers received less support because they could not articulate their needs and take advantage of the help they were offered.

Few differences between novice and experienced teachers

The main variables used in measuring the ability of teachers to cope were self-efficacy regarding student learning, self-efficacy regarding student motivation and teacher certainty. As shown in Table 1, no differences in the self-efficacy variables existed between novice and experienced teachers. However, in terms of teacher certainty, novice teachers were somewhat less certain than their more experienced colleagues. This finding is in agreement with previous research (Munthe, 2003), but the difference between the novice teachers and the experienced teachers was not very great. For all three items, both groups of teachers seemed to have fairly high mean scores.

As discussed earlier, professional and relational support from superiors has been shown to be important for coping with teaching. In our quantitative analyses, both experienced and novice teachers stated that they received quite a lot of relational support from their superiors but somewhat less professional support. Furthermore, novice teachers received less professional support from superiors than did experienced teachers. There were no differences between experienced and novice teachers in terms of the level of collegial support received. The findings also indicate that both groups received high levels of collegial support. Collaboration includes joint planning and deliberation on teaching and its consequences. The practice of joint planning seemed quite widespread, whereas deliberation was far less common. However, novice teachers seemed to participate less in joint planning than did experienced teachers.

Although the mean scores were quite similar for the two groups, the SEM model indicated that the independent variables have different significance for the groups. Figure 2 shows the final model for experienced and novice teachers (after fitting and removing insignificant paths), with standardised regression effects, standard errors, explained variance on each of the dependent variables and model fit indices.

Figure 2 about here

Deliberation on teaching and its consequences did not have any impact on experienced or novice teachers' coping.[5] This finding is contrary to what was assumed in the hypothesised model in Figure 1. Collaborating with colleagues on planning had a negative effect on teacher certainty for novice teachers but had no effect for experienced teachers, thus indicating that this negative effect diminishes with experience. Furthermore, joint planning with colleagues had a positive effect on the self-efficacy of experienced teachers but had no effect amongst novice teachers. Receiving support from colleagues was more important in terms of teacher certainty and self-efficacy for novice teachers' coping than for experienced teachers. Relational and professional support from superiors had a positive effect on the self-efficacy of

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[5] However, when we fit the model to a subsample of 319 (15%) randomly selected teachers from the total sample (not reported here), deliberation had a significant effect on both self-efficacy and teacher certainty. This finding might imply a curvilinear relationship, in which the effect of deliberation is less important when one is beginning a teaching career and when one becomes more experienced. However, this finding should be investigated further.

experienced teachers, but support from superiors did not have any effect on the coping of newly qualified teachers.

The explained variance shows how much of the variation in the dependent variables could be explained by the independent variables. According to the findings, support from superiors and colleagues had a greater effect on experienced teachers' self-efficacy than on their certainty. By contrast, support from superiors and colleagues had a greater effect on novice teachers' certainty than on their self-efficacy. The model fit measures indicate that the models fit reasonably well (Tabachnick & Fidell, 2001).

The role of superiors and colleagues

An important finding of the quantitative analyses was that novice teachers, compared with experienced teachers, felt that they had received less professional support from their superiors. However, our interviews and observations did not unambiguously support the existence of differential treatment in these schools; principals did not necessarily offer less support to newly qualified teachers than other groups of teachers. Our observations of the interplay between school leadership and teachers and our interviews with the school leadership offered a more complex explanation. Discrepancies seemed to exist between what the novice teachers *perceived* to have been offered and what they were *actually* offered. In our qualitative material, novice teachers were not offered less support than experienced teachers at any of the schools. In actuality, novice teachers were offered more support than experienced teachers at some of the schools. That was for instance the case in school A where Thor worked. However, according to our observations, experienced teachers seemed more capable of taking advantage of the support offered. We found that experienced teachers explicated and acknowledged their own needs and beliefs to a greater degree, demonstrated a higher level of knowledge of the practical realities and possessed a wider repertoire of actions. During the interviews, the experienced teachers referred to conditions and experiences with which both they and the school leadership were well acquainted. This was the case in both Thor's and Jorunn's schools. Because of their specialized knowledge of the workplace, experienced teachers found it easier than their less experienced colleagues to contribute to staff meetings and to receive a response to their needs. As teachers gained experience, it became easier for them to contribute. As Jorunn said:

> In the beginning I was a bit confused about what my colleges really were discussing at the meetings. I didn't know much about what they were referring to. Now I it isn't that difficult … one of my experienced team mates has also explained a lot to me, she is really helpful.Yes, and you need to be observant.

This transitional condition, which appeared to be related to the level of experience, was supported by the finding that professional support from school leaders was important for the self-efficacy of experienced teachers but not for novice teachers. Accordingly, both professional support and relational support from superiors became important over time.

One variable in the quantitative analyses that substantially affected the ability of both novice and experienced teachers to cope was the level of support received from colleagues. Both groups reported receiving high levels of support from colleagues, on average (Table 1). Collaboration with colleagues was operationalized as planning and deliberation of teaching and its consequences. Joint planning occurred rather frequently amongst teachers; however, novice teachers participated somewhat less compared with experienced teachers. Deliberation on teaching and its consequences were less common, but no differences between novice teachers and experienced teachers were found. Collaboration on planning and organizing was more common than discussion and deliberation.

This finding was also supported in the observational studies, which showed that grade and team meetings were focused on bringing everyone up to date and that novice teachers tried to adapt to the well-established practices preferred by the experienced teachers. Deliberation and discussion revolved around how errors and mistakes could be corrected when problems and irregularities are discovered. This was also the case in the schools where Jorunn and Thor were working. More profound discussions about the inherent values and norms on which a current practice is based only occasionally occurred. As Jorunn said:

> In teacher education we learned the value of discussing the pedagogical premises of our work. Here we don't do that much … perhaps it is because we don't have time to do it …No, sometimes we do … I really find it difficult to say anything wise then. My colleagues that have been here for some years are more confident and speak more easily that I do – hopefully this will change somewhat when I get more experience.

That novice teachers encountered difficulties when articulating their observations and experiences in this teacher collaboration, may explain the negative effect of participation in joint planning on novice teachers' certainty (Figure 2). Our results suggest that collaborating with colleagues represents a stressful situation for novice teachers.

Novice teachers' withdrawal from involvement

The novice teachers' lower level of participation in collegial collaboration indicates that the relationship between what novice teachers are offered and what offers they make use of is complex. An experienced teacher who was responsible for mentoring several novice teachers at Thor's school explained the situation as follows:

> We have a mentor appointment scheduled weekly with each novice teacher. And there I am – waiting, and no one shows up. It has happened several times, with different individuals each time. When I ask them why they didn't show up, they either reply, 'I forgot', or, 'I do not have any problems to discuss'. The latter [reason] is rubbish. I constantly observe that they don't make it as they should. But I believe they are telling the truth. They don't have the words or the experience to describe and address sufficiently the situations they face. They need help with this.

Our observations at the team meetings supported this impression. The novice teachers were reticent to make known their point of view in the presence of the more experienced teachers. They appeared to lack the ways to articulate their needs. This reticence sometimes manifested itself in other ways, such as in their lack of support and recognition of the potential solutions to problems that were put forth by the experienced teachers. Novice teachers attributed this type of behavior to their lack of experience. As Thor said:

> Sometimes I feel ashamed. I feel I should have been cleverer, be as observant as the other colleagues on the team … they are quicker in so many ways.

However, Thor also indirectly blamed the experienced teachers for their own reluctance to provide and receive support. Novice teachers in several of the schools did that, also Jorunn. She described the situation as follows:

> The way things are on the team, I really feel [that] the two most experienced [teachers] are the ones who collaborate and discuss [the topics] the most. Sometimes, during team meetings, I feel that I am just decoration.

Novice teachers with this type of attitude might feel invisible and, as a consequence, decide not to participate in team work. From their perspective, team collaboration follows a pattern that they as individual novice teachers cannot influence or become involved.

The novice teachers' lack of involvement in the mutual exchange of support and experience might have been influenced by their perception of the experienced teachers' ability to listen and relate to them. For example, one senior teacher, who was articulate and competent in discussing different learning strategies (both old and new), was described by his colleagues as the one teacher to whom everybody should listen. However, several novice teachers at this particular school felt that novice teachers should act reserved and refrain from commenting on the practices of senior teachers. Now we are talking about the school where Jorunn works. This is also Jorunn's opinion:

> Yes, I do see things that others on the team might have done differently, even the more experienced [teachers]. But there I come, the uppish young fellow who has been in the game for only three years, saying that I think you should be doing it this or that way. They wouldn't take me seriously. I think they find it easier telling me how it works than the other way round. Formally, I am the leader and in charge of the team. But if this team had been a difficult one and I were supposed to give feedback, I believe it would have been problematic with several teachers with more than 30 years of experience.

In this case, the relationship between Jorunn's own beliefs and what others think seems unarticulated. Such relationships probably make it difficult for teachers to break out of established patterns and to create other ways of collaborating that are based on deliberation of the consequences of teaching and pedagogical practices.

Novice teachers' coping: Individual or collective responsibility?

Our findings show that collegial support and collaboration are as important for novice teachers as they are for experienced teachers. In teacher research, teachers are traditionally viewed as individual actors (Engeström, 1994; Lortie, 1969; Løvlie, 2001). Teachers think that their ability to control and focus on rules and routines plays a decisive role in their success as teachers (Eraut, 2002; Furlong & Maynard, 1995; Hoy & Rees, 1977). As Thor said:

> We don't have the cooperation I had hoped for - I really miss the time I was at the other school and did everything alone. Now I'm a little forced to sit and talk and I feel there is a lot of talk that takes a very long time compared to when I did it alone. But then it's so that some people are very, very protective of what they do themselves, they will not show it and they will certainly not let anyone into the classroom when teaching.

Many school leaders view classroom management as an indication of success for novice teachers (Oakes & Lipton, 1999). Individual coping is the key, a view that was promoted by novice teachers in our study. Jorunn said

> Of course we are used to work in team and often we are two or more teachers in the class room – but I like most to be alone with the class. I don't think I am the only one who wants that.

This finding might seem surprising; however, it does fit well with the traditional understanding of what provides professionals with status and authority: An exclusive knowledge base is the foundation for individual coping and secures individual autonomy in the professional's work (Etzioni, 1969; Freidson, 2001; Goode, 1969). This traditional understanding implies that novice teachers are the most in need of practical/technical skills to cope with different situations as they arise.

With this approach, the influence of collaboration in schools is left out of the equation. Knowledge, competence and coping not only are individual phenomena but also can be attributed to the community of practice in which both novice and experienced teachers

formally and informally participate. Several researchers have stressed the importance of such an approach (Aili, Persson, & Persson, 2004; Rogers & Babinski, 2002;). Teachers' joint efforts in overcoming the limitations and obstacles they encounter can positively affect their coping and professional development (Engeström, 1987; Tuomi-Gröhn & Engeström, 2003). Viewing the teacher as an individual actor – as the novice teachers in this study did to some extent – does not promote these perspectives. However, as our study shows the benefits of perceiving the job of teaching as a relational task amongst teachers are also important (see also Edwards, 2005)- Both inexperienced and experienced teachers need to learn this. But this is not only a school matter. Also policy makers and school authorities need to acknowledge that. This includes, however, the whole school system and thus also teacher education that also need to promote a more relational conception of the teacher role in their teacher training programmes and in the induction processes in schools. Instead of viewing coping as a personal destiny and dealing with professional work in accordance with the teachers' efforts only, it seems more relevant to view coping as a joint assignment of the teaching staff. The issues of importance are determining the ways in which teachers can support each other, supplement each other and participate in a mutual exchange of knowledge and experience. Therefore, examining not only the individual challenges that teachers may face but also the potential opportunities and unused relational and organisational opportunities that may be derived from collective professional development and collaboration also becomes vital (Berg, 1993; Hoyle & Megarry, 1980; Lortie, 1975). Our results indicate that novice teachers find it difficult to benefit from these opportunities. The example used in this paper (i.e., the failure of newly qualified teachers to show up for their individual mentoring sessions) indicates that other, more collective approaches perhaps should be emphasised.

Conclusion

As stated in the introduction, attrition among novice teachers is an issue of global attention. Knowledge of what affects novice teachers' coping, and how coping can be accommodated in schools, is therefore of utmost importance

The quantitative analyses reveal that the novice teachers do not differ greatly from the experienced teachers. However, the interviews and observations indicate that important differences exist between the experienced teachers and the novice teachers in terms of their ability to articulate their own needs and shortcomings. Is this finding perhaps indicative of inadequate professional preparation – and a shortcoming of the novice teachers, indicating something wrong with teacher education? Making the transition from one institutional setting (education) to another (work) can be understandably challenging. One of the most challenging aspects of this transition is, as we have argued, that the training that teachers receive in their both time- and scale-limited professional education differs from the complex demands put forward by work. This transition will be successful when the novice teacher develops into a competent, full-fledged professional over time at school. However, as shown, this development can occur only if the school operates like a learning organisation (see also Senge, 1990) and it is taken into account that the conditions surrounding teachers' acquisition of knowledge in education differ from those experienced by teachers in their professional life. This is in accordance with Rolf (1989). Rolf shows how the demands for knowledge in the educational system primarily are built on the mastering of theoretical and ideological discussions, and to a lesser degree are connected to coping with practical situations, that are encountered in professional life. From this perspective, it is surprising – and perhaps even alarming – when some novice teachers reported in our study that they had encountered no or few problems in their work.

The understanding that the transition from education to work can be a traumatising shock has been toned down in this paper. We have shown that novice and experienced teachers cope differently in some aspects of the workplace and that a difference in self-efficacy and a small, although significant difference in teacher certainty, exist between these two groups of teachers. Our data shows that a climate of collaboration and learning is as important for coping as the level of teaching experience. However, the shock associated with practical teaching is a phenomenon that can have a lasting impact. Even so, the shock is probably best understood as a transfer shock. This shock is typically experienced when teachers make the transition from a protected educational setting - where they only are responsible for their own education and well-being - to a school setting, where they also are responsible for the education and well-being of others. Some researchers argue that these two contexts often operate within two different logics concerning learning and qualification, although the differences are not always as large as one could expect (Caspersen, 2013). However, the differences may lead to conflicting expectations and demands towards newcomers (Joram, 2007; Labaree, 2003; Anderson & Herr, 1999),

Even if the problems that novice teachers face can be seen as transitional phenomena they may, as we have discussed, manifest themselves as a gap between education and workplace learning. However, this gap can be bridged in a persistent cooperation and negotiation between teacher education, novice teachers and schools concerning the novice teachers' induction (see e.g. Hagger & McIntyre, 2000).

Our findings do not indicate how novice teachers should participate and be included in the community of the school in a binding way. However, the need for a school leadership that takes seriously not only administrative but also professional issues seems apparent. This idea is supported by the somewhat surprising finding that novice teachers receive less aid from their superiors than what their experienced colleagues do. However, different factors influence how novice and experienced teachers cope. One such factor is the role of support from superiors, which becomes more important as teachers gain experience. This factor should be a topic for further research and should be connected to the relationship between individual coping and school culture. Our findings also invite future research into how professional teacher preparation might be further developed. Our study challenges the understanding that professional education either fails or succeeds in graduating good teachers; it instead supports the idea of emphasising the school as an arena for teacher preparation in the future.

Novice teachers themselves play an important part in their own coping ability. The survey data suggest that a lack of professional involvement exists amongst novice teachers. Based on the interviews and observations carried out for this study, we argue that this lack of professional involvement is caused not only by a lack of follow-up of novice teachers but also by the inability of novice teachers to articulate their needs and to interact closely with their colleagues. In-demand teachers are not those who single-handedly attempt to deal with all perils and troubles encountered in the classroom but rather are those who engage in different forms of collaboration to solve problems, articulate their own practices and experiences, share with colleagues and provide support and encouragement.

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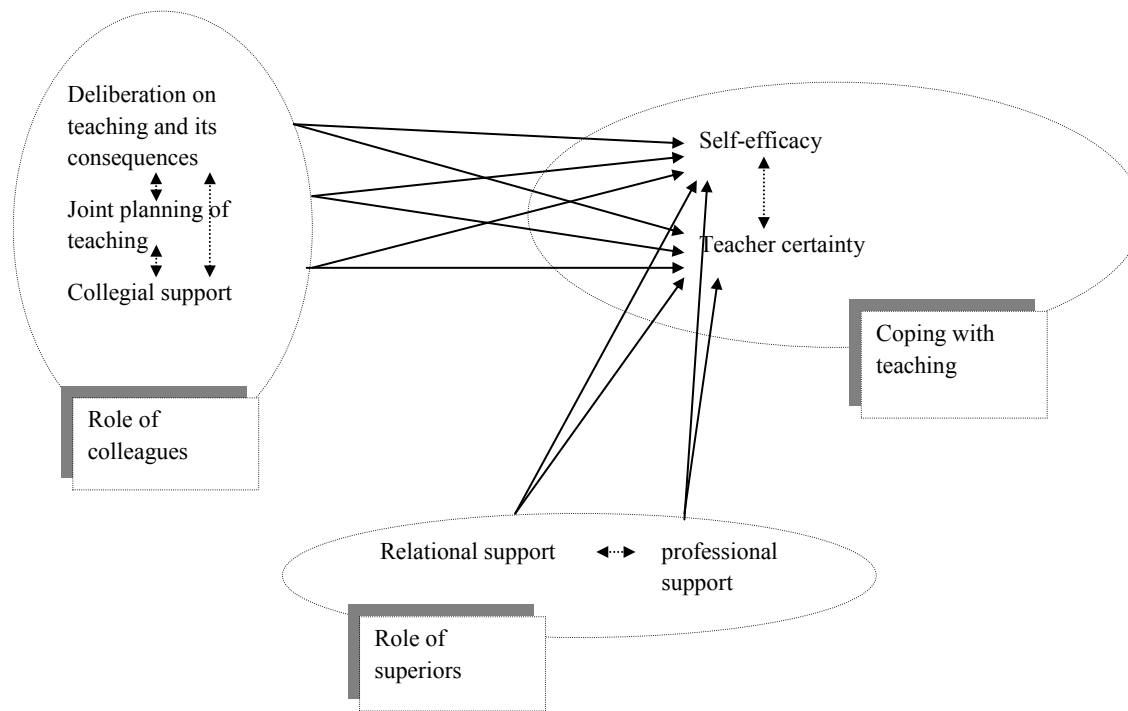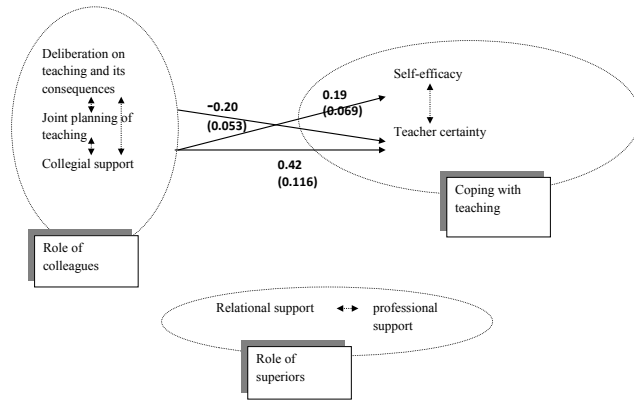
Deliberation on teaching and its consequences

Joint planning of teaching

Collegial support

Role of colleagues

Self-efficacy

Teacher certainty

Coping with teaching

Relational support ◄┈► **professional support**

Role of superiors

Figure 1 Hypothesised structural equation model for coping as a teacher, based on previous empirical research and theory

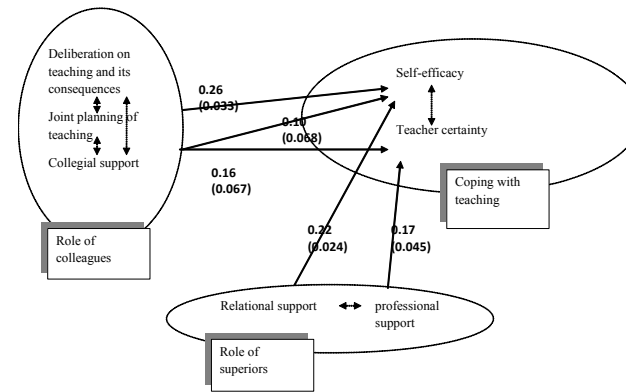**Table 1 Measures of coping and the role of superiors and colleagues**

Coping	Novice (0-3 years)		Experienced (7-10 years)					Model fit measures
	mean	SD	mean	SD	sig.	Cronbachs alpha	Items	χ^2; df; RMSEA; CFI; CMIN/DF
Self efficacy expectations - student learning	3.9	0.74	4.0	0.73	0.668	0.83	3	281.7; 96; 0.044; 0.963; 2.934
Self efficacy expectations - student motivation	3.7	0.65	3.8	0.71	0.113	0.84	3	
Teacher certainty*	3.9	0.76	4.1	0.71	0.000	0.83	4	
Superiors								
Relational support - school leadership	4.5	1.18	4.4	1.23	0.485	0.88	3	201.2; 72; 0.042; 0.964; 2.795
Professional support - school leadership*	3.2	1.28	3.4	1.27	0.035	0.79	3	
Colleagues								
Collegial support	4.4	0.72	4.4	0.71	0.919	0.83	3	56.1 ;24; 0.036; 0.99; 2.337
Joint planning*	3.6	1.29	3.8	1.15	0.049	0.83	2	
Deliberation on consequences	2.5	1.03	2.5	1.02	0.720	0.76	4	

Dimensions, mean, std. deviation, probability of significant difference between means (*t*-test), Cronbach alpha, number of items, and measures for model fit in CFA.*=significant difference between means ($p < 0,05$). DF=Degrees of freedom; RMSEA=Root mean square error of approximation; CFI=Close fit index; CMIN/DF= ratio of the χ2 to degrees of freedom.

Novice teachers, n = 218. Model fit (X²; df; RMSEA; CFI; CMIN/DF): 423; 263; 0,053; 0,935; 1,608. Explained variance:
self efficacy/teacher certainty, 3,6% / 12,1%

Experienced teachers, n = 485. Model fit (X²; df; RMSEA; CFI; CMIN/DF): 575; 260; 0,05; 0,948; 2,212 . Explained variance:
self efficacy/teacher certainty, 17,1% / 6,2%

Figure 2 Standardised regression estimates (maximum likelihood), with standard errors, of the independent variables on the dependent, explained variance and model fit measures for each group.