Antecedents of employee collaboration among newly qualified teachers in Danish schools

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Abstract

This study examines newly qualified Danish teachers' perceptions of peer collaboration through the lens of organisational theory. In Denmark, a new teacher employment policy has introduced primary and secondary school reforms aimed at greater employee collaboration, increased workloads and extended learning time. In this article, we explore the organisational antecedents of collaboration-oriented activities among newly qualified teachers in Denmark. This study represents only a snapshot of newly qualified teachers' perceptions of school organisations in the wake of the reforms. The sample was comprised of 143 newly qualified teachers in Denmark that were nominated by their schools' principals. Structural equation modelling of the cross-sectional survey data was used to assess the strength of statistical associations between the dependent variable and the hypothesised organisational antecedents. Teacher–principal trust is not associated with collaboration among newly qualified Danish teachers. However, this trust seems to contribute to collaboration, albeit in a contradictory way–first negatively through increased job autonomy, and then positively through increased affective commitment to the organisation. Role clarity, organisational citizenship behaviour, job autonomy and affective commitment were all associated with newly qualified teachers' involvement in collaboration. Further, affective commitment and job autonomy were found to have mediating characteristics.

Keywords: OCB, role clarity, autonomy, affective commitment, employee collaboration, relational trust.

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Introduction

In the 1970s, research suggested that the way in which a teacher's core tasks are carried out is individualistic (Lortie, 1975), implying a lack of a shared collaborative culture among teachers. Peer and leader–employee relationships have been described as 'loosely-coupled systems' (Weick, 1976; Meyer & Rowan, 2006). Traditionally, the norms of privacy and individualism in teachers' work have limited peer collaboration (Pedder & Opfer, 2013). Lortie's description of teachers as monarchs of the classroom who conduct their activities within the egg box structure of the schools remains a reasonable summary of teachers' work (OECD, 2014).

However, recent psychological research has emphasised that peer collaboration may play an important role in improvement efforts among employees (e.g. Galegher, Kraut, & Egido, 2014; Melton & Hartline, 2012). This is due in part to the fact that exchanging ideas and attempting to improve the practices of the organisation in daily interactions among employees can contribute to the employees' development (Volmer et al., 2012). Mechanisms for improvement can be explained both by employees' desire to appear as skilled as their colleagues and by social norms dictating the contribution of networked improvement communities, which are comprised of researchers and practitioners who aim to accelerate learning about key psychological subjects, to a school's attempts at improvement (Galegher, Kraut, & Egido, 2014). For example, it is expected that teachers will plan content, examinations and tests according to the needs of their courses, which requires short-term and long-term coordination in the form of work plans and year plans. Coordination is especially important between teachers who are teaching the same subject to different grades, and between teachers who are teaching different subjects in the same grade. To a large extent, teachers' planning is documented on ICT-based platforms, providing students and parents with access to this information. Moreover, just as networks have been found to facilitate exchange of technical knowledge among employees (Cummings & Cross, 2003), social network structures may sustain collaborative efforts (Daly & Finnegan, 2010). Teaching preparation is also reinforced by special initiatives such as learning assessments and school reforms, which rely on bottom-up processes and for which a school organisation or a local authority is typically responsible. These initiatives demand greater preparation and administrative work on the part of the teacher. Similarly, there are clear guidelines requiring coordination and collaboration in post-teaching work (OECD, 2014). This can be a matter of assessing whether the planned outcomes were achieved, or it may involve coordination in order to grade students' work consistently.

Newly qualified teachers' beliefs and attitudes are more 'plastic' than those of experienced teachers (McLaughlin & Talbert, 2001). Therefore, this study examines newly qualified teachers' perceptions of teacher collaboration through the lens of organisational theory. This study applies psychological theories and principles to organisations and employees. To date, few researchers have empirically investigated the organisational antecedents of newly qualified teachers' attitudes about collaboration (Weiss & Weiss, 1999). To our knowledge, this study is the first to investigate newly qualified Danish teachers. It is therefore important to explore statistical associations between the clarity of new roles to be created through trust-building attempts by leaders and factors related to organisational psychology, including teacher autonomy, affective commitment and organisational citizenship behaviour (OCB). This is an interesting line of inquiry in the context of Danish education because the changes in employment policies regarding Danish teachers have been far more comprehensive than in other Nordic countries.[*] In Denmark, a new teacher employment policy has introduced primary and secondary school reforms aimed at greater employee collaboration, higher workloads and extended learning time (Elstad, 2016). Teachers appointed during or after the autumn of 2013 are of particular interest here because most began their new jobs without personally experiencing the lockout of 2013 (although most would be familiar with the opinions of their more experienced colleagues regarding the new policies) (Faurfelt & Reymann, 2014). The policy shift is explained in the appendix.

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[*] The problem with teachers' working time that must be solved is high costs (Elstad, 2016). This policy emphasis inspired Norwegian employers too. Per Kristian Sundnes, a leader of the Norwegian Association of Local and Regional Authorities (KS), declared that Norwegian educational authorities should look at Denmark to find a solution for teachers' working time (Almendingen, 2013).

The purpose of the present study is to explore the organisational antecedents of peer collaboration among newly qualified teachers in Denmark. In what follows, we will first describe the Danish context for educational reform and then explain the theoretical framework used to form hypotheses. This framework draws on psychological theories and principles and their relationship to organisations and employees. After explaining how we used structural equation modelling of the cross-sectional survey data to assess the strength of statistical associations between the dependent variable and the hypothesised organisational antecedents, we will draw conclusions based on empirical evidence and provide suggestions for practice and further research.

Educational Reform in Denmark

Traditionally, Danish teachers educate students alone (Egelund, 2009). Large-scale international surveys such as the Programme for International Student Assessment (PISA) showed that reading performance among Danish 15-year-olds was relatively stable from 2000–2012 and roughly aligned with the international average (OECD, 2013a). However, globally, Denmark is among the countries that spend the most on schooling (Shrewbridge et al., 2011; OECD, 2013b). In consequence, Danish politicians would like to see greater returns on the money allocated to education (Aftale, 2013). Part of the strategic initiative to ensure this outcome is to change conditions related to teachers' working hours, with teachers encouraged to collaborate more and manage higher workloads. In particular, teachers are expected to teach more, spend longer hours at school, prepare lesson plans, grade students' work at school and, above all, collaborate across disciplines to encourage interdisciplinary study. The Danish Finance Ministry has employed McKinsey & Company to identify parameters to determine whether this new large-scale school reform is working as intended (Vangkilde, 2014; Christensen et al., 2014).

Danish authorities now expect principals to define themselves as work leaders (Ministry of Education, 2014). The rules are to be simplified, and management is to work towards clear goals. Performance-based salary contracts are to be introduced for school leaders, requiring the school's results to be transparent. A national body of learning consultants will likely be appointed to review schools' results and provide advice to schools that fail to attain the expected results. It is envisaged that a more efficiently run educational system will free resources for future welfare reforms (LGDK, 2013). Costs relating to special education and textbooks are to be cut. In sum, the reform programme resembles corresponding school reforms in a number of other countries and is characterised by targeted management, control over results and decentralisation of decision-making (Pors, 2012; Elstad, 2016).

Danish authorities assume that teacher collaboration will lead to the development of teaching methods and schemes, and that reports and discussions among colleagues will help individual teachers improve their own teaching. In that light, it is important to study newly qualified teachers' attitudes towards the new requirements for employee collaboration and organisational antecedents in Denmark.

Theoretical Framework

We examined the organisational antecedents of employee collaboration among newly qualified teachers in Danish schools. OCB and teacher-principal trust are considered exogenous factors, while role clarity, affective commitment and job autonomy are considered mediating factors. It is important to understand how these organisational aspects relate to each other. These aspects have been studied separately or in combination, but not—as far as we know—in relation to one another.

We presume that trust is a prime resource for organisational improvements led by principals, whose actions play a key role in developing and sustaining collaboration (Bryk & Schneider, 2002; Searle et al., 2011). Relational trust allows necessary social exchanges among employees to take place (Kramer & Tyler, 1975). Effective relationships and support can contribute to reducing newly qualified teachers' uncertainty and vulnerability, which in turn can cause them to invest energy in collaboration-oriented activities with their colleagues. However, without the 'lubricant' of support in an organisation's 'machinery', problems may arise when implementing educational reforms that call for cooperation.
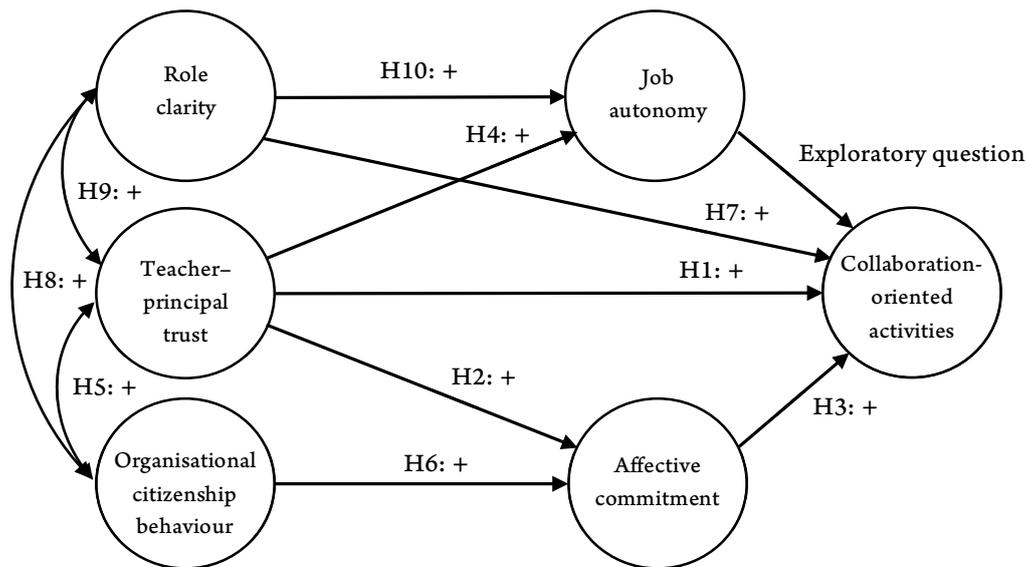
Figure 1. Hypothesized model: Predictors of collaboration-oriented activities. A plus sign, such as in 'H1: +', signifies that the hypothesis is positive.

Relational trust is the connective tissue that connects the efforts of education professionals (Bryk & Schneider, 2002). Trust (or lack of trust) is created when teachers interpret the intentions of other teachers and leaders. For employees, trust is based on respect, competence, personal regard for others and integrity (Kramer, 1999). Principals, teachers and students have distinct sets of role-relationships, and trustworthiness is seen as integral to the social organisation of schools (Coleman, 1990). We assume that teacher–principal trust is directly associated with the way in which newly qualified teachers perceive collaboration (Hypothesis 1).

Secondly, we presume that teacher–principal trust is associated with affective commitment; a unanimous feeling of affective commitment to a school organisation can create a supportive work culture, in turn affecting the teacher's level of commitment to collaborative activities. We therefore hypothesise that relational trust between teachers and principals is related to affective commitment (Hypothesis 2).

Affective commitment to a school organisation is central in the study of work attitudes and behaviour (Elias, 2009). Affective commitment is defined as an emotional attachment to a school, such that a teacher identifies with, is involved in and enjoys membership in the school organisation (Allen & Meyer, 1990). To be successful, teachers must be affectively committed to their school organisation (Turmo et al., 2015). Affective episodes are important for sustaining employees' job satisfaction. Morgan

et al. (2009) found that positive events improve motivation and resilience. Therefore, we assume that affective commitment is positively associated with collaboration-oriented activities (Hypothesis 3).

Laschinger and Finegan (2005) identified an association between relational trust and job autonomy among nurses. Therefore, we speculate that teacher–principal trust is associated with job autonomy among teachers (Hypothesis 4).

Almost and Spence Laschinger (2002) found a positive link between autonomy and collaboration among health personnel. However, Goode (1994) found negative associations between autonomy and collaboration among nurses. Because of these mixed results, we explore the associations between job autonomy and collaboration-oriented activities (exploratory question).

OCB has been defined as 'individual behavior that is discretionary, not directly or explicitly recognised by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization' (Organ et al., 2006, p. 3). In the present context, OCB includes the help and support experienced teachers give to newly qualified teachers, who may, for instance, struggle with discipline or communication problems in their classes. Elstad et al. (2011) found that OCB is associated with relational trust. We therefore hypothesise that teacher–principal trust is associated with OCB (Hypothesis 5).

Elstad et al. (2011) found also a strong association between affective commitment and OCB. Therefore, we assume that OCB fuels and is positively associated with affective commitment (Hypothesis 6).

Role clarity is involved in newly qualified teachers' knowledge of the extent of their authority, their responsibilities (Chesebro & McCroskey, 2001). Thus, we expect that role clarity is associated with collaboration-oriented activities (Hypothesis 7).

Podsakoff, MacKenzie and Bommer (1996) identified a link between role clarity and OCB. Therefore, we suspect that role clarity motivates teachers to go above and beyond their formal job responsibilities in their OCB (Hypothesis 8).

Teacher–principal trust plays an important role in shaping employees' role clarity. Additionally, consistency between a leader's words and actions affirms their personal integrity. Sarkar, Aulakh and Cavusgil (1998) identified a link between the role of relational bonding among employees and inter-organisation collaboration in the construction industry. On that basis, we hypothesise that teacher–principal trust positively influences role clarity (Hypothesis 9).

Van Sell, Brief and Schuler (1981) found a statistical association between employees' perceptions about job autonomy and role clarity. Therefore, we assume that role clarity is associated with newly qualified teachers' traditional beliefs about job autonomy (Hypothesis 10).

The complex way in which organisational factors influence collaboration must be emphasised. Traditionally, autonomy has been important to teachers (Pearson & Moomaw, 2005). The potential flexibility offered by teaching may affect recruitment and may be a reason to remain in a teaching position. When this flexibility is threatened, there may be a change in teachers' performance. Figure 1 illustrates our hypothesised model.

Method

Participants

The sample was comprised of 143 newly qualified teachers (69% female and 31% male) in Denmark. The teachers had less than three years of teaching experience after completing teacher education. About 75% of the participants had completed regular teacher educa-

tion (4 years, 240 ECTS[*]) while the rest had completed *Meritlæreruddannelse* (150 ECTS).[**] About 82% of the participants were between 20 and 40 years of age.

We chose to study this group because newly qualified teachers are more sensitive than experienced teachers to relational trust, role clarity and OCB (Delvaux et al., 2013). We invited all Danish principals to nominate newly qualified teachers in their schools. It was not possible to compute the exact response rate because not all schools in Denmark employ newly qualified teachers. Therefore, the sample is not entirely random. However, the selected schools vary considerably in their geographic location, and we have no reason to suspect selection bias.

Measures

A questionnaire consisting of several scales from internationally validated instruments adapted to the Danish context was used to collect data. For our purposes, six scales were included, and four items were used on each scale:[***] 1) role clarity (sample item: I know what my responsibilities are; Rizzo et al., 1970); 2) teacher–principal trust (sample item: The principal takes a personal interest in the professional development of teachers; Bryk & Schneider, 2002); 3) OCB (sample item: A number of teachers in this school support new teachers when they struggle with their students; Bryk & Schneider, 2002); 4) job autonomy (sample item: My job allows me to make my own decisions on how I plan my work; Morgeson et al., 2005); 5) affective commitment (sample item: I do not feel a strong sense of 'belonging' to my school as an organisation (reversed); Meyer et al., 1993) and 6) collaboration-oriented activities (sample item: I collaborate with colleagues to develop teaching methods in order to improve my teaching practice; Opfer & Pedder, 2011). All scales except OCB were scored on a six-point Likert-type scale ranging from

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* European Credit Transfer and Accumulation System is abbreviated ECTS.

** Meritlæreruddannelse is a specially arranged component of teacher training for people who have already completed occupational education, such as a carpenter or language program. After Meritlæreruddannelse, an applicant can teach in schools and compete with other candidates from ordinary teacher education programmes.

*** One exception is the construct 'job autonomy', which used only three items.

1 (*not true*) to 6 (*true*). The construct of OCB included the response categories 1 (*none*), 2 (*a few*), 3 (*approximately half*), 4 (*a great deal*), 5 (*most*) and 6 (*almost all*). See Table 1 for reliability of the scales.

Analysis

To begin, we explored the data in relation to psychometric properties (normal distribution), which were found to be sufficient for the planned analyses. In addition, we tested the measurement models and inter-correlation between the latent variables (see Table 1). Due to the ratio of the number of participants (N) to the number of estimated parameters, we used a bootstrap procedure to estimate the confidence intervals. The models were tested using Mplus 7.0. To assess the goodness of fit between the theoretical models and the empirical data, we used chi-square statistics and a variety of fit indices, such as the root mean square error of approximation (RMSEA), the comparative fit index (CFI) and the standardised root mean square residual (SRMR). With respect to assessment criteria, we followed Schermelleh-Engel, Moosbrugger and Müller (2003), who suggested that RMSEA ≤ .08, CFI ≥ .95 and SRMR ≤ .10 show that the model has acceptable fit, while RMSEA ≤ .05, CFI ≥ .97, and SRMR ≤ .05 represent good fit. At the conceptual level, models were evaluated by examining factor loadings, error variances and reliability.

Results

The hypothesised model showed reasonable fit ($\chi 2$ (198) = 300, p < .000; RMSEA = .060; CFI = .95; SRMR = .055), and the predictors explained 25% of the variance in collaboration. Role clarity and affective commitment had direct positive effects on collaboration (respectively, β = .27, p < .05; β = .40, p < .001), while job autonomy had a direct negative effect (β = -.33, p < .001). Unexpectedly, teacher–principal trust had no significant direct effect on collaboration (β = .00, not significant abbreviated ns). However, estimation of the indirect effects of variables indicated that teacher–principal trust affected collaboration via both job autonomy (β = -.14, p < .01) and affective commitment (β = .22, p < .01). In addition, OCB had an indirect effect on collaboration via affective commitment (β = .09, p < .01). These results suggest that role clarity, OCB, job autonomy and affective commitment tend to affect collaboration. In addition, the results indicate that affective commitment and job autonomy have certain mediating characteristics. Teacher–principal trust seems to contribute to collaboration in a contradictory way–first negatively through increased job autonomy, and then positively through increased affective commitment to the organisation. See Table 2 for an overview of the above-mentioned results.

Table 1. *Inter-correlations and reliability of latent variables (n = 143)*

	Variable	1	2	3	4	5	6
1	Role clarity						
2	Teacher–principal trust	.47***					
3	Organisational citizenship behaviour	.36***	.30***				
4	Job autonomy	.44***	.54***	.11			
5	Affective commitment	.37***	.63***	.40***	.35***		
6	Collaboration-oriented activities	.27**	.21*	.22**	-.07	.38***	
	Cronbach's alpha	.78	.91	.95	.89	.72	.82

*p < .05, ** p < .01, *** p < .001

Table 2

|	Wording	Result
Hypothesis 1	Teacher–principal trust generates collaboration	Not supported
Hypothesis 2	Teacher–principal trust generates affective commitment in a positive manner.	Supported
Hypothesis 3	Affective commitment has a positive association with collaboration.	Supported
Hypothesis 4	Teacher–principal trust is associated with job autonomy.	Supported
Hypothesis 5	Organisational citizenship behaviour is positively associated with teacher–principal trust.	Supported
Hypothesis 6	Organisational citizenship behaviour is associated with affective commitment	Supported
Hypothesis 7	Role clarity is positively associated with teachers' collaboration-oriented activities.	Supported
Hypothesis 8	Organisational citizenship behaviour is associated with role clarity.	Supported
Hypothesis 9	Teacher–principal trust is associated with role clarity	Supported
Hypothesis 10	Role clarity is positively associated with job autonomy.	Supported
Exploratory question	Exploration of teachers' job autonomy.	Negative association
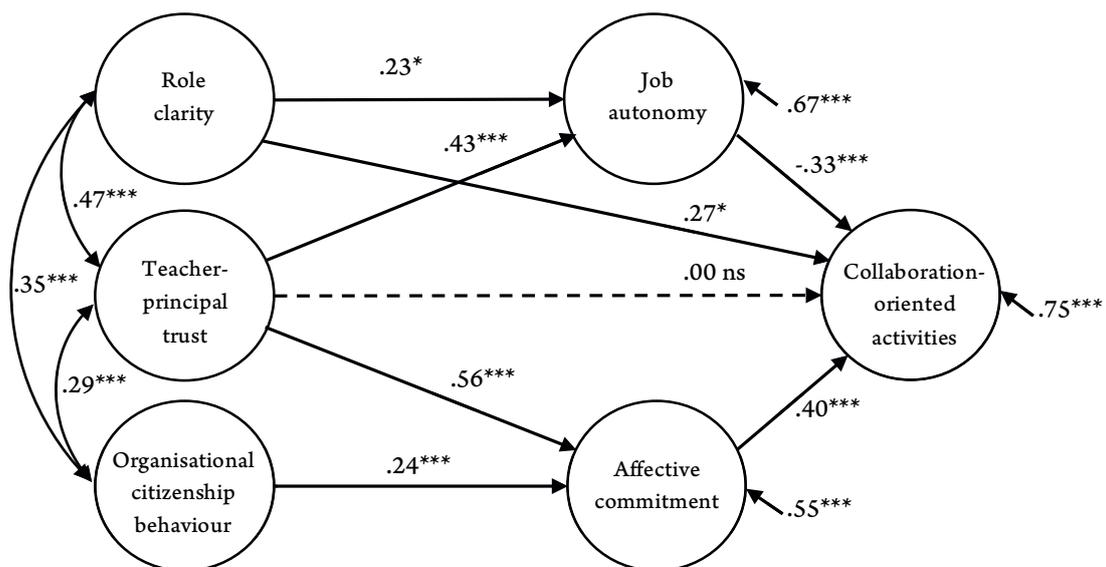
Figure 2. Results of model testing and predictors of collaboration-oriented activities. (* p < .05, ** p < .01, *** p < .001).

Discussion

Collaboration is a vital component of improvement efforts in service organisations (Melton & Hartline, 2012) and in school organisations (Goddard, Goddard, & Tschannen-Moran, 2007). Our findings showed that teacher–principal trust was not significantly associated with collaboration. The lack of a statistical association between collaboration and teacher–principal trust is surprising in light of Danish educational tradition: 'Danish principals are more first among equals; they have typically made their career through teacher positions of trust' (Meier et al., 2014).

School leaders can find themselves between a rock and a hard place. On one hand, relational trust is an important factor supporting leadership (Kramer, 1999). Most Danish principals previously served as teachers and as such are likely to understand teachers' situations. On the other hand, rhetoric encouraging strong, clear leadership through dynamic action has intensified. For example, Claus Hjortdal, foreman of the Danish Association of School Leaders, suggested that 'teachers who have lost their motivation are encouraged to consider whether they should continue as teachers' (Faurfeldt & Reymann, 2014). This rhetoric is supported by employers' policies on efficient school management (Schilder, 2014). The newly qualified teachers included in our sample were hired in the 2013/2014 school year. Our survey was conducted three months after these teachers took up their new positions after a lockout (which is explained in an appendix). More research is needed to better understand why the relationship between trust and collaborative practices is not significant. However, we found strong positive associations between teacher–principal trust and other organisational factors, such as affective commitment, OCB and role clarity. The relationship between trust and collaborative practices was not necessarily non-significant in itself, but was made non-significant due to the two mediating variables included in the model. Hence, the potential variance between the two is fully explained (or mediated) by the mediating variables. This is not surprising, as autonomy and affective commitment contribute greatly to understanding behaviour at work.[*]

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* Thanks to an anonymous reviewer for this interpretation.

OCB is moderately associated with teacher–principal trust. To date (before April 2016), no national initiative for mentoring newly qualified teachers during their first year of practice has been introduced. Individual schools in Denmark have attempted to organise support systems for newly qualified teachers (GL, 2015; OECD, 2014; EVA, 2014), but these efforts have been meagre and unsystematic (EVA, 2014). However, principals and experienced teachers function as informal mentors.

We found that affective commitment is a significant factor for collaboration among Danish teachers, and that affective commitment is associated with OCB. As expected, we also found a strong association between teacher–principal trust and affective commitment. The quality of social relationships in schools strongly affects newly qualified teachers' psychological link to their school and their perception of role clarity. Our results suggest that clearly defined tasks or expectations and perceived job autonomy play a significant role in determining the extent of collaboration. The results of the current study underscore once again the importance of affective commitment, which not only has a positive effect on collaboration but also mediates the positive effects of other organisational variables on collaboration.

Role clarity is found to have contradictory effects on collaboration. On one hand, a clearly defined role has a direct positive effect on collaboration. On the other hand, clearly defining roles may lead to more autonomous behaviour, which in turn may lead to fewer collaborative activities. The negative relationship between job autonomy and collaboration may have several explanations. For instance, it can be linked both to individualism and a need for independence (Chrikov et al., 2003). Additionally, newly qualified teachers may wish to prove their competence to themselves and others by completing tasks alone. Teachers who feel more autonomous may feel less need to learn through collaboration or may not consider it a priority because of structural challenges within the school (e.g. scheduling conflicts with other teachers).

Our analysis reveals clear and significant connections between OCB and role clarity. We were not able to create an ex ante hypothesis about this connection. However, we found relatively strong negative associations between job autonomy and collaboration, suggesting

that those who strongly wish to be independent at the workplace are not inclined to collaborate with other teachers.

Limitations of the Study

We have no reason to suspect systematic bias in our sample as the selected schools varied in location and size. However, this study has limitations.

First, this type of analysis inherits limitations from its conceptual perspective (parsimonious modelling) and from its methodological (cross-sectional) approach. In addition, when associations between constructs are not present in the real world, measurement biases may emerge (Podsakoff et al., 2003). Another limitation of this study is the use of self-reported questionnaire data, as the subjectivity of such data is undeniable. We also had no opportunity to link self-reporting data to objective goals for task performance. We acknowledge these limitations and suggest that they serve as a point of departure for future research.

Implications for Practice and Further Research

Despite its shortcomings, this study contributes to our understanding of how organisational factors may influence newly qualified teachers' perceptions of collaborative activities. However, the results themselves elicit new research questions. Even though the data were obtained from the same source, some of the variables were affected by contextual factors such as the respondents' environment. The sampling procedure prohibited multilevel modelling because the some of the principals nominated teachers by using their private e-mail addresses and not the school-based addresses. The consequence was that we could not use hierarchical linear modelling. In future research we want to pursuit the possibility of hierarchical linear models by linking measures of schools within which the teachers are grouped. This is interesting because the respondents come from different schools with different leaders, two factors that might affect the participants' responses. Hence, these are nested data and should be treated as such. Scholars could determine whether the nested data assumption holds by

identifying intra-class correlations.[*] This was not possible in our investigation, as our data do not include the information necessary to conduct a multi-level analysis. We do not have any information on the schools' characteristics or leaders. Thus, this is an avenue for further research.

We found that while affective commitment is the factor that most strongly explains collaboration, relational trust between school leaders and teachers explains affective commitment. Role clarity also helps explain collaboration, but to a considerably weaker degree. We believe that improving affective commitment can be a goal in policies that aim to promote collaboration.

In this study, we have investigated the perceptions of newly qualified teachers. In the future, would be worthwhile to study how experienced teachers perceive and judge the repercussions of Danish employers' policies over time. The Director of Local Government Denmark (LGDK) has stated that 'we believe that this is something that we actually will get past, once people see that it is actually possible to create a better school within this new framework' (Ekeberg, 2014, p. 18). It is possible that teachers' affective commitment is so strongly embedded in professional codes that bitter conflicts will have less impact on how teachers work, both individually and with other teachers. In the long run, more research is needed to better understand the relationship between school culture and new employer policies. For those interested in the connection between these new policies and the work culture of schools, Denmark stands out as a unique location for research (Moos et al., 2013).

One unanswered question concerns the influence leadership activities and policymakers' use of levers may have on newly qualified teachers' collective beliefs, efficacy and collaborative learning activities. Politicians have expressed hope that interdisciplinary cooperation among teachers will improve the quality of teaching and, hence, the quality of learning (Antorini, 2014). Although rhetorical declarations of intent are one thing, there is limited evidence to suggest that teacher collaboration can in fact improve students' learning outcomes (Goddard et al., 2007). In our study, we had no opportunity to link newly qualified teachers' self-reporting to objective goals in terms of their contribution

[*] *We thank an anonymous reviewer for this interpretation.*

to students' learning outcomes (for instance, measures of students' added value).

Molenaar et al. (2012) suggest that the density of work-related and personal supporting networks can affect teachers' perceptions of collective efficacy, which in turn is associated with increased student achievement. Collective efficacy is an interesting intervening variable that may help to explain how dense social networks among teachers may benefit both students and school reform efforts. Future research is warranted to improve our understanding of how collective beliefs and efficacy may increase students' achievement.

Conclusion

We have shown that organisational factors may influence newly qualified teachers' collaboration-oriented activities. Such activities are considered important for school organisations (Bryk & Schneider, 2002) as well as for service enterprises (Melton & Hartline, 2012). Further research on this topic should have a longitudinal design and research parameters that combine overall data from pupils, teachers and schools.

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Appendix

In Denmark, one political goal of educational reform ('*Folkeskolereform*') is for teacher collaboration to play an important part in overcoming challenges in Danish schools (LGDK 2014; Folkeskoleloven 2014). The proposed changes in Denmark come in the wake of a month-long, deep-seated employment conflict (a so called 'lockout') involving the primary and lower secondary school union and LGDK that took place in the spring of 2013. The leader of LGDK said that forcing the issue of higher workloads for teachers was '…a price one has been willing to pay' (Ekeberg, 2014, p. 18). In opinion polls taken one year after the conflict (in the spring of 2014), a majority of teachers said that they lacked the motivation to carry out the reforms, and many considered leaving the profession (Faurfelt & Reymann, 2014). As of autumn 2014, 10–15% of Danish teachers had left the teaching profession, perhaps because Danish teachers are expected to focus more on collaboration than was necessary in the past (LGDK, 2013; Aftale, 2013). As it proposed greater collaboration, higher workloads and extended learning time, the new teacher employment policy in Denmark is an interesting case for investigation. Strong ties among Danish teachers are important for the implementation of the reforms, and the quality of the relationships between teachers and school leaders affects organisational improvements based on teacher collaboration (Bryk & Schneider, 2002).