Antecedents of Newly Qualified Teachers' Turnover Intentions: Evidence from Sweden

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Abstract. The purpose of this study was to explore potential predictors of newly qualified teachers' turnover intentions. Based on a sample of 249 newly qualified Swedish teachers, structural equation modelling of a cross-sectional survey was used to analyse data. The results indicated three important predictors of turnover intentions amongst newly qualified teachers. First, mutual trust is important amongst school professionals. Second, it is necessary to encourage newly qualified teachers' emotional commitment to their profession and workplace to diminish turnover intentions. Finally, perceived role conflict has a significant effect on turnover intentions.

Keywords: newly qualified teachers, teacher attrition, Sweden, turnover intention

Introduction

Employed teachers may engage in continual assessment of their schools and their occupational status to determine whether their current job is the appropriate choice for them (Darling-Hammond, 2010). If they find that their employment is not competitive, they may decide to seek out a position at another school or even leave the teaching profession entirely. Currently, several countries are experiencing high rates of teacher shortages (Goldhaber, 2015; Organisation for Economic Co-operation and Development [OECD], 2012). Therefore, teacher attrition has become a major topic concerning educational research and policy analysis in many countries (Ingersoll, Merrill & May, 2014). The reason for this is obvious: Education is the cornerstone of society, and teachers are considered the most important factor in determining the quality of education (Aaronson et al., 2007; Goldhaber & Hansen, 2010; Rivkin, Hanushek,

& Kain, 2005). Sweden is among the countries with expected teacher shortages (Lärarförbundet, 2015). Previous research on turnover intentions amongst newly qualified teachers illustrated that organisational and contextual factors are strong predictors of turnover intentions (Tiplic, Brandmo, & Elstad, 2015). In the present study, we use a similar approach to explore the antecedents of turnover intentions amongst newly qualified Swedish teachers. This study aims to evaluate the statistical associations concerning the turnover intentions of this Swedish teacher population and several organisational antecedents, specifically self-efficacy, conflict of roles, a trusting relationship between school professionals, affective commitment and organisational support.

The remainder of the paper is organised as follows: First, we describe the Swedish context. We then posit 10 hypotheses related to the causes of turnover intention amongst newly qualified teachers. Following this, we present our methodological approach. Finally, we present and discuss our findings and their implications for research and practice.

The Swedish Context

The OECD (2015) described Sweden as 'a school system in need of urgent change' (p. 11). Moreover, the Programme for International Student Assessment (PISA) found that between 2003 and 2012, the mathematics scores of Swedish students decreased the most of those from all participating nations, and Sweden had the largest number of weak readers amongst the Nordic countries (OECD, 2013a). Furthermore, in the OECD Teaching and Learning International Survey (TALIS) for 2013, Sweden had the largest percentage (62%) of respondents who 'strongly disagreed' with the claim that the teaching profession is well recognised by society; only 5% 'agreed' or 'strongly agreed' (OECD, 2013b). In addition to problems regarding the perception of teachers by society, in Sweden, new teachers face additional challenges. It has been claimed that the Swedish school is in a state of crisis (OECD, 2013a). The OECD (2015) declared that Sweden had failed to improve its school system despite the series of reforms carried out in recent years. A more ambitious national reform strategy is now urgently needed to improve the quality and equity of education. The OECD recommends that to accomplish this, Sweden should improve both the quality and attractiveness of the teaching profession.

Sweden is also currently experiencing a shortage of teachers and pedagogues (Statistics Sweden, 2012). According to new statistics from the National Agency for Education, other institutions have found that there is a severe shortage of qualified teachers at all levels. In addition, Statistics Sweden (2014) reported that the Swedish educational system will lack roughly 65 000 teachers by 2025.

However, this estimate is too low: The Swedish Public Service Broadcaster (2016) reported on January 11th, 2016 that the increased migration to Sweden will induce the need for 90 000 full-time teachers. Several goals have been proposed in response to these challenges. The Swedish Ministry of Education has stated that the teaching profession must be made more attractive (Ministry of Education and Research, 2015). Rewards should be introduced to draw well-educated people who are currently in other occupations towards teaching (Dagens Nyheter, 2015). Furthermore, better integration between teacher education and the actual work of teachers has been emphasised as a new policy direction (Ministry of Education and Research, 2015).

Lindqvist, Nordänger and Carlsson (2014) highlighted the working environment and working conditions as potential mitigators of teacher turnover. A report by the University of Gothenburg showed that in Sweden, many newly qualified teachers are not employed in the part of the school system that they prefer (Corneskog & Lundkvist, 2006). As in other countries, the dropout rate of newly qualified teachers in Sweden is becoming problematic, especially because the need for qualified teachers will increase significantly in coming years as a large number of instructors reach retirement (Lindgren, 2005; Statistics Sweden, 2014b). Based on the abovementioned factors, the Swedish education system represents a relevant context for studying antecedents of turnover intentions amongst newly qualified teachers.

Theoretical Framework

The term *turnover intention* denotes an attitude favouring leaving a present profession or workplace (Tiplic et al., 2015). In this study, the phrase 'turnover intentions of newly qualified teachers' refers to such teachers who intend to leave their jobs. Turnover intention is used as the dependent variable in this study. To explore the organisational antecedents of turnover intention, several theoretical perspectives are combined in a framework, as follows: 1) teacher efficacy, 2) human resource management and 3) working conditions. The components of this theoretical framework are explained in the following sections.

Teacher Efficacy

In prior research, investigators have linked teachers' experiences with discipline problems and instructional management to their intentions to leave their current position or even the profession as a whole (Martin, Sass, & Schmitt, 2012; Skaalvik & Skaalvik, 2011). These researchers also demonstrated that job satisfaction and teacher burnout are elements that tend to be closely linked to thoughts about leaving, and these can be predicted through teacher self-efficacy

(Skaalvik & Skaalvik, 2010). Bandura (1977) introduced the concept of self-efficacy beliefs as the individual's perception that he/she is able to attain a target objective in a particular task. According to Bandura (1977), an individual's confidence in his/her abilities is a powerful force affecting the motivation to act, the amount of effort put into the task and the persistence of his/her coping mechanisms when setbacks occur.

In Bandura's (1977) proposal, four major factors have an influence on the self-efficacy beliefs of newly qualified teachers. These are as follows: mastery experiences, vicarious experiences, verbal persuasion and physiological arousal. The most powerful of these factors is mastery experiences; for newly qualified teachers, such experiences arise through teaching pupils in practice. If a newly qualified teacher considers his/her teaching to be successful, self-efficacy is enhanced; this increases the expectation that future endeavours are likely to be successful. Greater self-efficacy amongst newly qualified teachers may inspire them to put more effort into tasks, whereas failures will tend to decrease self-efficacy beliefs, thereby leading to lower motivation (Guskey, 1988; Tschannen-Moran, Hoy, & Hoy, 1998).

Studies on the self-efficacy of newly qualified teachers has suggested that several factors contribute to teaching efficacy, including self-perceptions related to instructional competence, emotional and pedagogical support from fellow newly qualified teachers, personal characteristics and the teacher training programme (Poulou, 2007; Tschannen-Moran & Hoy, 2007). Newly qualified teachers may experience classroom management as problematic during their first working years. The need for short-term survival can overshadow the positive aspects of the teaching experience (Skaalvik & Skaalvik, 2010). The difficulties involved in mastering novel educational strategies can overload the capacity of newly qualified teachers to relate to their work (Leinhardt & Greeno, 1986; Leinhardt, Young, & Merriman, 1995). Based on this background, we posit two hypotheses concerning teachers' self-efficacy, as follows:

Hypothesis 1: Self-efficacy in relation to instruction is a negative predictor of newly qualified teachers' turnover intentions.

Hypothesis 2: Self-efficacy in relation to discipline is a negative predictor of the turnover intentions of newly qualified teachers.

The teaching profession's level of collaboration has increased over time. Teachers' perceptions of the efforts of the faculty, which have previously been related to individual teacher efficacy (Skaalvik & Skaalvik, 2007), can in fact be characterised as *collective teacher efficacy* (Goddard, Hoy, & Hoy, 2000). Teachers

in Sweden are expected to carry out multiple tasks by collaborating as a team[1]. For instance, teachers assigned the same subject or class must work together to a certain level to plan and teach content, carry out assessments, give homework and schedule student–parent conferences. Furthermore, teachers are expected to meet the requirements when students have special educational plans. Because developing a collective perspective to overcoming challenges may help newly qualified teachers when they are struggling with a variety of teaching challenges and issues, collective efficacy may be assumed to contribute to the confidence in their capabilities that teachers develop (Skaalvik & Skaalvik, 2007). Moreover, it can be expected that collective teacher efficacy will contribute to the inclusion of newly qualified teachers in the professional community. In addition, it has been documented that collective teacher efficacy is negatively associated with newly qualified teachers' turnover intentions (Tiplic et al., 2015). Thus, the following hypothesis can be proposed:

Hypothesis 3: Collective teacher efficacy is a negative predictor of newly qualified teachers' turnover intentions.

Human Resource Management

Traditionally, schools are seen as a special organisational case; teachers often spend most of their time in their classrooms, without frequent contact with their peers. Dan Lortie (1976) used the metaphor of an 'egg-crate structure' to describe the situation wherein teachers work in separate, isolated classrooms. Although teachers' collaboration is a growing phenomenon (Vangrieken, Dochy, Raes, & Kyndt, 2015), the teacher is still often the only professional present in the classroom. Teachers work in contexts that are different from other occupations where colleagues engage in direct, immediate interaction. However, teachers talk before and after their lessons, and school managers and teachers converse in formal and informal arenas. Relational trust between school principals and teachers is recognised as a key resource for school improvement (Bryk & Schneider, 2002). Bryk and Schneider (2002) demonstrated that the level of trust amongst school professionals affects students' achievement. Social trust influences the degree to which schools work for pupils and serve as an element of social capital (Coleman, 1990).

Trust is a key resource in effort to improve the organisation, and 'collective decision-making with broad teacher buy-in occurs more readily in schools with strong relational trust' (Bryk & Schneider, 2002, p. 122). Teachers are more likely to continue working at a given school when they perceive that their principals are providing adequate support (Ingersoll, 2001). We assume that vulnerability and uncertainty are less problematic when newly qualified teachers develop

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[1] http://skl.se/skolakulturfritid/skolaforskola.85.html

strong relationships with other professionals at the same institution. Thus, this study defines trust in schools as a two-dimensional construct comprising that between teachers and that between teachers and the principal (Bryk & Schneider, 2002). These two elements have been found to ease relations amongst colleagues in the school organisation; thus, they improve the relationships between school employees by leading to job satisfaction (Bryk & Schneider, 2002). A lack of relational trust may induce friction in the school machinery and foster an intention to leave the profession amongst newly qualified teachers. Therefore, we hypothesise that both 'teacher–teacher trust' and 'teacher–principal trust' influence newly qualified teachers' intentions to leave their jobs:

Hypothesis 4: Mutual trust amongst teachers is a negative predictor of turnover intentions for newly qualified teachers.

Hypothesis 5: Mutual trust between teachers and principals negatively predicts turnover intentions amongst newly qualified teachers.

In a school, the behavioural climate, organisational support and administrative support can significantly affect a newly qualified teacher's perception of mastery, ultimately influencing occupational retention of that teacher (Aamodt & Havnes, 2008; Hong, 2012; Ingersoll, 2001; Kukla-Acevedo, 2009). Peer teachers who assist newly qualified teachers in their first working year, as well as school managers who facilitate professional collaboration, seem to exert an important influence when it comes to determining the extent to which newly qualified teachers perceive that they have mastered their teaching role (Caspersen & Raaen, 2010; Smith & Ingersoll, 2004):

Hypothesis 6: Perceived support from the organisation is a negative predictor of newly qualified teachers' intentions to leave their jobs.

In teaching and learning, innovation can be important for newly qualified teachers as they transition from student to teacher (Bakkenes, Vermunta, & Wubbels, 2010; Ghaith & Yaghi, 1997). In previous research, it has been demonstrated that teachers and students may perceive their schools as innovative or non-innovative (Giles & Hargreaves, 2006). These views could have significant implications for the job motivation, job autonomy and intention to leave of newly qualified teachers. Thus, we have developed the following hypothesis:

Hypothesis 7: Support for innovation is a negative predictor of newly qualified teachers' turnover intentions.

Affective commitment to the school organisation has recently emerged as a central concept in the study of teachers' work attitudes and behaviours (Elias, 2009). The term 'affective commitment' refers to a teacher's emotional

attachment to, identification with and involvement in the school where he/she works. Affective commitment has attracted educational scholars because of its consequences for teacher retention (Choi & Tang, 2011; Ingersoll et al., 1997; Kelchtermans, 2005; Mayer, 2006; Smethem, 2007; Troman, 2008; Yu, Leithwood & Jantzi, 2002). In a Norwegian study of teachers' attitudes and behaviours, mutual trust amongst professionals in schools and goal-oriented leadership were clearly associated with teachers' feelings of affective commitment (Christophersen, Elstad, & Turmo, 2015). In terms of affective commitment, prior research has determined that commitment also has a positive relationship with job satisfaction amongst teachers (Culver, Wolfe, & Cross, 1990; Fresko, Kfir, & Nasser, 1997; Meyer, Allen, & Smith, 1993) and negatively related to newly qualified teachers' turnover intentions (Tiplic et al., 2015). Low affective commitment may result in an intention to leave teaching as a profession. Thus, we have developed the following hypothesis:

Hypothesis 8: Affective commitment is a negative predictor of newly qualified teachers' turnover intentions.

Working Conditions

Starting from their first day at work, newly qualified teachers are expected to behave professionally. There are difficult challenges that arise in the attempt to provide instruction appropriate for individual students (Burke & Greenglass, 1993; Chan, 2002; Grace, 2012; Schwab & Iwanicki, 1982). Lack of clarity concerning the roll of the teacher (Rizzo, House, & Lirtzman, 1970) affects newly qualified teachers intention to leave (Tiplic et al., 2015). Teachers are expected to manage contradictory expectations. There are several competing sources of influence in terms of the teacher's activities: On the one hand, students have a right to co-determination in issues that pertain to them in their school life. On the other, the teacher carries the responsibility for what the students learn in school. Further, there is a mutually contradictory relationship between taking account of pupils' immediate desires and the desire for the school to limit the learners' free will and exert pressure to influence their actions. Good learning demands academic commitment and effort on the part of the pupil, while the student may prefer the teacher to produce inspiring teaching so that the pupils can attain good results. In other words, a tension exists between pupils' desire to be led easily through a progression of demands resulting in the desired qualification and the professional teacher's emphasis on problem-solving tasks requiring the pupil's effort to attain a deep understanding of the subject. Another example is that in the educational policy in several countries, communication technology has not been directed as a support for the exercise of the teacher's role. When teachers lose their desired control, a typical rational response is to limit the use of technology (Elstad, 2006).

Clear leadership induces role clarity (Christophersen et al., 2015), which may in turn reduce a newly qualified teacher's uncertainty. Reduced uncertainty may in turn reduce turnover intention. Thus, we propose the following:

Hypothesis 9: Perceived role conflict is a positive predictor of newly qualified teachers' turnover intentions.

Hypothesis 10: Perceived role clarity is a negative predictor of newly qualified teachers' turnover intentions.

Methods

Sample

Data were collected through a digital survey questionnaire that was distributed to 457 newly qualified Swedish teachers with up to 5 years of experience. A step-wise process was used to select the sample. First, a request was distributed to 3687 Swedish institutions registered at the Swedish National Agency for Education ('Skolverket'), including not only schools but also other educational and non-governmental institutions. Out of these 3687 institutions, we received feedback from schools' principals who were interested in nominating newly qualified teachers in their respective schools for further investigation. The school types in this case involved primary, lower secondary and upper secondary schools. Contact information for 457 newly qualified teachers was collected. A questionnaire was then distributed to each nominated teacher, and 249 completed responses were returned, *resulting in an overall response rate of 54%.*

Measures

The questionnaire contained items that were adapted to match the context, as follows: the Siegel Scale of Support for Innovation (Siegel & Kaemmerer, 1978); an internationally validated instrument called the Norwegian Teacher Self-Efficacy Scale (NTSES; Skaalvik & Skaalvik, 2007); the Three-Component Model of Organizational Commitment (Meyer et al., 1993); the Teacher–Teacher Trust and Teacher–Principal Relations Survey (Bryk & Schneider, 2002); the Role Questionnaire (Rizzo et al., 1970); the Survey of Perceived Organizational Support (Eisenberger, Huntington, Hutchison, & Sowa, 1986); and a four-item scale that measured turnover intentions, one of which was adapted from Kuvaas (2007).

The survey was developed based on measurements reported in previous literature. Four to five single items were used to measure the concepts. The internal consistency of each concept was satisfactory. Previously reported instruments of turnover intention (Kuvaas, 2007) and affective commitment (Meyer, Allen & Smith, 1993) were modified according to recommendations by

Haladyna and Rodriguez (2013). The questionnaire was first developed in Norwegian and used in a study of Norwegian beginning teachers (Tiplic et al., 2015). It was later translated into Swedish.

The following measures were scored on a 6- or 7-point Likert scale:

1) Teacher self-efficacy for maintaining discipline in the classroom (SED; sample item: How certain are you that you can maintain discipline in any class or group of students?);
2) Teacher self-efficacy for instruction (SEI; e.g. To what extent are you certain of your ability to provide instruction and good guidance to all students, irrespective of their ability level?);
3) Collective efficacy (CE; e.g. Professionals at our school can help the most challenging students to become engaged in school work);
4) Teacher–principal trust (PT; e.g. The principal takes a personal interest in teachers' professional development of teachers);
5) Teacher–teacher trust (TT; e.g. At our school, teachers in this school trust each other);
6) Perceived organisational support (POS; e.g. The school genuinely cares about my wellbeing);
7) Affective commitment (AC; e.g. In considering my school as an organisation, I do not feel a strong sense of 'belonging' [reversed]);
8) Innovation support (IS; e.g. Our school can be described as flexible and engaging in continual adaptation to change);
9) Role conflict (RCo; e.g. The policies and guidelines at our school are incompatible with my work);
10) Turnover intentions (TI; e.g. I am actively searching for a new job); and
11) Role clarity (RCl; e.g. I know what my responsibilities entail).

A four-item scale was used to measure turnover intentions; one of these items was adapted from Kuvaas (2007). The following items were included: 'I am actively searching for another job'; 'As soon as I find another job, I will quit this school'; 'I am thinking seriously about changing my workplace'; and 'I often think about quitting my present job'.

Analysis

Based on the theoretical assumptions, we set up a parsimonious structural model and then conducted a stepwise extension of this model to better understand the antecedents of newly qualified teachers' turnover intentions. Going from a simple model (Model 1) towards more content in the model's explanatory adequacy (Model 2) can better equip the researcher to analyse and interpret the complexity of statistical associations. In our research endeavour, we started with the essential in explanatory mechanisms of turnover intentions (see

Model 1). When fundamentals had been captured (perceptions of self-efficacy and relational trust in Model 1), we included other possible independent variables until all of them were tried and analysed. Based on an idea of this stepwise exploration of the data, we extended the analysis by including more independent variables in Model 2. Turnover intention was the dependent variable in Models 1 and 2, but Model 2 included additional antecedent factors. The selection of additional factors in Model 2 was based on the two following criteria: a) theoretical reasons for including a factor (as hypothesised above); and b) correlations between variables, as indicated in Table 1. Our stepwise exploration resulted in excluding the relational trust variables from Model 2 due to multicollinearity with other organisational variables. In particular, when we included all variables in the analysis, none were significant due to high multicollinearity between the relational trust variable and the remaining organisational variables (see Table 1).

Table 1
Inter-correlations and reliability of the latent variables

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	Instructio											
2	Self-	.53*										
3	Teacher's	.35*	.35*									
4	Trust	.11	.008	.53*								
5	Trust	.23*	.16*	.41*	.52*							
6	Role	-.12	-.06	-	-	-						
7	Role	.47*	.37*	.37*	.19*	.41*	-					
8	Perceived	.23*	.014	.45*	.54*	.86*	-	.47*				
9	Innovatio	.32*	.12*	.67*	.57*	.59*	-	.31*	.53*			
1	Affective	.22*	.22*	.42*	.51*	.58*	-	.35*	.56*	.47*		
1	Turnover	-	-	-	-	-	.50*	-	-	-	-	-
	Cronbach'	.80	.90	.83	.81	.72	.81	.84	.89	.92	.94	.9

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

We first determined the descriptive item statistics using the Statistical Package for the Social Sciences (SPSS). The item scores were normally distributed in all variables. The hypothesised model was tested using Mplus and the incorporated latent variables. The structural model assessments considered the root mean square error of approximation (RMSEA), the standardised root mean square residual (SRMR), the *p*-value for the χ^2 statistic, the comparative fit index (CFI)

and the Tucker-Lewis index (TLI). Standard criteria were used to determine a good fit ($p > .05$, RMSEA $< .06$, SRMR $< .08$, CFI $> .95$, and TLI $> .95$; Brown, 2006; Byrne, 2010; Hu & Bentler, 1999; Kline, 2005).

Results

The results showed that the associations between the three teacher efficacy measures and turnover intentions were not significant in either of the two models. Therefore, hypotheses 1, 2 and 3 were not supported in the data. However, the associations between the two relational trust measures and turnover intentions were significant in Model 1. Therefore, hypotheses 4 and 5 were supported in the data.

Neither perceived organisational support nor innovation support had significant associations with the turnover intentions in Model 2. Therefore, hypotheses 6 and 7 were not supported. In contrast, the results showed that the association between affective commitment and turnover intentions was significant; therefore, hypothesis 8 was supported in the data.

Finally, the results demonstrated that the associations between perceived role conflict and turnover intentions were significant, thereby supporting hypothesis 9. However, the associations between perceived role clarity and turnover intentions were not significant. Thus, hypothesis 10 was not supported in the data.

Table 2 shows both the hypothesised model and the results of the analysis.

Table 2: Hypotheses and results

Hypothesis no.	Wording	Result
1	Self-efficacy in relation to instruction is a negative predictor of newly qualified teachers' turnover intentions.	The associations between these variables in models 1 and 2 were not significant; therefore, the hypothesis is not supported.
2	Self-efficacy in relation to discipline is a negative predictor of the turnover intentions of newly qualified teachers..	The associations between these variables in models 1 and 2 were not significant; therefore, the hypothesis is not supported.
3	Collective teacher efficacy is a negative predictor of newly qualified teachers' turnover intentions.	The associations between these variables in models 1 and 2 were not significant; therefore, the hypothesis is not supported.
4	Mutual trust amongst teachers is a negative predictor of turnover intentions for newly qualified	The association ($b(TT{\rightarrow}TI) = -.21$) in model 1 was significant, supporting the hypothesis.

	teachers.	
5	Mutual trust between teachers and principals negatively predicts turnover intentions amongst newly qualified teachers.	The association (b(PT→TI) = -.36) in model 1 was significant, supporting the hypothesis.
6	Perceived support from the organisation is a negative predictor of newly qualified teachers' intentions to leave their jobs.	The association between these variables in model 2 was not significant; therefore, the hypothesis is not supported.
7	Support for innovation is a negative predictor of newly qualified teachers' turnover intentions.	The association between these variables in model 2 was not significant; therefore, the hypothesis is not supported.
8	Affective commitment is a negative predictor of newly qualified teachers' turnover intentions.	The association (b(AC→TI) = -.44) in model 2 was significant, supporting the hypothesis.
9	Perceived role conflict is a positive predictor of newly qualified teachers' turnover intentions.	The association (b(RCo→TI) = .22) in model 2 was significant, supporting the hypothesis.
10	Perceived role clarity is a negative predictor of newly qualified teachers' turnover intentions.	The association between these variables in model 2 was not significant; therefore, the hypothesis is not supported.
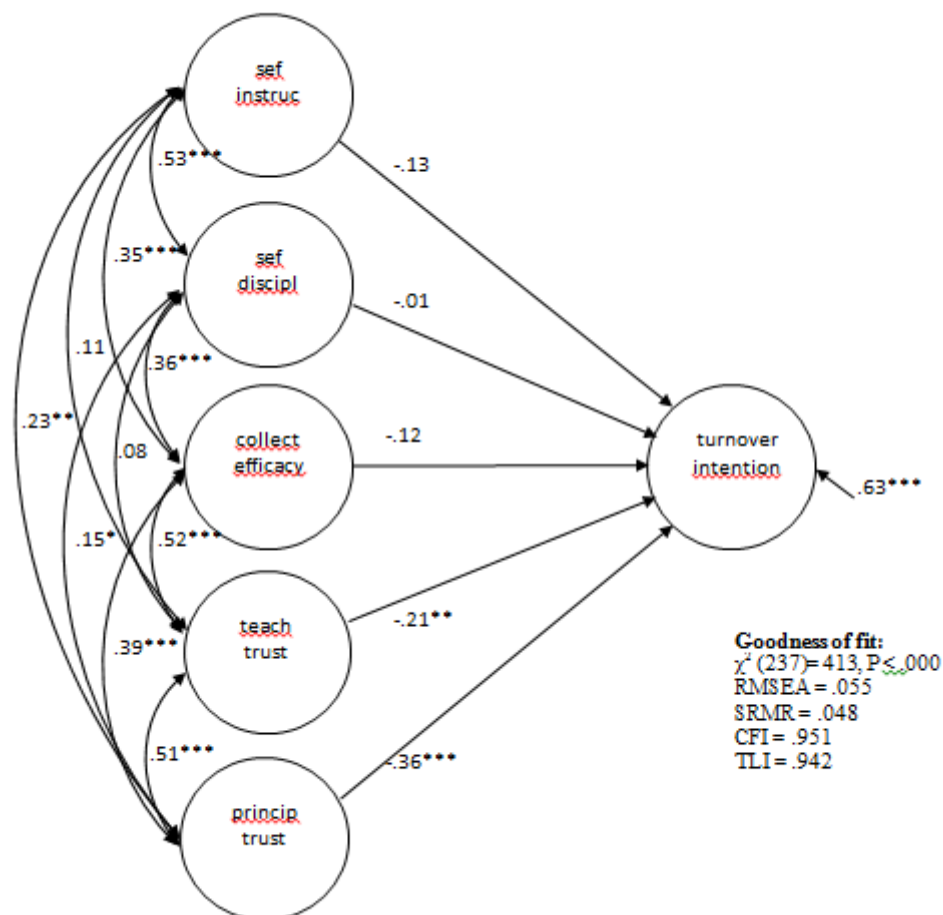
Model 1.
Teacher self-efficacy, trust and collective teacher efficacy as predictors of the turnover intentions of newly qualified teachers. Sef instruc = teacher self-efficacy for instruction, sef discipl = teacher self-efficacy for maintaining discipline in classroom, collect efficacy = collective teacher efficacy, teach trust = teacher–teacher trust, princip trust = teacher–principal trust. Note: The figure displays standardised coefficients. All correlations between independent variables above .10 were significant at the 5% level, while those above .20 were significant at the 1% level. **$p < .01$, *** $p < .001$
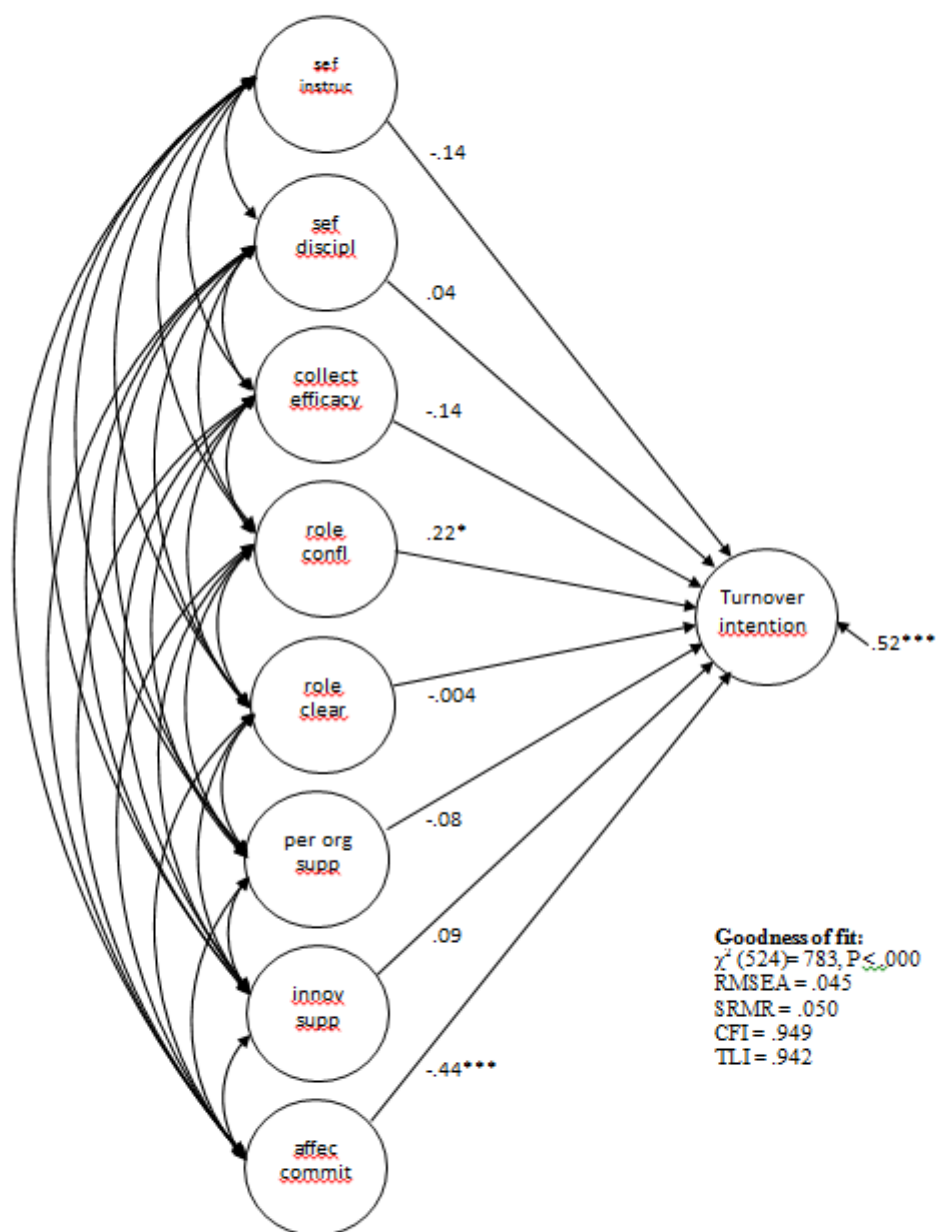
Model 2.
Teacher self-efficacy and diverse organizational variables as predictors of beginning teachers' turnover intention. Name: sefinstruc = teacher self-efficacy for instruction, sef discipl = teacher self-efficacy for maintaining discipline in classroom, collect efficacy = collective teacher efficacy, teach trust = teacher–teacher trust, princip trust = teacher–principal trust, role confl = role conflict, role clear = role clarity, per org supp = perceived organizational support, innov supp = innovation support, affec commit = affective commitment. Note: Standardized coefficients are displayed. Correlations between the independent variables are presented in table 2.
* p<.05, **p<.01, ***p<.001

Discussion

The findings showed that relational trust between teachers and teacher-principal trust were negatively associated with newly qualified teachers' turnover intentions. This suggests that when newly qualified teachers develop trust in their colleagues and principals, they become less likely to want to leave their workplace or the profession as a whole. In schools, relational trust is a mutual, multifaceted type of social exchange (Bryk & Schneider, 2002). Such an exchange relation can be characterised by the elements of competence, respect, personal regard for others and integrity; these features facilitate the accomplishment of objectives at both the personal and organisational levels. The Swedish findings support the importance of relational trust amongst colleagues, whereas the Norwegian findings concern principal–teacher trust (Tiplic et al., 2015). Although the teacher–principal relationship exhibits power asymmetry, both parties are vulnerable. A teacher can undermine the school's goals, thereby impeding the development of the organisation development. However, principals also make many decisions that directly affect teachers. Thus, it is crucial to establish respectful, professional relationships amongst employees and between new employees and their principals.

In this study, another factor that was found to predict newly qualified teachers' turnover intentions was role conflict. This result supports previous research on the topic (Tiplic et al., 2015) and suggests that ambiguities of newly qualified teachers' roles represent a significant challenge; this has significant ramifications for their intentions to leave their profession or workplace. While previous research has assessed the presumed effects of perceived role conflicts in schools (Miles & Perreault, 1976), including diminished job satisfaction amongst teachers (Skaalvik & Skaalvik, 2010), few have considered role conflict per se occurring in school settings (some researchers have considered perceived role conflict pertaining to school leaders, e.g. Eckman, 2004; Gross, Mason, & McEachern, 1958). An earlier study of Norwegian beginning teachers revealed significant associations between role conflict and turnover intention (Tiplic et al., 2015). This similar finding supports the importance of role conflict amongst newly qualified teachers. These findings imply that the prevention of role conflict in schools may also mitigate teacher turnover. In this regard, the inter-correlations between the variables might widen the understanding of role conflict and how to limit it. The results showed that collective efficacy, support and affective commitment were negatively correlated with role conflict ($r(CE \leftrightarrow RCo)$ = -0.37 in Model 2, ($POS \leftrightarrow PCo$) = -0.68 in Model 2, ($IS \leftrightarrow PCo$) = -0.46 in Model 2 and ($AC \leftrightarrow RCo$) = -0.46 in Model 2). These results indicate that efforts to strengthen collective

efficacy, support and affective commitment can indirectly contribute to the prevention of newly qualified teachers' turnover intention through reducing perceived role conflict.

As another important predictor of job satisfaction (Culver et al., 1990; Meyer et al., 1993), affective commitment predicted newly qualified teachers' intentions to leave the profession or workplace. This indicates that amongst newly qualified teachers, their intentions to leave the school or the profession result from lack of a sense of belonging to their school. This result emphasises the effect of affective commitment on individuals' intentions (Hong, 2010). It also indicates the importance employee–school relationships when it comes to ensuring newly qualified teachers' professional growth and commitment. This result has implications for how schools should approach staff support, work climate and human relations.

The hypothesis concerning the relationship between a demanding environment related to classroom management and newly qualified teachers' intentions to leave their workplace or profession was not supported by the results. Moreover, we did not find evidence to support the hypothesis on the relationship between challenges related to the delivery of new teaching content and turnover intentions. It may be that because newly qualified teachers know about such challenges, they accept their lack of experience and do not anticipate immediate success in everyday classroom tasks. Unlike previous research that uncovered the significant association between collective efficacy and intentions to leave one's profession or workplace (Tiplic et al. 2015), this link was not supported in the present study. This topic is clearly an avenue for further research.

Our results did not support the hypothesis that newly qualified teachers' perception of organisational support in schools would reduce their intentions to leave their profession or workplace. However, Goddard and O'Brien (2003) previously reported that a lack of staff support is an important predictor of newly qualified teachers' intentions to leave their workplace or profession in Australia. Mentoring in a Swedish context has historically followed the classical arrangement of supportive mentoring in which individual mentors work with individual mentees. However, in 2011, a new law imposed a probationary process for new teachers that included a process of mentoring as supervision characterised by mentors assessing mentees (Kemmis, Heikkinen, Fransson, Aspfors, & Edwards-Groves, 2014). In sum, in this mentoring practice, new teachers' competence is evaluated against established teaching standards. It could be that this extensive mentorship in Sweden satisfies newly qualified teachers' need for support (Kemmis et al., 2014). To some extent, the presence of supportive mentors could replace the requirement for general organisational support.

We did not find confirmation of the hypothesis that support for innovation in schools mitigates the turnover intentions of newly qualified teachers. The correlation between support for innovation and teachers' turnover intentions was negative when the other predictors were controlled for; however, this association did not reach statistical significance. It may be that newly qualified teachers, unlike experienced teachers, are not necessarily striving to incorporate new ideas into their everyday tasks in the classroom. Before they start to engage in novel solutions in the classroom, newly qualified teachers may focus on building their self-confidence by gaining greater familiarity with managing challenging everyday tasks. Given that schools' innovation support is a positive characteristic, the level of innovation in the schools where newly qualified teachers are working may have significant ramifications for their professional development in future (Siegel & Kaemmerer, 1978).

Regarding the independent variables, it was interesting to see which were correlated with the strongest negative predictors of turnover intention (teacher–principal trust, teacher–teacher trust or affective commitment) to determine the factors relevant to keeping newly qualified teachers in their jobs. All three of these independent variables were strongly correlated with collective efficacy $(r(TT{\leftrightarrow}CE) = 0.52$ in Model 1, $(PT{\leftrightarrow}CE) = 0.39$ in Model 1 and $(AC{\leftrightarrow}CE) = 0.42$ in Model 2). This result indicates that these variables overlap to some degree. Trust is likely to be a precondition for perceived collective efficacy. It also seems likely that those who are affectively committed to their work are more likely to report collective efficacy.

In summary, this study showed that contextual and organisational factors had a significant effect on intentions to leave their profession or workplace amongst newly qualified teachers in Sweden, while perceptions of individual competence did not. Similar patterns were found in the analysis of the sample of Norwegian beginning teachers (Tiplic et al., 2015). These similarities are not surprising. The countries are neighbours, and they share a common teacher ethos, educational values and educational policies (Helgøy & Homme, 2006). Furthermore, from the 1960s onward, educational policies in Norway and Sweden have been oriented to a similar comprehensive educational project (Arnesen & Lundahl, 2006; Telhaug, Mediås, & Aasen, 2006), in which 'schools should be inclusive, comprehensive, with no streaming and with easy passages between the levels' (Blossing, Imsen, & Moos, 2014, p. 1). It is expected that these similarities are extended to the values and beliefs amongst Norwegian and Swedish teachers. In addition to the perceived attitudes of employees, the relationships of newly qualified teachers with their organisations and with significant school professionals were the most significant predictors of intentions to leave the workplace or profession.

The results showed only partial support for previous research findings relating to significant factors in confidence on the job and the wellbeing of teachers (Tiplic et al., 2015). For example, in the analysis of the Norwegian material, we found significant negatively associations between teachers' collective efficacy and their turnover intention. This pattern is not present in the Swedish material. Further, in the Swedish data, we found significant negative associations between teacher–teacher trust and teachers' turnover intentions. This pattern is not present in the Norwegian material.

Limitations

One important limitation of this study is related to the sample. We were constrained by data access in this research due to the lack of any database on newly qualified teachers in Sweden. Therefore, our sample consisted of newly qualified teachers whose principals responded to our request for participants. However, we have no reason to believe that our sample is biased, or even further, that our results are misguiding, since we studied associations between variables that are not sensitive to population representativeness issues.

Another limitation is that we did not have an opportunity to couple newly qualified teachers' self-reporting data to objective goals in their task performance, such as value-added measures. In addition, we did not include other factors, such as teacher wages and school policies, to assess external factors that affect turnover intentions amongst newly qualified teachers.

Conclusion

This study contributes to the literature by showing that the quality of human relations amongst school professionals makes a difference in how teachers perceive attrition and retention. One of our main conclusions is that the quality of the relationships between teachers, as well as between principals and newly qualified teachers, is an important predictor of turnover intention for new teachers. Good relationships between principals and teachers can contribute to reducing the uncertainty and vulnerability of newly qualified teachers, which can benefit the entire school. Another possibility is that mutual trust amongst teachers supports the social norms that generate shared obligations, thereby influencing teachers' judgement related to the amount effort they should put into their work. Assuming that the statistical correlations represent causality, relational trust is crucial to collegiality in terms of school leaders' desire to enhance the retention of newly qualified teachers. We consider that the social glue between colleagues influences their retention of their occupational beliefs and wants. Teachers' affective commitment to the school organisation is often

described in the literature as influencing teacher behaviour (Firestone, 1996; Toh, Ho, Riley, & Hoh, 2006; Watt & Richardson, 2008; Canrinus, Helms-Lorenz, Beijaard, Buitink, & Hofman, 2012).

Affective commitment is important in sustaining the job motivation of newly qualified teachers, as it serves to reinforce their perceptions of management and collegiality. Affective episodes are also important in sustaining the job satisfaction of newly qualified teachers.

Finally, we found that role conflict was positively associated with turnover intention. Role conflict was also negatively correlated with the potential moderators of turnover intention. These findings are relevant in terms of practice, policymaking and teachers' perceptions of nation-wide school politics. Our study provides empirical grounds for minimising newly qualified teachers' experiences of role conflict. Policymakers can increase teachers' perceived role conflict by communicating contradictory expectations. The findings presented in this study indicate that in official discussions about schools and teaching, politicians and other relevant actors should acknowledge the difficult issues in teachers' work, including the perception of role conflict.

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