Support and Retention: A Comparative Study Between Primary and Secondary

School Teachers

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Abstract

The lack of teachers around the world, especially in European countries like in the Netherlands, presents major challenges. Beginning teachers often face difficulties during their first years on the job, leading to high attrition rates within the first years of their careers. Although teacher induction programs aim to provide structured support, recent literature emphasizes the essential role of informal interactions with colleagues. However, existing research often overlooks the distinctions between primary and secondary school teachers, failing to investigate the specific impact of colleague support on these different types of teachers. This study addresses this gap by examining the relationship between support from colleagues and teachers' intention to leave their profession, comparing primary and secondary school contexts. The data were collected through questionnaires from teachers with less than seven years of experience in primary and secondary schools in the Netherlands (N=190). For the first hypothesis, we conducted a linear regression to examine the relationship between support and intention to quit. For the second, we compared the means of support and intention to quit between primary and secondary education and used multigroup linear regression to compare the relationship coefficients. Results indicate a significant negative relationship between colleague support and intention to quit among primary school teachers, while the relationship was non-significant in secondary schools. Theoretical and practical implications of using informal support are discussed to address the challenges of teacher retention, highlighting the dynamics within primary and secondary education contexts.

Keywords: Teacher Shortage, Induction Process, Support from Colleagues, Intention to quit, Primary schools, Secondary schools, the Netherlands

Problem Statement

The shortage of teachers is becoming an increasingly global phenomenon. In many European countries including the Netherlands, Czech Republic, Estonia, Finland, Germany, Iceland, Italy, and Norway, there is a problem with too few teachers (Helms-Lorenz et al., 2016). According to Smith and Ingersoll (2004) it seems that more teachers are quitting than entering this job and -more specifically- many beginning teachers leave the profession within the first 5 years on the job. As a consequence, the teacher shortage problem is often considered as a teacher retention problem. The teacher retention problem represents a challenge for policymakers to make sure that there are steady and reliable teachers, who are able to handle different needs of the students and the increasing requirements of today's learning environment (Podolsky et al., 2016).

Moreover, according to Van de Grift's study (2010) (as cited in Helms-Lorenz et al., 2016) new teachers show lower levels of teaching skills, about 66% below the average teacher. Consequently, continuously replacing beginning teachers without having the time for them to become more experienced is likely to result in a decrease in the overall skill level of the teacher workforce. Flores and Day (2006) mentioned that early-career teachers frequently describe the transition from being a student teacher to acting as a teacher as feeling adrift or facing a "sink or swim" scenario when entering the teaching profession.

Notably, the teacher induction period stands out as a phase characterized by intense learning process (Thomas et al, 2019). Globally, a significant number of teachers leave the profession during this period, a phenomenon often referred to as the 'Teacher Retention Crisis' (Ingersoll & Strong, 2011). At the start of their careers, professionals need to acquire a substantial amount of knowledge and skills.

Teacher induction programs are structured support systems for new teachers to develop professional skills and effectiveness (März & Kelchtermans, 2020). Even though the intention and relevance of providing formal and structured support for beginning teachers through induction programs are commendable, the emphasis on such approaches has drawn researchers' attention away from the valuable impact of informal, collegial interactions. Those 'less formal' interactions play a crucial role in shaping how beginning teachers experience their initial phase of induction into the teaching profession (März & Kelchtermans, 2020).

According to Snoek et al (2010) professional support from colleagues helps teachers in acquiring essential skills and advancing in their professional growth. Support from colleagues is a valuable resource found in the connections or relationships between individuals in the school workplace (Thomas et al., 2019). Because beginning teachers face similar difficulties, they feel their new colleagues as friends that have the same experiences. Thus, literature about beginning teacher induction tends to consensually consider informal interactions, as a form of support, extremely important for beginning teachers (Kessels, 2010, Struyve, et al., 2016).

While research consistently highlights the importance of peer interactions in the process of teacher induction, the term 'teachers' is often used broadly, overlooking the distinctions between primary and secondary school teachers. Notably, primary and secondary education systems function as separate systems, each with its own unique dynamics and requirements (Day, et al., 2006). However, it remains a gap in the literature concerning the specific investigation and comparison of the importance of support from colleagues in teacher induction process between these two educational levels. Despite the acknowledgment of differences between primary and secondary systems, research addressing this gap is currently lacking.

Indeed, studies often investigate either primary (Neugebauer, et al., 2019) or secondary school teachers (Fontaine, et al., 2012, Noordzij & van de Grift, 2020) or even do not distinguish between the two (Gu, et al., 2007, Tehseen & Hadi, 2015).

In this paper we investigate the induction process of primary as well as secondary school teachers. More specifically, we examine the relationship between the support from colleges and teacher's intention to quit and compare to what extent this relationship differs between primary and secondary school teachers.

Theoretical framework

Building the Framework from the Shortage to the Importance of Induction

The challenges encountered by early-career teachers significantly contribute to the increasing rates of attrition among beginning teachers. This high dropout rate is recognized as a reason for teacher shortages, potentially impacting student performance (Ingersoll & Strong, 2011). This emphasizes the importance of dealing with the teacher retention problem (McKenzie & Santiago, 2005).

Successful beginning teacher induction is a crucial process, aiding them in overcoming the difficulties associated with teaching (Kearney, 2014). Over the last twenty years, the educational literature has predominantly concentrated on one-to-one mentoring in the context of induction, frequently treating mentoring and induction as synonymous. Studies suggest that new teachers find one-to-one mentoring valuable, contributing to a higher rate of teacher retention (Bickmore & Bickmore, 2010). Other arrangements or strategies that could positively impact the induction process for new teachers include reducing the new teacher's workload and assigning them to classes where they have a higher likelihood of success (Magudu, 2014).

Despite the above, the literature suggests that other aspects of induction, like collaborative structures, are just as crucial. When measuring effectiveness through

teacher retention, a combination of support processes, rather than just mentoring or administrative help, proves most successful (Bickmore & Bickmore, 2010).

According to Smith and Ingersoll (2004), a comprehensive approach that includes regular collaboration, orientation seminars, networking, reduced teaching load, and teacher aide support significantly boosts teacher retention. Additionally, according to Mansfield et al., 2014 collegial support helps the beginning teachers to deal with those years that previously have been mentioned almost as "emotional rollercoaster" years. It is said that such a support can reduce teacher's intention to quit. And keep them motivated. Moreover, differences between primary and secondary education systems may influence the association of colleague support with teachers' intention to quit. Research by Brouwers and colleagues (1999) and Mérida-López et al. (2020) provides evidence that support from colleagues influences teachers' intentions to quit, in both primary and secondary education. Understanding these dynamics is important for examining the relationship between support from colleagues and teachers' intention to quit across different educational levels.

Because of this evidence, the perception of teacher induction has shifted towards viewing it as a phenomenon that is closely connected to social contexts and peer interactions (März & Kelchtermans, 2020). This, has brought the significance of the concept of social capital in teacher research (Coppe et al., 2022).

Social Capital Theory

The concept is rooted in the economic principle of returns on investments. However, in this context, the investment is not monetary but involves an individual investing in the development of social connections. With proper nurturing, these social ties can later be leveraged by the individual to gain advantages or "returns" (Benbow & Lee, 2019). Social capital is transmitted through relationships with

friends, coworkers, family, discussion partners, and others. It serves as a channel for providing resources, whether tangible or intangible, such as information, support, knowledge, advice, prestige, or wealth, either directly or indirectly (Benbow & Lee, 2019). Struyve and colleagues (2016) defined social capital as "the set of resources embedded in social relations". Access to social capital influences how beginning teachers can use valuable resources effectively, gain insights from experienced colleagues, and navigate the complexities of teaching successfully (Sikma, 2019).

The role of social capital in the induction process proves essential for teachers' authentic growth and effective coping mechanisms (Gu & Day, 2007). Social capital, derived from effective peer support, contributes significantly to early career teachers' resilience (Fox & Wilson, 2015). This support, based on mutual understanding and empowerment, makes teachers feel connected and belonging to the teaching profession. Establishing social networks, particularly through peer support, is emphasized for early career teachers, as it enhances their capacity to cope with challenges and contributes to their professional development (Fox & Wilson, 2015).

In this thesis, we contend that the support teachers offer or receive can significantly impact their intention to stay. Grounded in the social capital theory, it becomes evident that support from colleagues plays a crucial role in teacher retention. More specifically, according to Struyve, et al. (2016), it is believed that experiencing social isolation within the school setting could result in more pessimistic thoughts and emotions regarding one's career choice. Ultimately, this may contribute to the decision to leave the profession. Instead, when beginning teachers have the chance to share their knowledge and skills and being accepted by their colleagues this could lead to confident and motivated teachers who stay in the profession (März & Kelchtermans, 2020).

Present Study

This paper aims to evaluate the induction process in both primary and secondary schools in the Netherlands. Our focus is specifically set on analyzing the connection between support from colleagues and teacher's intention to leave their job. Furthermore, we will examine how this relationship varies between primary and secondary school teachers.

The following research questions will guide the study:

(1) How is support from colleagues associated with teachers' intention to leave? and (2) To what extent the relationship between support from colleagues and intention to quit differs between primary and secondary school teachers in the Netherlands?

A negative relationship is hypothesized between support from colleagues and intention to leave among teachers. It's anticipated that the higher the support is the lower the intention to leave would be.

Variations are hypothesized in the relationship between support from colleagues and intention to quit across primary and secondary school teachers.

Method

Procedure and Participants

This study uses a correlational research design, with descriptive elements, to explore the relationship between support from colleagues and teachers' intention to quit, and to compare these relationships between primary and secondary school teachers. We used (online) questionnaires to obtain information about teacher's intention to quit and the amount of support from colleagues as well as demographics. A first round of data collection was conducted in January 2023; The second round was conducted from January until February 2024. We aimed at recruiting participants with 7 years or less of experience in the teaching profession, both working in primary

and secondary schools in the Netherlands. In the beginning of the survey, teachers had to give consent for the use of their input for scientific and/or educational research purposes as well as for public reports concerning the induction of teachers. They were informed that participation was voluntary and that they could stop answering the questions at any time without any negative consequences. If they agreed with these conditions, they were taken to the survey questions. In addition, teachers were asked to list the colleagues from whom they receive professional and/ or emotional support and to indicate the frequency and quality of these interactions.

We engaged the participants through newly contacted teachers by students collaborating within our group. We had 190 participants including both primary (n=127) and secondary school teachers (n=63). Approximately 73% of the included teachers identified as female and 27% as male. Moreover, an approximate 64% of the teachers had less than five years of teaching experience with the remaining almost 36% having five to seven years of experience.

Measures

For the independent variable, support from colleagues, we assessed beginning teachers' support from colleagues by examining the frequency and quality of interactions. Beginning teachers had rated the frequency and quality on a scale of 1 to 5 (considering 1-15 colleagues). Professional and emotional support had been combined into an overall measure, with the frequency and quality scores calculated accordingly. Support from colleagues is computed as follow:

$$Pro\_sup = \sqrt{\sum_{i=1}^{n}[(Pro\_Freq_i)(Pro\_Qual_i)]}$$

$$Emo\_sup = \sqrt{\sum_{i=1}^{n}[(Emo\_Freq_i)(Emo\_Qual_i)]}$$

$$sup\,from\,col = Pro\_sup + Emo\_sup$$

For the dependent variable, intention to quit, questions about "thoughts of leaving the profession" and/or "plans to change profession" and/or "quit teaching" had been taken into account. Three items were assessed on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Reliability analysis was carried out to verify the internal consistency of the used scale ($Cronbach\,alphas = 0.926$).

Moreover, the socio-economic status (SES) is regarded as a control variable in the studied relationship. The inquiry applies to the socio-economic backgrounds from which the students admitted to the school originate in a scale ranging from very low, to low, average, high, very high. This measure is self-reported by the participants (i.e., teachers).

Analysis

In order to answer the first research question "How is support from colleagues associated with teachers' intention to leave" we searched for the relationship between the amount of support and their intention to quit using a linear regression analysis. Furthermore, SES was entered as a control variable.

As for the second research question "To what extent the relationship between support from colleagues and intention to quit differs between primary and secondary school teachers in the Netherlands?" we implemented different steps. First, we compared the means of both support from colleagues and intention to quit in primary and in secondary education. Moreover, we ran the linear regression in a multigroup setting to compare the coefficients of the relationships between the variables.

We used the Jamovi Software (version 2.3.28.0) with the package "Path Analysis" to conduct our analysis (The jamovi project, 2022).

Results

In this part, we will present the findings of our research for the two hypotheses.

Table 1 presents the relationship between support from colleagues and teachers' intention to quit with Group 1 representing primary education teachers in the Netherlands and Group 2 representing secondary education teachers in the Netherlands.

Table 1:

Effect Estimates: Primary & Secondary Education

Relation	Group 1		Group 2	
	β	p	β	p
Support from colleagues -> Intention to quit	-0.2126	0.017	-0.0770	0.567
SES -> Intention to quit	-0.1926	0.030	-0.0160	0.906

Regarding the first hypothesis it's anticipated that the higher the support is the lower the intention to quit would be, we found a negative and significant relationship $(\beta = -0.2126, p = .017)$ in primary schools in the Netherlands between teachers' intention to quit as the dependent variable and support from colleagues as the independent variable. It means that the more support they get from their colleagues, the less they want to leave teaching profession. In secondary schools, the relationship between teachers' intention to quit and support from colleagues was negative but non-significant $(\beta = -0.0770, p = .567)$ between the former as the dependent variable and the latter as the independent variable; These results partially align with our first hypothesis; it is supported only for primary education teachers.

In the analysis, students' socioeconomic status (SES) served as a control variable to refine the effect of the main predictor, which is the support from colleagues. The

analysis in primary schools shows a negative and significant relationship between SES -as the independent variable- and teachers' intention to quit as the dependent ($\beta = -0.1926, p = .030$), indicating that the higher the students' socioeconomic status, the less the teachers want to quit. Regarding the secondary education teachers, we found a negative and non-significant relationship between SES and intention to quit ($\beta = -0.01, p = .906$).

Table 2 presents the mean scores of the intention to quit and support from colleagues between primary (Group 1) and secondary (Group 2) teachers.

Table 2

Means of Intention to Quit and Support from Colleagues Scores in Primary and Secondary school Teachers

Variable	Group 1			Group 2		
	N	Mean	SD	N	Mean	SD
Intention to quit	125	2.16	1.15	61	2.02	1.24
Support from colleagues	117	6.13	2.19	55	6.50	2.36

In order to assess the differences in intention to quit between primary and secondary teachers, as well as the differences in support from colleagues between two examined educational levels independent samples t-test was used. The results revealed no significant differences.

Specifically, the average intention to quit among primary school teachers ($M = 2.16, SD = 1.15$) was similar to that of secondary school teachers ($M = 2.02, SD = 1.24$), $t(184) = 0.777, p = .438$. Since the p-value is greater than .05, we

do not have enough evidence to support the alternative hypothesis that there are

significant differences. This indicates that primary and secondary school teachers

report similar levels of intention to quit. Likewise, the average support from

colleagues among primary school teachers ($M = 6.13, SD = 2.19$) was similar to

that of secondary school teachers ($M = 6.50, SD = 2.36$), $t(170) = -1.01, p =$

.312. Again, since the p-value is greater than .05, we do not have enough evidence to

support the alternative hypothesis that there are significant differences. This indicates

that primary and secondary school teachers report similar levels of support from

colleagues.

Regarding the second research question, variations were hypothesized in the

relationship between support from colleagues and intention to quit across primary and

secondary school teachers. The analysis showed that for primary school teachers,

there is a significant negative effect of support from colleagues on intention to quit

($\beta = -0.2126, p = .017$). For secondary school teachers, the effect is non-

significant, indicating no substantial effect. In particular, the beta coefficient for

secondary school teachers was negative ($\beta = -0.0770$) but not statistically

significant ($p = .567$). These findings suggest variation between the two groups.

Specifically, support from colleagues has a stronger effect on reducing intention to

quit among primary school teachers compared to secondary school teachers. The

relationship is significant and greater for primary school teachers, the relationship is

non-significant for secondary school teachers. However, the presence of any effect

variation highlights that the relationship between support from colleagues and

intention to quit seems to be more important for primary school teachers.

Additionally, the R-squared value of 0.08755 (95% CI: 0.023, 0.182) shows us that

around 8.76% of the variance in primary school teachers' intention to quit can be

explained by the support they receive from colleagues and SES. The R-squared value of 0.00628 (95% CI: 0.005, 0.051) indicates that 0.6% of the variance in secondary school teachers' intention to quit is explained by the support from colleagues and SES. It is evident that support from colleagues and SES -as predictors- have a much stronger association with intention to quit among primary education teachers compared to its association with the intention to quit among secondary teachers.

Discussion

This paper set out to delve into the effects of support from colleagues on the intention of beginning teachers to leave their teaching jobs in primary and secondary Education in the Netherlands. Given the significant attrition challenges in the education sector, we aimed to explore whether and how informal support from colleagues within school environments is able to reduce shortages. Using social capital theory, we tried to understand the potential influence of informal support from colleagues on teachers' decision to quit or not. With limited research having focused on the comparison of primary and secondary education, we examine this aspect comprehensively.

The following results relate to the first research question, which investigates the effects of the support from colleagues in teachers' intention to quit. We found out that in primary education support from colleagues has a strong relation with teachers' intention to quit. This is supported from the social capital theory by providing empirical evidence of the importance of informal support. It is important to have good social capital in order to improve aspects such as the induction process which can predict factors that influence attrition (Fox, & Wilson, 2015). Additionally, Thomas and colleagues (2019) emphasize that collegial support is such crucial that could assist in overcome the "sink or swim" years of beginning teachers and finally reduce

teacher's intention to quit and keep them motivated.

The findings in secondary education were presented differently. This highlights the significance of considering factors, such as distinctions between primary and secondary school environments, when analyzing teacher induction and support dynamics. Although Mérida-López et al. (2020) show evidence that support from colleagues in secondary education is important for influencing teachers' decision to leave or not, understanding the variations of the dynamics between the two levels is crucial for assessing the relationship between support from colleagues and teachers' intention to quit (Day, et al., 2006).

In our study, we found a non-significant effect between support from colleagues and teachers' intention to quit in the secondary education sample. It may have different demographic characteristics compared to previous studies, which could influence how support from colleagues works in this context. Additionally, differences in measurement methods could have an impact. In our study, support from colleagues was assessed by examining both the frequency and quality of professional and emotional interactions, combined into an overall measure. This approach may differ from those used in other studies. For example, some studies might focus on the frequency of interactions without considering the quality, or they may use different scales. For instance, Siciliano (2016) measured organizational and professional commitment using a combination of scales from three different sources, each targeting various aspects of commitment. This illustrates how diverse measurement approaches can be. Consequently, further research is needed to understand how different types of support affect teacher retention in secondary education

Unlike the straightforward findings of the first research question, the aim of the second research question was more explanatory. In this phase we wanted to delve

deeper into the comparison and the variation of the relationship between support from colleagues and intention to quit across different educational settings. The results revealed significant negative relationship between support from colleagues and intention to quit among primary teachers, while the relationship was negative but not statistically significant for secondary teachers.

Recent literature suggests that in both investigated educational levels the support from colleagues plays vital role in their decision (Thomas et al., 2019, Mérida-López et al. ,2020). From the findings of our study, we assume that even if secondary teachers feel that they have support, this support may not be as effective in influencing their intention to quit. This could be due to the nature and quality of support, the frequency of interactions, or how support is perceived and used in secondary settings. In the Netherlands, secondary teachers often teach different subjects and therefore have fewer opportunities to interact and build relationships with their colleagues compared to primary teachers, who spend more time with the same group of colleagues. In secondary education, most teachers teach their classes independently and focus on their own classroom activities, which in turn creates a more isolated work environment (Hodkinson & Hodkinson, 2003). The combination of this isolation and the separation of departments, because of the division of subjects in different departments, makes it difficult to keep in-depth and sustained professional collaboration in secondary schools (Hargreaves & Macmillan, 1995, as cited in de Jong, 2021). Consequently, primary teachers may benefit more from support due to more cohesive and frequent interactions.

To better understand the potential reasons for the differential impact of support from colleagues on teachers' intention to quit, it is important to consider the structure of teacher education programs and the organization of school environments (Day, et

al., 2006). Future research should delve deeper into how these structural differences influence the quality and effectiveness of support that teachers receive.

Den Brok and colleagues (2017) suggest that another significant factor contributing to a lack of support from colleagues could be the absence of a supportive network within the school environment. If teachers perceive a lack of colleagues or a limited availability of social capital, it can exacerbate feelings of isolation and hinder their ability to cope with the challenges of teaching.

Another reason explaining the results for secondary teachers is our sample and at this place we address some limitations of our study. To begin with, we gathered data from 127 primary school educators and only 63 from secondary school educators. In other words, we had nearly double the amount of data from primary schools compared to secondary schools. This imbalance in sample size means that our analysis may have lacked the statistical power to detect a significant effect for the group of secondary school teachers. Statistical power is the probability that a test will correctly reject a false null hypothesis (Cohen, 1992). A higher power indicates a greater possibility of detecting a true effect when it exists. Cohen (1992) suggests that to achieve an adequate power, a study requires a sufficient sample size. Our smaller sample size for secondary school teachers might have reduced the power of our statistical tests, making it more difficult to detect significant relationships between support from colleagues and intention to quit. To address this limitation in future research, it is crucial to ensure a more balanced and larger sample size for both groups.

Additionally, it's important to note that different methods of data collection could have highlighted different aspects of the impact of support from colleagues. Extra qualitative research would be very beneficial and would add new insights to our interpretations. Qualitative research, such as interviews, would be helpful and add

new insights to our interpretations (Creswell, 2014). For instance, interviews might have revealed clearer cases of when the support from colleagues is lacking, directly contributing to teacher shortages.

Moreover, future research should explore how different types of social interactions impact beginning teachers. In this study, we assessed support from colleagues by examining both the frequency and quality of interactions. Beginning teachers rated these interactions and we combined professional and emotional support into an overall measure, with the frequency and quality scores calculated accordingly. Notably, Coppe and colleagues (2023) have underscored the importance of professional networks. Recognizing this significance, it would be valuable for future research to delve deeper into social interactions by differentiating between professional and emotional support from colleagues.

It's important as well to highlight the insufficiency of literature that directly compares primary and secondary school contexts. This gap in research presents an opportunity for future investigation to explore the contrasts in support structures, challenges, and retention dynamics between these educational levels. By addressing this gap, researchers can provide valuable information into the unique needs and experiences of teachers in primary and secondary education, ultimately contributing to more tailored support strategies and improved teacher retention efforts.

Finally, policymakers could use this thesis to inform policy decisions aimed at addressing teacher retention challenges, better meeting the needs of beginning teachers of examined educational levels, and promoting their retention in the profession. Understanding the differences between primary and secondary education can help create specific strategies to improve teacher retention and build a more stable and effective teaching environment.

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