

Exploring beginning teachers' attrition in the Netherlands

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ABSTRACT

Based on a review of recent studies and reports, this research investigates attrition among beginning teachers in the Netherlands as well as reasons for teacher attrition, and compares the finding with studies on this topic conducted elsewhere in the world. The findings suggest that attrition among beginning teachers in the Netherlands with a percentage close to 15% is somewhat lower than in countries such as the United Kingdom, United States, and Australia. Yet, causes for attrition are comparable to those reported elsewhere. Interestingly, attrition seemed lower for teachers with a teaching degree, suggesting that teacher education may play a vital role in reducing attrition. In addition, it seems that high-quality coaching and supervision, reducing workload, and organizing a social network for beginning teachers may be important factors in reducing attrition. Finally, there is a need for better registration and monitoring of teacher attrition and for more comprehensive research on this topic.

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Introduction

In many countries, a shortage of well-trained teachers is expected or already manifested (e.g. Ministerie van Onderwijs Cultuur en Wetenschap, 2015; Sutchter, Darling-Hammond, & Carver-Thomas, 2016). In response to the problem, nations try to attract new teachers by providing alternative routes into the profession (for example, America's Teach First program, which has also been taken up in the UK and the Netherlands), by loan subsidy programs and by bonuses or higher salaries (OECD, 2005). However, as Lindqvist, Nordäng, and Carlsson (2014) argue, it is unlikely that only recruiting new teachers will solve the problem. Therefore, many countries not only try to increase the number of students that enroll in teacher education and the number of graduates that enter the profession after graduation (Luekens, Lyter, Fox, & Chandler, 2004), but also endeavor to reduce teacher attrition. Different definitions of teacher attrition are used in the literature, some including teachers with intentions to leave a school but starting at a new school or education sector (turnover), whereas others exclude teachers that remain in the profession. In this special issue article, we use the definition of teacher attrition proposed by Cooper and Alvarado (2006), that is, teachers who leave the profession before retirement.

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Teacher attrition around the world

Throughout the literature, teacher attrition is an acknowledged problem in many countries (e.g. Fantilli & McDougall, 2009; Heikkinen, Jokinen, & Tynjälä, 2012; Ingersoll, 2001, 2003, 2004, 2007; Orland-Barak, 2010; Rooksvaag & Texmon, 2012; Skilbeck & Connell, 2003; Stokking, Leenders, De Jong, & Van Tartwijk, 2003). It has also been suggested that teacher attrition may be particularly high in the early phases of the teaching career. Smith (2014) cites Borman and Maritza-Dowling (2008), who report that the figures of attrition seem to form a U-shaped curve with a peak for newly qualified teachers leaving within their first five years of teaching, and for teachers over 50 who take an early retirement. Studies in the US report that teacher attrition five years after graduation from teacher education may be as high as 30%, rising up to 50% in high-poverty areas (Hong, 2010; Ingersoll, 2001). Other studies suggest that 30–40% of the teachers leave teaching within the first five years in Australia (Ewing & Manuel, 2005; Milburn, 2011). In the United Kingdom, it has also been reported that 50% of the teachers are not in the teaching profession anymore 5 years after graduation from teacher education, whereas it has been estimated that already 40% of the graduates do not start teaching after graduating from a teacher education program (Espinoza, 2015). In other countries, however, the situation is different. For example, McInerney, Ganotice, King, Marsh, and Morin (2015) reported that in Hong Kong only 4.8–5.0% of the teachers leave the profession early in the career. Finally, there is debate as to how the attrition rates of teachers compare to those from other professions, with some scholars arguing that those in teaching are much higher (e.g. Ingersoll, 2001), while others suggest that the numbers in teaching may actually be comparable to other professions (Harris & Adams, 2007; Plunkett & Dyson, 2011).

Causes of teacher attrition

Several causes of early career teacher attrition have been reported in the international literature. After reviewing the literature, Buchanan and colleagues (Buchanan, Prescott, Schuck, Aubusson, & Burke, 2013) mention job dissatisfaction, low salary, a weak school organization, lack of autonomy resources or lack of opportunities to participate in decision-making, burnout, difficulties to adjust to teaching demands, difficulties in managing social relations, and an unsafe or unhealthy school culture. These authors also conducted an empirical investigation among 52 teachers that left the teaching profession using interviews. From their data, they reported the following categories of reasons to leave the profession: lack of collegiality and support of beginning teachers, low student engagement or student behavioral problems in class, poor working conditions, lack of teaching resources, no opportunities for professional learning, high workload, and social isolation. Falch and Strøm (2005), analyzing Norwegian data, found that teachers were more likely to leave the profession after having taught in schools with high percentages of minority students or high percentages of students with special needs. Krieg (2006) provided evidence that quality in teaching may be related to teacher attrition; in his study, however, he only found that women performing better in teaching were less likely to quit their jobs. This relationship was not found for men. For men, salary and experience (e.g. being close to retirement) were the most likely reasons to quit. Hong (2010), investigating relationships between pre-service and in-service teachers' professional identities and dropping out of the profession, extracts the following major reasons from his questionnaire and interview data: issues with classroom control, conflicting

relationships with parents of students or with colleagues and administrators, emotional burnout, lack of efficacy, and having beliefs of heavy teaching responsibilities. McInerney et al. (2015) connected the relatively low percentage of beginning teachers leaving the profession in Hong Kong to the strong social obligations beginning teachers experience to continue teaching, cultural factors (e.g. fear to lose face, to get socially isolated), as well as high status and salary conditions of teachers in Hong Kong. After presenting an overview of the literature, Smith (2014) summarized the potential origins of teacher early attrition. First, there are factors related to the personal circumstances of individual teachers such as maternity and a spouse getting another job and therefore the family moves. Second, teachers may be disappointed or even disillusioned by the characteristics of the teaching job. Examples of such characteristics are a heavy workload, large classes, time pressure, stress and burnout, and having to teach according to lists of responsibilities and demands with effectiveness being mainly measured in terms of students' scores on external tests. These include also the feeling not to be trusted and be threatened in the professional autonomy, being blamed for low achievement scores, and being rather social workers than educators. A final part of this disappointment is the emphasis on documentation, external bureaucracy, and organization instead of spending time with the students. Third, characteristics of a specific school, e.g. only part-time positions being available, an established unfavorable culture, lack of feedback and support, lack of support from the leadership or mentor, lack of cooperation among teachers, (tacit) power struggles among members of staff and leadership, and the quality of leadership and of the administration of the school. Fourth, but not least, poor relationships in the school can be a reason for teachers to quit their job. This refers to the relationship with students (discipline issues), as well as colleagues and leadership of the school.

Attrition of beginning teachers in the Netherlands

In the international literature, extensive reports on the size of the problem of early career teacher attrition and causes of early career teachers leaving the profession are available for countries such as the US, the UK, and Australia. The present paper aims to contribute to this literature by describing the situation in the Netherlands and comparing it to the situation in other countries. The method used in this paper resembles that of the thematic review, describing findings of research reports and conference contributions. At present, the topic of research on teacher attrition is still in its infancy, and hardly no published journal articles are available on the topic. In doing so, we hope to gain insight into the contextual factors (at the national level) that influence early career teacher attrition. We also aim to provide suggestions for improving the situation, both within the Netherlands as well as in other countries.

Sources

The sources of our report are based on a search of the Internet and the Dutch literature using the keywords teacher attrition, teacher turnover, teachers leaving the profession, or/ and their Dutch translations. Criterion for inclusion was that empirical data on the Dutch situation were included. No other in or exclusion criteria were used because there were only a very limited (and recent) set of studies available. In addition, we scanned recently published

doctoral dissertations to see whether we could detect any more qualitative or quantitative examples of individual teachers and their reasons for leaving the profession. While several dissertations reported on single teachers not being included in the study due to leaving the profession, only one dissertation provided a more elaborate account for teachers leaving the profession, and not surprisingly this dissertation was focused on professional identity tensions of beginning teachers (Pillen, 2013). To begin, we will first provide data on the size of the attrition of beginning teachers in the Netherlands. Subsequently, we will summarize causes of teacher attrition in the Netherlands which are mentioned in publications on this subject.

Attrition rates among beginning teachers

Kurver, van Casteren, van Geel, Warmerdam, and van der Boom (2012) based on rigorous analyses of national data estimated the teacher shortage in 2012 in secondary education in the Netherlands somewhere between 1 and 3%. Although this percentage by itself may seem modest, it is serious because it is bound to increase: the yearly number of students graduating from teacher education programs for secondary education is only sufficient to fill half of the vacancies (Fontein et al., 2016). Attrition by beginning teachers will further increase the problem.

We found a varied set of studies reporting data on teacher attrition rates in the Netherlands. Some of these were (local) governmental reports or announcements, whereas some other studies were published in professional journals or presented at conferences, based on grants from the government, which launched a large initiative to establish teacher induction programs and investigations on their effectiveness.

Fruytier, Goorhuis, and Montessori (2013) reported on an investigation on teacher attrition in the Utrecht region including 1840 starting teachers over a six-year period between 2007 and 2012 in 33 secondary schools. Their study used regional non-official school employment data, school policy documents, and teacher survey data. From their project report, we infer that in the first two years of their career about 40% of the teachers left the school they first taught in. Many of them, however, did not leave the teaching profession, but went to another school, making a rough estimate of attrition from the profession to be about 20%. About two-thirds of them left on their own initiative, whereas for about one-third of the beginning teachers, their appointments were not continued because the school did not evaluate their performance positively. The Utrecht region probably is not characteristic of the entire country. Fontein et al. (2015), who used a large governmental database of teacher employment records to describe the development of the labor market for teachers, wrote that in 2015, this region had the strongest increase in the number of students in the entire country. The prognosis is that in the central city of Utrecht the number of students will have increased by 11.5% in 2020 as compared with 2014. A recent report from the school governing board even assumes an increase of approximately 40% until 2030. In runner-up The Hague's region, this percentage is 2.4% and in Amsterdam, which is third on their list, the percentage is only 0.8%.

van der Grift and Helms-Lorenz (2013) not only investigated early career teacher attrition from secondary education, but included data gathered in schools from all over the Netherlands as well. They followed 338 teachers' careers for three years via teacher provided employment data and questionnaires for teachers and their students, thus including both

where they taught and some data on their own and students' perceptions of their functioning. From their data, they estimated that the attrition rate for certified early career teachers is 22%, and that the attrition rate for uncertified teachers is 46% in the first three years of teaching. This is in line with the report of Sutcher et al. (2016) who contended that in the USA, teachers with little preparation tend to leave at rates two to three times as high as those who have had a comprehensive preparation before they enter. From both groups however, a considerable portion of the beginning teacher population moved to another school, making an attrition rate from the profession, respectively, 9 and 29%. For the certified teachers, an equal amount left in the first and in the second years.

Helms-Lorenz (2014) used a large governmental database of entrants to teacher education programs including about 98% of the student-teacher population in the Netherlands. After analyzing this large database, she reported that approximately 21% of the teachers in secondary education stopped teaching after one year. This figure grew to 31% after five years. From these teachers, 2–3% moved to teach in another educational sector. Her analyses showed no differences between males and females or between teachers working in smaller or larger schools. She found a slightly higher percentage of teachers leaving vocational schools compared to general secondary education or pre-university schools. For primary education, the situation in her study appeared to be a little better, with 18% of the teachers having left the profession five years after graduation. In primary education, however, gender differences were found, with more males leaving the profession than females. Also, in primary education more teachers left smaller schools than was the case for larger schools. Finally, she reported that 25% of the students never enter the teaching profession after graduation from their teacher education program.

In a more recent study, Verkade, van der Grift, Helmz-Lorenz, and Maulana (2015) analyzed questionnaire data from about 545 beginning teachers from 73 secondary education schools across the Netherlands. From these teachers, 12% left the profession altogether within 3 years after graduation and 13% moved to other schools. The attrition percentage was lowest for the group of certified teachers: 6%. Based on these findings and on the reports from questionnaires, the authors came to the conclusion that a low level of teaching skills and a low level of well-being were the main reasons for teacher attrition in their study.

Another national estimate is provided by van Leenen and Berndsen (2013) who investigated all graduates from teacher education programs in the Netherlands in 2011 using a questionnaire. Their response rate was 26% out of a population of 9170. In their data, 55% of the teachers graduated from primary and 45% from secondary education programs. Figure 1 shows, for secondary education graduates at several points in time, the number of teachers having a job after graduation, leaving and re-entering the job, and later entering as reported in the van Leenen and Berndsen study.

Figure 1 shows that the number of graduates working in schools is after 3 months 70%, after 9 months 75%, and after a year 76%. This is a gradual increase but the numbers also show an outflow of 6% during the first year after graduation, which is compensated by 12% later entrants. In primary education, the percentages are more alarming (see Figure 2). Again, the latter entrants (29%) compensate the outflow of 15%, but the latter is a considerable amount. It must be noted that these include outflow of teachers who were appointed as replacements for illness or maternity leave.

The most recent report related to teacher attrition is based on a national data-set including information on the position in the labor market of all graduates from teacher education

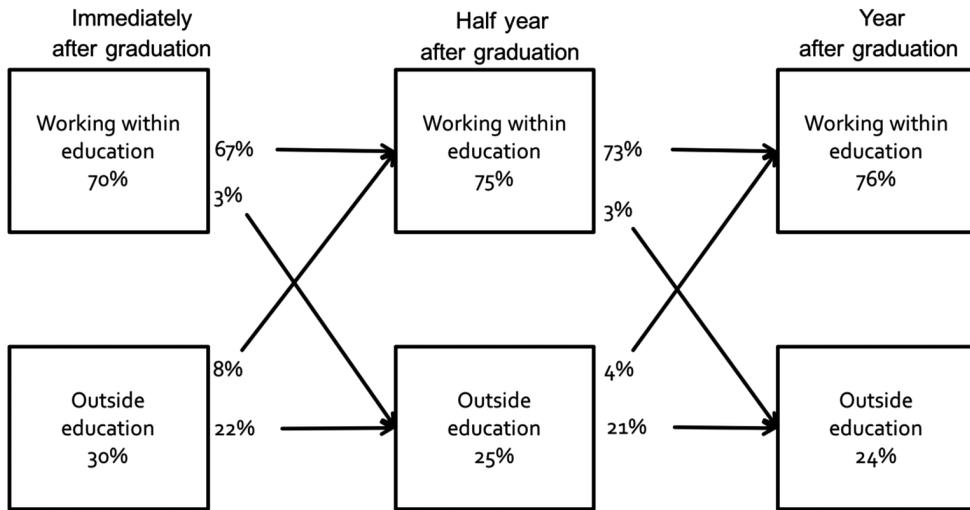


Figure 1. Flow of secondary education graduates between work inside and outside education (adapted from van Leenen & Berndsens, 2013).

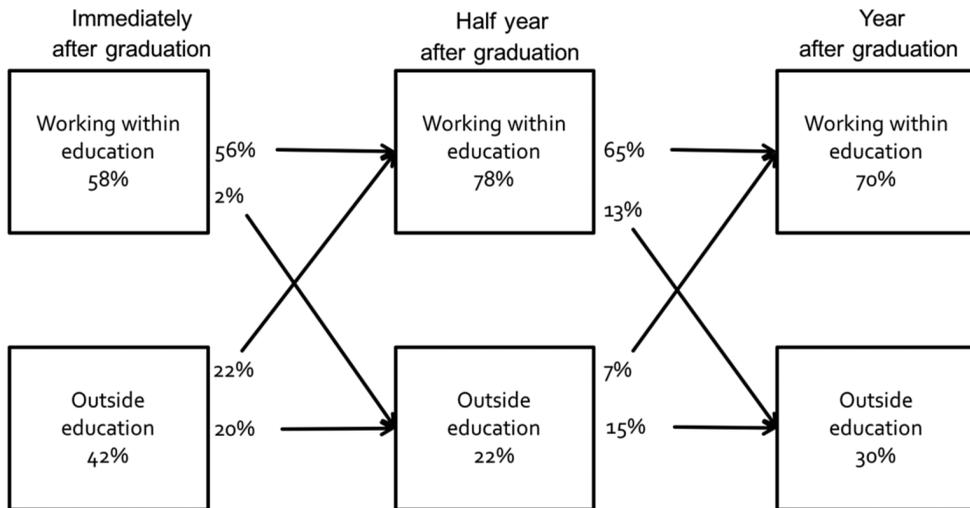


Figure 2. Flow of primary graduates between work inside and outside education (adapted from van Leenen & Berndsens, 2013).

programs in the Netherlands between 2006 and 2013 (Fontein et al., 2016). Table 1 shows the proportion of graduates employed in education one year after graduation.

More graduates of primary education enter the profession than graduates from secondary education programs. Many graduates work part-time in their job because the schools cannot offer them full-time positions. This is more the case for secondary than primary education (Fontein et al., 2016). The fact that the percentage of teachers having a job of more than four days a week declined from 76 in 2006 to 46 in 2012 and 48 in 2013 seems to counter the idea that teacher shortages are forthcoming in primary education. In secondary

Table 1. Proportion of graduates working in education one year after graduation (percentages; after Fontein et al., 2016).

	Year of graduation							
	2006	2007	2008	2009	2010	2011	2012	2013
Primary	81	81	80	81	78	77	73	76
Secondary (graduated from university of applied sciences)	63	64	64	62	62	61	58	60
Secondary (graduated from research university)	73	79	76	75	74	73	69	72

education, the percentage of teachers having a job more than four days per week is higher, but not more than 65%.

Looking at these graduates after five years shows that from the 2006–2009 cohorts in primary education 88% is still in the profession and 12% left the profession. For secondary education these numbers are 87 and 13%. This attrition rate is compensated by late entry of graduates: of the graduates that had not entered the profession after one year, 37% in primary and 21% in secondary had entered after five years. These last figures combined with the number of graduates that have entered the profession after one year mean that five years after graduation, of the teacher education graduates, 88% teach in primary education and 68% (universities of applied sciences) and 79% (research universities) in secondary education.

The evidence from these different reports on early career teacher attrition in the Netherlands presents an inconsistent image. Differences between the reports may evolve from different samples and definitions. However, these differences do not help us decide which numbers come closest to the real attrition rate and in fact we have to conclude that we do not exactly know what the size of the problem is. It is interesting that Dutch politicians and specifically the minister of education have taken the 9% estimate for secondary education in the first three years of the career from the van der Grift and Helms-Lorenz' study (2013) as the most credible estimate, but it did not give a rationale for that choice. It is important to note that this number includes all types of attrition: both voluntary and involuntary because the school did not have any job any more or it concluded that the teacher was not exhibiting an expected level of competence. We would suggest that the estimate from the Fontein et al. (2016) report (12% for primary and 13% for secondary after five years) is probably more accurate because their data take into account all teachers and cover four cohorts. Also in these numbers voluntary and involuntary attrition are combined and unfortunately there is no estimate available of these two elements.

Causes of beginning teachers' attrition

In general, teachers in the Netherlands are less happy with their job conditions than other Dutch professionals. Koppes et al. (2013) investigated Dutch professionals' perceptions of their working conditions via a questionnaire, including teachers (both early career and more experienced teachers). Compared to other professionals, teachers say more often that they work more hours than they should according to their contract and also they less often say that they are paid for this overtime. Teachers find their work more hectic than other professionals, and they more often report symptoms of stress and burnout: emotional exhaustion and feeling empty at the end of the day. However, they are more satisfied with

the opportunities to learn, and they say their employers stimulate professional development more than the average employer in the Netherlands.

van der Grift and Helms-Lorenz (2013) reported on differences between beginning teachers who stayed in the profession and those who left. Leavers were statistically significantly less satisfied with their profession (an effect size of .69) and their students found the pedagogical competence of the leavers lower than of those who stayed (effect size of 1.21). Differences in self-efficacy, stress, and student perceived engagement in class were not statistically significant between leavers and stayers, although the effect sizes were medium, respectively, .35, .41 and .23. Harmsen, Helms-Lorenz, Maulana, and van der Grift (2015) investigated in their quantitative survey study several factors possibly causing beginning teachers' attrition. They indicated, based on data of 545 beginning teachers, that an important factor causing attrition for their respondents was a lack of growth and a low level of perceived teaching competence (effect size of .50). Additionally, they report statistically significant regression coefficients for the level of emotional stress (1.14), difficulties with the teaching task or role (1.11), negative relationships with school management (.95) or with colleagues (.82), high work pace and heavy teaching loads (.64), changes in teaching tasks (.63), lack of communication about school procedures and processes (.65), and uncertain expectations about the future (.48). Interestingly, they reported that a high level of emotional stress and high workload positively affect growth in teaching skills, yet also increase the likelihood for leaving the profession. In a later study using questionnaire data of 143 beginning teachers and via conducting structural equation modeling, Harmsen, Helms-Lorenz, Maulana, and van Veen (2017) found that high psychological demands imposed on teachers were the strongest cause for stress and attrition. The second and third strongest related causes were negative social relations with colleagues and negative student behavior.

All these studies investigated causes based on correlates of attrition. This is a strong approach because those factors may come to the fore that teachers themselves are not aware of. Other studies focused on teachers' perceived causes of attrition. Fruytier et al. (2013) mentioned a few reasons for attrition of beginning teachers based on their interviews with a selection of career leavers. These leavers experienced lack of feedback and support, and if there was support the quality was low. In particular, the feedback did not align with the level of competence of the beginning teachers. Furthermore, some were disappointed in the students, felt stressed, and experienced burnout. Finally, unclear expectations of the school were mentioned as reason for leaving the profession. A somewhat older survey study among beginning teachers in both secondary as well as primary education (SBO, 2010) lists several reasons for both leaving the profession as well as for low job satisfaction. Reasons mentioned by respondents in order of importance were low salary or better job alternatives outside the teaching profession, high work load, better growth opportunities outside the teaching domain, looming future expectations about the nature of education, lack of variety, personal or family reasons, loss of jobs at the school, and lack of respect and status for the teaching profession in society.

In a qualitative case study on identity tensions of beginning teachers (Pillen, 2013), it was found via interview data that two teachers left the profession within one year after graduation. For these teachers, a substantial amount of qualitative data were available, which described their developments as teachers, the dilemmas and tensions faced during the early years of their career as well as personality data and reports on developments in their personal lives. Both teachers were women. The first teacher, Iris, did not get a permanent job after

a temporary job at her practice school and only occasionally taught after graduation (as substitute teacher), and now mainly works in the health care sector, after having completed a second bachelor program. She had and has an open attitude toward teaching, as a result of both positive as well as negative experiences as a teacher. She had a bad experience with her practice school mentor teacher during teacher education (this was not the same school at which she completed her teacher education); she and her mentor had different personalities, and also different opinions on good teaching. During her student teaching period, she had low confidence in herself as teacher, but this was also in part the result of the tense situation with her mentor. Iris wanted to be a structured, rather strict teacher, but also one who displayed humor in the classroom. She described herself as perfectionist as a person and not open to her own feelings (or those of others). This perfectionist attitude created stress in both personal and professional lives and also was the cause of a lack of self-confidence at various periods of her life. Marion, the second teacher, did not get a permanent job as a teacher and decided to leave the profession and now works in her father's business firm. She found the profession rather stressful, perceived growth opportunities as low, and support from colleagues and principal rather low as well. She also had a negative experience at her school, where the principal wanted to get rid of the temporary staff; he decided to evaluate Marion negatively, despite the mentor of Marion was very satisfied with her performance. Marion also had a difficult time during teacher education: in that period she moved twice, became pregnant, and her husband was ill at home for quite some time. As a person, she tended to be very direct, could be quite strict, and avoided uncertain situations. She also tended to be very direct in class, and this sometimes resulted in conflicts with students in her classes. Taken together, these two case studies of Pillen (2013) suggest the following causes for leaving the profession:

- not obtaining a permanent job or finding better job alternatives;
- bad experiences with mentors at practice schools or experiencing a lack of support from the teacher education institute;
- feeling lonely/lack of social support or support by principal or colleagues;
- personal problems (relationships, pregnancy, moving, illness of partner); and
- personal characteristics and professional identity issues: perfectionism, finding content more important than helping people, etc.

It seems that in both cases, a combination of some of these factors rather than just one factor caused the teacher to leave the profession.

In Table 2, causes found in the various Dutch studies are mapped according to the four categories suggested by Smith (2014). As can be seen, the table suggests that reasons from all four types of categories are present in the Dutch context, although personal circumstances only come to the fore in more qualitative, small-scale studies, whereas the majority of the studies seem to suggest that job characteristics, and also the school context – relations as well as school culture or school organization – are most common as reasons for teacher attrition. Also, it becomes clear that it is hardly one factor that drives teachers to leave the profession, but that it almost always concerns a multitude of reasons.

In a report studying 337 beginning teachers from 60 secondary education schools, Helms-Lorenz, van de Grift, and Maulana (2016) showed that attrition can be significantly reduced via an intervention aiming at the following factors: (1) reducing workload, especially by assigning less difficult classes to beginning teachers, (2) school enculturation,



Table 2. In Dutch studies reported causes of teacher attrition, mapped in terms of the categories of Smith (2014).

Types of causes (after Smith, 2014)	van der Grift and Helms-Lorenz (2013)	Fruytier et al. (2013)	Harmsen et al. (2015) (see also: Helms-Lorenz et al. (2016))	SBO (2010)	Pillen (2013)
Personal circumstances of individual teachers				Personal problems	Personality (perfectionism) Health problems Family issues Better career options elsewhere
Characteristics of the teaching job	Satisfaction with profession Poor teaching competence	Stress and burnout	Work pace Teaching load Emotional stress Unclear expectations of teaching role Poor teaching competence	Teaching load Low salary Low status and respect in society Lack of variety in tasks Lack of growth options Loss of jobs at school	
School characteristics		Unclear expectations from school	Lack of communication Unclear expectations from school Weak future options		
Poor relationships in school		Lack of support and feedback	Lack of growth options Poor relations with management Poor relations with colleagues		Bad relationships with management Bad experience with supervisors Isolation at school

getting beginning teachers acquainted with school procedures and processes and with colleagues and teams, and (3) personal supervision and coaching, including support during classroom teaching and collegial visits by others as well as joint preparation and evaluation of lessons. From the results of their study, it can be inferred that the factors mentioned are thus important correlates of attrition in the Dutch context.

Discussion

In conclusion, we discuss two elements concerning beginning teacher attrition.

First, although it is felt within the Netherlands that the attrition rate of beginning teachers is high, compared to some other countries it appears moderate: percentages in various documents lie between 9 and 25%, whereas research in other countries suggest percentages as high as 50% (Espinoza, 2015; Ewing & Manuel, 2005; Milburn, 2011). What is more, percentages appear much lower for teachers with teaching qualifications or proven competence in teaching than for teachers without qualifications or low competence in teaching (van der Grift & Helms-Lorenz, 2013). This finding might be interpreted as a success of teacher education programs, which apparently do prepare graduates such that they are less likely to leave the profession. Teacher education programs for secondary education in the Netherlands often are part of two-year master's programs at research universities (preparing for teaching in the upper levels of secondary education) or four-year bachelor programs at universities of applied sciences (preparing for teaching in primary and the lower levels of secondary education). More and more programs emerge for specialization via master's degrees, both at research universities and at universities of applied sciences. In all cases, preparation consists of a considerable amount of time spent at practice schools, and many teacher education institutes and schools work together intensively via so-called professional development school programs. Uncertified teachers leaving the profession might be considered fortunate from the perspective of a wish to have only certified teachers in schools. However, this group consists of teachers who have opted to become a teacher later in their career and are in an alternative teacher education program. For many of these teachers, their failure is not only a personal tragedy, but it is also a failure of the policy to attract what are called hidden resources to the teaching profession. It is important to take into account that between 12 and 32% (depending on the teaching program) of the graduates in teacher education never enter the teaching job; this means that of those who complete teacher education, ultimately between at least 20% (primary education) and 40% (secondary education) are not teaching 5 years after graduation. The effectiveness of teacher education in supplying teachers is even worse if one takes into account the dropout rate during the teacher education programs, which may amount for many programs up to 50 or 60% at the universities of applied sciences. Finally, it is unknown how entry qualifications of beginning teachers as well as student teachers affect teacher attrition; such information would be helpful in establishing what role teacher education and teacher qualification actually play in teacher attrition.

Second, studies in the Dutch context show similar types of causes for teacher attrition as have been found in other countries. Most of these causes appear to relate to the characteristics of the teaching job and the local school context in which beginning teachers find themselves; however, personal reasons also play a role and, in many cases, it is a combination of factors rather than a single factor that causes attrition. To better understand the

causes behind teacher attrition, theoretical models might be helpful. One such model is the Job–Demand Resources theory (Bakker & Demerouti, 2007, 2014), which postulates that for a positive job satisfaction, an adequate balance between the demands of the job and teachers' personal resources to cope with these demand is needed. A consequence of a misbalance between demands and resources might be teacher attrition. Interestingly, some factors might actually act as both demand and resource in this respect, for example a low(er) level of teaching competence, which, on the one hand, may lead to more teacher motivation to develop themselves and to engage in situations to practice competences; and, on the other hand, it can lead to stress and low self-efficacy, which in turn can cause attrition. An important avenue for future research would be to test this model in a longitudinal design in which beginning teachers are followed for the first five years of their career and variables related to several of the potential attrition causes are mapped.

Obviously, this special issue contribution has several limitations. First of all, we reviewed a variety of sources discussing attrition in the Dutch context. Much more empirical data are needed to actually establish the causes behind teacher attrition in the Netherlands. Interestingly, different types of data collection may evoke different factors to come to the fore; it seemed that qualitative data allow for a better understanding of the personal factors and personal school context of beginning teachers in relation to teacher attrition, while surveys may better reveal reasons related to general characteristics of the teaching job.

Second, almost all studies or reports on teacher attrition in the Netherlands focus on beginning teachers and insight concerning experienced teachers' attrition is sadly missing. The reports on beginning teachers suggest different percentages of teachers exiting the profession. These differences may be related to differences in definitions and differences in access to teacher or teacher education databases. It seems that in the Netherlands, as well as elsewhere, a good system to keep track of teachers' careers, including those teachers who leave the profession, would be beneficial. In addition, the government or research agencies should stimulate more research on this topic, including research on understanding the factors and processes that may lead to teacher attrition of well-prepared candidates capable of contributing much to the profession and to society as a whole.

Results from the Dutch context seem to imply that in order to reduce teacher attrition, an important role should be played by teacher education institutes as well as schools. Good preparation of teachers during teacher education reduces chances for attrition. Reports on individual teachers, such as those presented in the study by Pillen (2013), seem to suggest that in preparing teachers it may be helpful for teacher educators to focus on their development of professional identity, as this enables them to face difficult tensions or dilemmas and to cope with sometimes difficult conditions at their schools. Studies such as the one by Helms-Lorenz et al. (2016) further suggest that schools can reduce attrition by providing coaching and support, by engaging teachers in teams or networks and as such prevent isolation, and by assigning beginning teachers less demanding teaching tasks (e.g. not the most difficult classes, etc.).

Conclusion

This paper contributed to the knowledge base on teacher attrition by mapping several rather diverging estimates of the prevalence of attrition among Dutch teachers and reviewing the causes of attrition, based both on teacher reports and on comparisons of teachers who leave

and others who stay in the profession. Furthermore, these causes have been compared with results from studies in other countries. Similar to countries such as the United Kingdom, the United States, and Australia, the Netherlands faces the problem of attrition among beginning teachers. Even though similar causes appear to cause attrition in the Netherlands, namely a combination of personal, school, and general job factors, attrition percentages appear to be somewhat lower than in the aforementioned countries. Data from the reviewed studies and reports suggest that assuring that teachers are qualified, have sufficient teaching competence, and are engaged in induction programs may play a positive role in this respect. However, research on teacher attrition is scarce and the aforementioned factors are speculative at this point. Research would benefit from a clear registration of beginning teachers and their career steps, from a combination of qualitative and quantitative methods of data collection, which each help uncover different types of reasons better, and from more theorizing and modeling to explain the processes behind teacher attrition.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

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