Support for Newly Qualified Teachers Through Teacher Induction Programs – a Review of Reviews

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Abstract: This article gives an overview – in the form of a "review of reviews" – of existing knowledge in the research on teacher induction programs in primary and secondary schools. The article is based on seven reviews. The article describes the various elements that can make up teacher induction programs in primary and secondary schools, and shows that such programs – with their various content and contexts – can contribute to the professionalization of teaching. This includes the development of insight, self-efficacy, and self-esteem. Induction training can counteract burnout, strengthen teacher resilience and thereby facilitate continuing professional development and a firm foothold in the job as a teacher.

Keywords: teacher induction program, mentoring, teacher retention, professional development, school culture, foothold

Introduction

For some decades, there has been national and international interest in researching how newly qualified teachers gain a foothold in the profession.

In the research literature, various challenges are identified in relation to starting work as a new teacher. One challenge is that a large proportion of the work takes place in isolation from colleagues, despite teamwork being widespread in schools; thus, the new graduate is left to his or her own classroom, to either fail or succeed (Ingersoll & Strong, 2011; Johnsen

& Birkeland, 2003). Teaching in primary and secondary schools is a job with a relatively high degree of attrition, especially among new graduates. Some studies show that up to 40 % leave their jobs within the first five years (Ingersoll & Strong, 2011, p. 3). One reason is lack of adequate support from school management (Ingersoll & Strong, 2011).

Beyond Denmark, in the past few decades, there has been an increase in the number of newly qualified teachers participating in some form of teacher induction. Teacher induction programs refer to a number of different types of activities, which may vary locally. Induction programs can be described as representing a "bridge from student of teaching to teacher of students" (Ingersoll & Strong, 2011, p. 203).

At the Center for Pedagogy and Education, VIA UC, in the "Mentoring and Guidance" program, we are developing design principles for the implementation of effective teacher induction programs in a Danish context. In relation to that I have been interested in gaining an overview of existing international knowledge and, therefore, ask the following questions: What does international research say about teacher induction schemes? What elements can such a program comprise, and what should one be aware of if it is to be effective and give teachers a firm foothold throughout an active and continuing lifelong learning process?

Method

The ambition was to establish an overview of existing knowledge in this research area and the significance of such programs in giving teachers a foothold in their teaching work. With regard to approach I chose a review of reviews. A traditional review is based on a systematic survey of all relevant studies in the form of primary studies about a specific issue (Launsø & Rieper, 2016). Instead, I chose to conduct a review based on a systematic survey of secondary studies, in the form of relevant systematic reviews, surveys, meta-analyses and syntheses, in the period 2006–2016. The general principles from the review method have been used (Dyssegaard, Larsen, Lindstrøm & Johansen, 2013; Gough, Thomas & Oliver, 2012; Rosén, 2012). In this way, with relatively few resources, I could summarize already-existing knowledge in the field.

The review process consisted of a literature search, relevance screening, quality screening, and a synthesis of the results of the selected secondary studies through a thematic analysis.

Literature search and relevance screening

A number of keywords were identified as the starting point for my search. I started out with a broad topic search and narrowed the search criteria as I went along. The subject search was structured as a block search (Kristiansen & Hjørland, 2013) in the following search string: (systematic review OR meta-analysis OR metaanalysis OR meta-synthesis OR metasynthesis OR overview) AND (beginning teacher * OR novice teacher * OR new teacher *OR newly qualified teacher *OR newly employed teacher) AND (induction program * OR mentor * OR retention * OR support *).

I searched two bibliographic databases: ERIC (Education Resource Information Center) and PsycINFO. The search criteria were peer-reviewed articles published between 2006 and 2016. Then I conducted an exclusion process based on relevance (Dyssegaard et al., 2013). All references found were read, based on explicit relevance criteria, in order to determine whether a reference should be included or excluded. My inclusion criteria were: meta-analyses, meta-syntheses, systematic reviews and overviews of the significance of teacher induction programs and other forms of support for newly qualified and newly-employed teachers and, specifically, their significance in retention and in their professional, personal and social development of new teachers. The results were:

> In ERIC, nine articles were found out of 39 references, and in PsycINFO, two
> articles out of 12 references. Furthermore, a chain search was performed based
> on the included references with no results returned.

Screening for quality

The literature search resulted in 11 relevant articles, evaluated in full text. The next phase of the review process was quality screening (Dyssegaard et al., 2013). All included articles were evaluated for quality based on the following criteria: credibility, transparency, and the degree of methodological reflection (Tanggaard, 2015). The specific preparation and

organization of the checklists (Walsh & Downe, 2005) for the assessment were determined by the research method of each article.

Checklists and evidence assessment of the reviews

I did quality screening on the basis of the following quality criteria: 1. Clear method description (is there a systematic data collection, transparency, and methodological reflection in the inclusion work, the analysis process, and the synthesis process?) 2. Discussion and conclusion (is the usefulness of the results discussed? Is the conclusion credible?)

The quality screening led to the exclusion of four reviews based on their low quality (Rosén, 2012), while articles assessed with medium or high quality were included. This led to the inclusion of the following seven articles in the further process: Greenfield (2014), Guarino, Santibanez, & Daley (2006), Hobson, Ashby, Malderez, & Tomlinson (2009), Ingersoll and Strong (2011), Schaefer, Long, & Clandinin (2012), Shockley et al. (2013) and Wang, Odell, & Sharon (2008).

Tabel 2. Scope of studies in the included reviews, and the research questions/aims linked to the reviews.

Review	Scope	Aims/Research questions
Greenfield (2015)	6 studies	How can teacher resilience be protected and supported?
Guarino et al. (2006)	46 studies	What strategies promote the recruitment and retention of teachers?
Hobson et al. (2009)	170 relevant texts *The article is included because of relevant content*	What do we know about the mentoring of new teachers: pros and cons for new teachers, benefits for mentors, for schools and for the education system?
Ingersoll and Strong (2011)	15 studies	A study of what we know and don't know about the effectiveness of teacher induction programs and mentoring schemes.
Schaefer et al. (2012)	65 studies	A study of research on attrition and retention of teachers.
Shockley et al. (2013)	10 studies	Which elements of teacher induction programs help to reduce teacher attrition and promote the quality of teaching?
Wang et al. (2008)	21 studies	The assumption is that there is a link between teacher induction, new teachers' performances, teaching practices and basic professionalism learned during their teacher training courses. Purpose: to investigate if this link is supported by research, policy or practical placements.

In my present review of reviews, I have relied solely on the descriptive studies mentioned above, as the review method generally does (Dyssegaard et al., 2013; Gough et al., 2012; Rosén, 2012). This means that, apart from the included articles, I have not included other relevant publications or materials that were not published within the time frame or that did not meet the above quality criteria.

Thematic analysis

In accordance with the purpose of this review of reviews I conducted a thematic analysis vertically and horizontally based on the condensation of the texts. First, I made an analysis of the individual study/review; next, I made a transverse reading with subsequent thematization (Braun & Clarke, 2006). The following themes were identified: 1) Teacher induction programs; 2) The mentor; 3) School culture and context; and 4) A firm footing as teacher, including transition from student to teacher.

Teacher induction programs

To facilitate the overview, I have divided the first theme "teacher induction programs" into three sub-themes: elements of teacher induction programs, goals and duration, and joint planning and collaboration.

Elements of teacher induction programs

In five of the seven reviews (Guarino et al., 2006; Ingersoll & Strong, 2011; Schaefer et al., 2012; Shockley et al., 2013; Wang et al. 2008), the program includes and extends beyond mentoring; there may also be collaboration with colleagues, various network groupings (new and experienced teachers together or as peers), peer-teaching observations, observation of the newly qualified teacher, management support and assistance, salary conditions, and time compensation. In two reviews, leadership support is an element of the program, exemplified by supportive communication, and support from management and administration (Shockley et al., 2013; Schaefer et al., 2012). Furthermore, teacher induction may include

seminars, courses, workshops and team teaching (Shockley et al., 2013; Wang et al., 2008). However, these elements are not elaborated on in more detail in the mentioned five reviews.

Furthermore, time reduction is a factor, albeit a weak one (Ingersoll & Strong, 2011), if such resource allocation is not coupled with support for professional learning and/or joint planning time (Schaefer et al., 2012). With regard to salary conditions (e.g. salary for mentoring time), the studies do not show clear results concerning their effect (Schaefer et al., 2012).

Objectives and duration vary in the programs

The goals and duration of the programs vary in the studies included in the reviews. The primary goals are to become better at teaching ("performance") and to retain teachers. However, the reviews show that there is a relatively wide range of goals that are contextualized locally – which is a point in itself (Schaefer et al., 2012).

According to Schaefer et al. (2012), there are not many programs in which new recruits are regarded as knowledgeable teachers, or as contributing members of a collegial group from whom other experienced teachers can learn. From this perspective, Schaefer et al. (2012), point out that there is a need for mentors who appreciate the knowledge of new graduates. They also point out that new teacher induction programs in the United States and New Zealand argue against "one size fits all" versions of programs. There is often talk of deficit thinking in such programs, and an idea that teacher induction should "fix" a problem. Instead, they believe that programs should draw on the knowledge and experience that the new teacher brings; i.e. that they be considered as contributing members who can teach experienced colleagues something:

> Beginning teachers need mentors that value the knowledge and past experiences they bring to the professional landscape. They also need mentors who are skilled in helping them learn in, and from practice. Induction policies need to focus attention equally on new teachers and on their mentors. (Schaefer et al., 2012, p. 117)

Teacher induction programs should, therefore, not only retain newly qualified teachers in the teaching profession, but also sustain and develop them so that they feel satisfied and regard themselves as being able to contribute in a qualified way in a professional context. "We suggest the need to shift the conversation from one focused only on retaining teachers towards a conversation about sustaining teachers throughout their careers." (Schaefer et al., 2012, p. 118).

The duration of induction programs is briefly touched on in two reviews (Ingersoll & Strong, 2011; Shockley et al., 2013). The longer and more comprehensive schemes, which run over at least two years and offer depth of support, have an effect as evidenced by six studies (Ingersoll & Strong, 2011). However, Shockley et al. (2013) mention that the length of programs varies to such an extent that nothing can be inferred in general.

Joint planning and collaboration

An important element of the five reviews mentioned above is variation of joint planning and collaboration (Wang et al., 2008; Guarino et al., 2006; Ingersoll & Strong, 2011; Schaefer et al., 2012; Shockley et al., 2013). In addition to joint planning and close collaboration with the mentor, planning with other colleagues is effective. This is also true of regular scheduled collaboration meetings with colleagues (Wang et al., 2008; Guarino et al, 2006; Ingersoll & Strong, 2011; Shockley et al., 2013). Ingersoll and Strong (2011) further point out, with reference to Kapadia, Cora, & Easton's study (2007), that teacher collaboration and support from management appear to be the most influential factors for new teachers.

According to Wang et al. (2008), good opportunities to learn from each other and develop one's own teaching are provided when newly qualified teachers – based on what they have learned in their teacher training – collaborate with other newly qualified teachers who have the same starting point, visions, norms and teaching values. Thus, Wang et al. (2008) emphasize that learned notions of good teaching and basic knowledge play a major role in what newly qualified teachers can learn through teacher induction programs. Therefore, with reference to Feiman-Nemser (1983, 2001) and

Odell, Huling, & Sweeny (1999), Wang et al. (2008) suggest that programs should be considered as a continuum from teacher training to the profession, which is elaborated in the discussion section in this article. In this context, with reference to Wang and Odell (2002), it is emphasized that mentors need increased knowledge and skills (Wang et al., 2008). Networks of both new and experienced teachers together are another element of some programs (Guarino et al., 2006; Shockley et al., 2013).

One of the most valued approaches to supporting new teachers' induction is mutual lesson observation and observation-based discussion. It may include observation of one's own and experienced colleagues' teaching, and can be followed by discussions and feedback with a mentor and/or colleagues (Hobson et al., 2009; Schaefer et al., 2012; Shockley et al., 2013; Wang et al., 2008).

Mentoring schemes

A mentoring scheme is often included as an element of teacher induction, and such schemes are identified in the literature as the most frequently found teacher induction strategy (Shockley et al., 2013). The studies show that the overall purpose of associating a newly qualified or newly employed teacher with a mentor has primarily been to give the newcomer a "local guide". To facilitate the overview the theme of mentoring schemes is divided into four sub-themes, elaborated below: characteristics and content, retention of new teachers, personal development and mentor knowledge and training. The sub-themes emerged from a cross-analysis with subsequent categorization of the findings.

Characteristics and content

The mentoring schemes described in the studies have a wide variation in character and content, and they take place in very different contexts. A mentoring scheme can range from a single meeting at the start of employment to a structured and formalized course with several meetings over a period of several years where time is allocated to both mentor and mentee for this collaboration (Ingersoll & Strong, 2011). Shockley

et al. (2013) emphasize that regular reflection meetings between an experienced colleague and a recent graduate are an inexpensive, easy-to-implement strategy (Shockley et al., 2013). Several studies emphasize that a mentoring scheme needs to have three key elements for supporting retention and professional development: a) that the mentor is trained to be a mentor; b) that mentoring is not the only strategy in a teacher induction; and c) that contextual conditions (e.g. school culture) are essential for mentoring to be an effective strategy in the retention of new teachers in the job, and in supporting new teachers' professional, personal and social development (Guarino et al., 2006; Hobson et al., 2009; Ingersoll & Strong, 2011; Schaefer et al., 2012; Shockley et al., 2013; Wang et al., 2008).

In Wang et al.'s review, it is stated with reference to Hall, Johnson, and Bowman (1995), Luft and Cox (2001) and Williams, Prestage, and Bedward (2001), that newly qualified teachers value formalized and structured mentoring that focuses on teaching observation and observation-based discussions, i.e. lesson-based discussions with a mentor in combination with interactions and feedback.

Retention of new teachers

Mentoring and other forms of support can promote retention. For example, Guarino writes, "Those who experienced induction and mentoring support in their first year of teaching were less likely to leave teaching or change schools." (Guarino et al., 2006, p. 197). However, there are conflicting results (Guarino et al., 2006; Schaefer et al., 2012; Shockley et al., 2013).

According to Ingersoll and Strong (2011), mentoring is identified as a crucial factor in teacher induction programs in relation to retaining new teachers at schools in well-performing school districts, especially when the mentor is from the same professional field and age. However, with reference to Glazerman et al.'s (2010) research in a school district with socioeconomic challenges, Ingersoll and Strong (2011) emphasize that the inclusion of mentoring in teacher induction programs is not enough to reduce the incidence of new teachers' relocating in cases where the schools are in areas with many socioeconomic challenges.

As previously mentioned, Shockley et al. (2013) underline that it is important for mentors to be trained in mentoring if such schemes are to work, and that mentoring is not the only induction strategy (Shockley et al., 2013).

Personal development – development of resilience

Teacher induction programs that include mentoring schemes have a positive impact on new teachers' classroom management (Hobson et al., 2009) and teaching quality (Hobson et al., 2009; Ingersoll & Strong, 2011), and have a positive impact on students' learning outcomes (Ingersoll & Strong, 2011). Hobson et al. (2009) state that mentoring schemes also reduce the experience of isolation in the newly qualified teacher, and increase self-confidence and self-esteem. Likewise, mentoring can increase one's capacity for professional self-reflection and the ability to solve problems.

Mentoring can support the development of resilience in newly qualified teachers. Resilience is considered by Greenfield as "a … relative, dynamic and developmental process involving interaction between individual, relational and contextual/organizational conditions" (Greenfield, 2014, p. 54).

Among others, some of the key elements of this contextual understanding of resilience are the importance of access to professionally-supportive relationships, as well as the opportunity to develop approaches to teaching. The latter refers to problem-solving approaches, characterized by reflection and the ability to see a challenge from multiple perspectives.

Greenfield's review identifies, for example, mentoring support for newly qualified teachers as one of the ways to support the development of resilience in newly qualified teachers. The mentor can act as both part of a relationally-supportive professional network and support the development of reflective, reframed and problem-solving approaches to teaching. A similar result can be seen in the research mapping by Schaefer et al. (2012) of newly qualified teachers and burnout. In their study, burnout is understood as bodily and mental fatigue that adversely affect the perception of the work and of colleagues, and in the long term also influence the development of a negative self-image. The survey shows that mentoring – together with supportive management – can counteract such burnout.

Mentors' knowledge and training

Mentors' knowledge of a subject area, along with their supervisory skills, are identified in the literature as key prerequisites for them to be able to support the process that newly qualified teachers go through in finding their footing as teachers (Hobson et al., 2009; Ingersoll & Strong, 2011; Shockley et al., 2013; Wang et al., 2008). Mentors' knowledge of the subject areas relates to having experience and knowledge of the subjects and the age groups being taught, but is also about general methods and approach issues and themes, such as differentiation or classroom management (Ingersoll & Strong, 2011).

Several reviews highlight the importance of mentors receiving training in mentoring (Hobson et al., 2009; Ingersoll & Strong, 2011; Shockley et al., 2013; Wang et al., 2008). For example, Wang et al. (2008) conclude in their review that mentors who had participated in mentoring training were better able to engage in dialogue with new teachers and were more likely to share their teaching experiences with them. Newly qualified teachers whose mentors were trained were better able to transfer mentor input and create good classroom routines than new teachers with untrained mentors.

In addition, newly qualified teachers with trained mentors had students with more positive student behavior and engagement than teachers with untrained mentors (Wang et al., 2008, p. 145). This review, thus, concluded that the mentor's knowledge of and skills in mentoring and guidance are crucial. In addition, role clarification as a mentor in a teacher induction program is crucial to the quality of mentoring (Wang et al., 2008). Hobson et al. (2009) refer to studies that show that inappropriate mentoring support from unqualified mentors can be a contributory factor in the decision to quit as a teacher. Experiences of unqualified mentoring support are linked to feelings of being overburdened with work, which further generates uncertainty in relation to one's own teaching practice (Hobson et al., 2009).

In supporting newly qualified teachers' development towards becoming effective teachers, mentoring works best if the mentor creates frameworks and processes where the new teacher is given the opportunity to reflect on their teaching practice with the mentor, rather than receiving

expert advice from mentors. Helping someone learn to teach can be seen as a mentoring-assisted inquiry process that is contextualized and situated in the new teacher's practice (Wang et al., 2008).

Mentors' counseling skills thus relate to being able to identify and support the focus on topics related to teaching throughout the study process, in the form of guidance related to the new teacher's specific context and their teaching practices (Wang et al., 2008). Mentor support should, therefore, be adapted to the task and the experienced needs of the newly qualified teacher (Hobson et al., 2009).

In encouraging the new teacher's developing practice, a key mentoring strategy is to offer multi-faceted perspectives and alternative interpretations of challenges in the classroom and teaching, by reframing the issue from other perspectives or by shifting the focus. This is frequently seen through work on teaching principles, modeling and observation of teaching, with subsequent feedback, discussion and reflection (Wang et al., 2008).

School culture and context

Four reviews directly address school culture and the school context for both retention and professional development of newly qualified teachers, including the school's and teaching management's interest in and support for newly qualified teachers (Greenfield, 2014; Schaefer et al., 2012; Shockley et al., 2013; Wang et al., 2008).

These four reviews indicate that new teachers have very different opportunities to develop professionally, depending on the school culture. The effect of the teacher induction program depends on the social, cultural and organizational context in which it is situated. Reviews indicate that collaboration between teachers and a collaborative school culture are, in general, important. In this context, a supportive, interested and encouraging management team is identified as a key factor in developing an open, collegial and collaborative school culture. It is, thus, an important factor when it comes to professional development, development of resilience in teachers and retention, together with motivation to stay in the teaching job. Teacher induction programs can support retention and

effectiveness, but these can be undermined if there is poor leadership and a non-conducive culture at the school, with a lack of, for example, professional communities (Shockley et al., 2013; Wang et al., 2008). Wang et al. (2008) refer to, for example, a study of structured teaching observation and discussions of new classroom management (Williams et al., 2001) where, for instance, effectiveness was found to depend on whether the newly qualified teachers were working in an individualistic or collaborative school culture. The same point is emphasized by Schaefer et al. (2012), with reference to Johnson and Birkeland (2003). Johnson and Birkeland (2003) distinguish between three types of professional cultures in their study of newly qualified teachers' career decisions: a) an experience-oriented culture (veteran); b) a novice-oriented culture; and c) an integrated culture. Their study showed that newly qualified teachers were more likely to remain in the teaching profession and be satisfied with their jobs if they were part of an integrative professional culture that encouraged collaboration and collegiality.

In addition, Wang et al. (2008) refer to a study by Williams et al. (2001) that includes a focus on mentoring. It was shown in that study that mentoring had a greater impact on newly graduated teachers' teaching if they were part of a collaborative school environment, while, "those in the individualistic school culture reported that the influence of mentors on beginning teaching was limited because the relationships were not supported in the school culture." (Wang et al., 2008, p. 139).

According to Wang et al. (2008, p. 145), there are not many studies on the effect of mentoring newly qualified teachers that have had a direct focus on discussing or analyzing the extent to which a mentoring scheme can be reinforced or neutralized by a school culture, organization or environment. They stress that this is an area that should receive more focus in future research.

The reviews of both Wang et al. (2008) and Greenfield (2014) point to the importance of problem-solving in collegial collaboration. Similarly, shared reflections on teaching and relationships with colleagues in the form of emotional support and mutual exchange of experiences are a great help in developing teaching and thus self-efficacy and robustness (resilience).

Furthermore, Wang et al. (2008) emphasize the importance of administrators' and principals support, with reference to a study by Holahan, Jurkat and Friedman (2000). In their study, the effect of ongoing, intensive mentor training for mentors and mentoring for newly qualified teachers was investigated. The results showed that in the schools where administrators and principals were in a position to support mentors and mentoring, it had an impact on the quality of how newly qualified teachers developed their teaching.

Some of the difficulties frequently encountered in mentoring schemes are identified in Shockley et al.'s review as contextual and organizational. They revolve around a lack of regular meetings and a lack of follow-up (Shockley et al., 2013).

Hobson et al. (2009) identify that mentoring schemes are more likely to be effective when:

– mentors have reduced teaching time and are allocated extra time to prepare and perform the mentoring role
– schedules allow mentors and new teachers to meet during the school day
– mentors receive a financial allowance and/or other recognition for their mentoring work
– mentoring support takes place in contexts relatively exempt from externally-set goals and agendas
– mentors are involved in designing the induction program of which the mentoring is a part
– the induction program of which the mentoring is a part is coherent and not fragmented with many contributors
– both mentors and new teachers have access to support other than the mentor relationship itself
– mentoring support takes place in a school culture that can be characterized by a collegial, collaborative culture.

A firm foothold as teacher

All seven reviews point to elements that influence the work of newly qualified teachers in gaining a foothold in the teaching profession,

including developing their skills as a teacher. A foothold in teaching means that the teacher continually strengthens their professional agency, professional identity and, thereby, the chance to be vitalized and recognized. The elements concern: mentoring and other forms of support; the motivation and positioning of newly qualified teachers at the school; contextual factors; and also, the transfer of what the graduates learned in their teacher training.

The transformation process from student to new teacher is characterized by a reflection of the individual's objectives in becoming a teacher. If newly qualified teachers do not gain a firm footing and end up leaving the teaching profession, the reasons for dropping out may be related to their intentions or visions in becoming a teacher (Guarino et al., 2006; Schaefer et al., 2012). Furthermore, contextual factors within and outside the school come into play.

Teacher induction programs alone are not sufficient for beginning teachers to gain a foothold and remain in the profession (Ingersoll & Strong, 2011; Shockley et al., 2013). Teachers could, for example, find it difficult to get onto a firm footing in schools in low-income areas, as these generally have a higher proportion of ethnic minority pupils and children with behavioral issues. Some teachers have difficulties tackling and understanding these children (Guarino et al., 2006; Ingersoll & Strong, 2011; Schaefer et al., 2012).

Only the study of Schaefer et al. focuses on the difference between female and male teachers regarding attrition. Their study showed that newly qualified female teachers have a higher attrition rate and leave the profession more often than their male counterparts (Schaefer et al., 2012). Generally, teachers will not accept poor working conditions. There seems to be a pattern where, in particular, it is the newly qualified teachers with multiple competencies that go beyond the teaching job who leave their positions (Guarino et al., 2006). A school with poor leadership and culture, and a lack of professional communities, also undermines the retention of newly qualified teachers (Shockley et al., 2013; Guarino et al., 2006). By contrast, close collaboration with colleagues, a collaborative work culture, and the exchange of experience between colleagues have, as previously mentioned, a positive influence on retention (Greenfield, 2014; Schaefer et al., 2012; Wang et al., 2008).

Gaining a firm foothold and being well integrated into a school culture do not necessarily mean that new teachers will be good teachers. Graduate teachers are at various different stages in developing their teaching, depending on the quality of their teacher training (Wang et al., 2008). Effective teacher induction should, therefore, increase focus on teacher retention and continuously support their professional development (Schaefer et al., 2012). Greenfield's review (2014) of studies that address teacher resilience shows that a teacher's relationship with a key person or mentor acts as a kind of buffer that protects their self-belief.

In the conclusion of their review, Shockley et al. (2013) put forward a hypothesis that motivational factors, such as versatile teacher induction programs, work assignments for which they receive acknowledgement, recognition of competencies, delegation of responsibilities, opportunities for promotion, professional relationships, and supervision and development opportunities, contribute more to beginning teachers' job satisfaction than does material compensation, e.g. their salary. These motivational factors relate to self-esteem and belonging, and to avoid teachers being on an insecure footing, these elements must be upheld by a supportive school culture.

Discussion
Limitations and weaknesses of the empirical studies

It is worth noting that several reviews (Guarino et al., 2006; Ingersoll & Strong, 2011; Shockley et al., 2013; Wang et al., 2008) point to certain limitations and weaknesses in the empirical studies under investigation.

Shockley et al. (2013) are concerned that most of their included studies are of a descriptive and qualitative nature, and tend towards evaluations. There are only a few longitudinal studies and some reports were not yet peer reviewed. In the case of quantitative studies, these do not include statistical measurements that can provide a basis for traditional quantitative meta-analyses. Wang et al. (2008) are concerned about the generalizability of the results. Guarino et al. (2006) conclude that evidence-based

research is needed to answer questions regarding teacher recruitment and retention.

The reservations of the various authors are, first and foremost, that qualitative research is involved, and that in the existing research there is little evidence-based research. But evidence-based research, in the form of randomized controlled trials, does not necessarily mean a guarantee of quality. Ingersoll and Strong (2011) are the only ones to refer to a large-scale quantitative randomized trial study in their review (Glazerman et al., 2008, 2010), and refute that only evidence-based research can be generalized and is of the required quality. Ingersoll and Strong (2011) are particularly critical of this quantitative randomized trial study, in that it appears to have major weaknesses; for example, it assumed that all school districts involved had the same level of teacher induction. However, it turned out that there was considerable variation in support, from mentoring support, orientation, and time on release to attend learning communities between schools. Furthermore, the control group was not aware of whether or not the control group of schools already had teacher induction programs similar to the "intervention" offered at the schools involved. Therefore, the comparison between control and intervention was not valid. Furthermore, in this study, mentors' experiences and training had not been considered. It was found that all mentors in the intervention group were new, while mentors in the control group were more experienced (Ingersoll & Strong, 2011).

Ingersoll and Strong (2011) in their review also point to the lack of a single concept of the "effective teacher" as a weakness in many empirical studies, in general. The concept is not well defined. Thus, precise definitions of what is understood by an effective teacher are needed, since it is important for the assessment of outcome and to clarify objectives of teacher induction programs. Ingersoll and Strong (2011) point out that there are many and competing definitions of an effective teacher. The definitions range from teachers who engage students and teach them to ask critical questions, to those who educate students to be mature citizens, to those who are sensitive to teaching regarding student diversity, to teachers who focus on student care, or those who are good at supporting social and behavioral development, to those teachers who are best at

getting students to achieve the highest marks in examinations (Ingersoll & Strong, 2011, p. 227).

Although I am primarily interested in teacher induction programs that support newly qualified teachers' professional development, this did not become an independent theme in my analysis of the included reviews in my review of reviews. The theme, although not explicitly stated as such, is considered as an underlying basis of understanding in this review. Professional development is implicitly included in the various themes in the analysis without being an independent theme which, in itself, is quite remarkable. In their review, Wang et al. (2008) touch on this issue. They emphasize, with reference to Feiman-Nemser (2001) and Odell et al. (1999), that teacher induction programs that primarily focus on teaching teachers to teach and develop their teaching are rare. They call for teacher induction not to be seen in isolation, but as being on a continuum from teaching training to professional teaching, given that induction can facilitate and support professional development.

The above issue, therefore, calls for a general review in the future of recent empirical research focusing on professional development. Professional development must be understood as something other than, and more than, the extent to which teachers are able to teach, based on centrally-standardized methods, principles and learning standards. Likewise, professional development and teacher induction programs must be about factors other than the extent to which teacher induction programs have a bearing on students' examination results and teacher effectiveness (Shockley et al., 2013; Ingersoll and Strong, 2011).

The concept of educational mentoring (Bradbury, 2010; Whatman, 2016), which takes a bifocal approach (to both student and new teacher learning, respectively), may be the first step in this direction. The focus on educational mentoring is supported by the OECD report on induction programs for newly qualified teachers which points to the fact that newly qualified teachers need personal, social and professional support (European Commission, 2010).

This review of reviews has included reviews and meta-analyses, all of which were published in the period 2006–2016, so these must be based on studies before 2011. This means that the latest research results within

the area of teacher induction programs are not included in this review. In my current review of reviews, my searches have mainly resulted in finding American, Canadian and English studies, i.e. studies based on an Anglo-Saxon research and education tradition. Teacher induction programs are also widely used in other countries, such as Norway, the Netherlands, Finland, Estonia, France, Japan and New Zealand. Therefore, there may also be other perspectives in further reviews which include the latest empirical research in teacher induction programs in countries other than those who educate within the Anglo-Saxon tradition.

I consider that one of the strengths of the methodological approach to preparing a review of reviews, meta-analyses and surveys, is that a comprehensive knowledge of teacher induction programs is collected and summarized in one review. The limitation, as I see it, is that recent empirical research is not included. There are some more comprehensive studies and reports, for example from Norway, which could complement the picture, but these are single empirical studies, not reviews, which was an including criterion for this study.

Conclusion

Despite all the reservations, almost all reviews seem to point to the fact that teacher induction programs consisting of various elements adapted to the context have a positive effect on the professional, social and personal development of newly qualified teachers.

Teacher induction programs can contribute to effectiveness, and can motivate and encourage (Shockley et al., 2013). They can enhance student achievement, teacher job satisfaction, the establishment of a firm foothold (Ingersoll & Strong, 2011), counter burnout, and strengthen teacher resilience, self-esteem and confidence (Greenfield, 2014; Guarino et al., 2006; Schaefer et al., 2012). Teacher induction programs have an impact on the quality of teaching by supporting and professionalizing the teacher's teaching and insight into how children learn, and the programs facilitate the continuing professional development of newly qualified teachers (Hobson et al, 2009; Ingersoll & Strong, 2011; Wang et al., 2008).

Ingersoll and Strong's (2011) combined studies – with one exception (Glazerman et al., 2008; 2010) – point out that teachers who participated in teacher induction programs are, for example, better at keeping students on track with regard to teaching goals, developing curricula that work, adapting classroom activities to students' interests, and maintaining a good teaching environment. With regard to student achievement, their studies showed that their students achieved higher marks in "academic achievement tests". The above can be assumed to contribute to retention. Teacher induction programs can also strengthen teachers' relationships with students and support their classroom management skills (Wang et al., 2008).

However, the effect seems to depend on the duration of the program (Ingersoll & Strong, 2011), and on the social, cultural and organizational context in which it is situated (Wang et al., 2008). The outcome may also depend on the teacher training received by the teacher (Wang et al., 2008), along with the mentor's skills and knowledge (Hobson et al., 2009; Ingersoll & Strong, 2011; Shockley et al., 2013; Wang et al., 2008). Finally, it should be mentioned that Shockley et al. (2013) recommend that a standardized definition of teacher induction program should be formulated. Such a program would involve various independent components and extend beyond solely mentoring. The definition must not, however, lead to standardized programs. The programs must always be organized based on the local context and the needs of the teachers involved. In other words, a teacher induction program must always be developed within the context of local creative thinking.

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