# Alternative teacher education in the Netherlands 2000–2005. A standardsbased synthesis

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Findings are synthesized from six evaluation studies of alternative teacher certification programs introduced in the Netherlands between 2000 and 2005. The available evidence raises concerns about the feasibility of accelerated workplace learning for aspiring teachers. Intake assessments amounted mostly to selection procedures, while less attention was paid to advising candidates. In candidates' workplace learning, work often overrode learning. They received little mentoring and were offered few opportunities to qualify themselves in all basic aspects of teaching. Conclusions and recommendations regarding the development of alternative teacher education are formulated on the basis of five quality standards for teacher education.

Entre 2000 et 2005, les Pays-Bas ont mis en place des parcours parallèles pour la formation des enseignants. Dans cet article, l'auteur présente les résultats de six études qui ont évalué la qualité de ces parcours parallèles. Les résultats disponibles soulèvent des questions quant à la possibilté de réaliser des formations accélérées effectuées sur le terrain et destinées aux futurs enseignants. Dans ces formations accélérées, l'évaluation initiale (intake assessment) servait la plupart du temps à sélectionner les candidats tandis que peu d'attention était accordée à la fonction conseil. Lorsque les candidats étaient formés sur le terrain, la pratique prenait le dessus sur la formation. Ils n'étaient guère encadrés et avaient peu l'occasion de se familiariser avec tous les aspects fondamentaux du métier d'enseignant.

S'inspirant de cinq standards de qualité pour la formation des enseignants, l'auteur présente ses conclusions et ses recommandations pour la mise en place de parcours parallèles en ce qui concerne la formation des enseignants.

Se sintetizan los resultados de seis estudios en los que han sido evaluados programas alternativos de certificación de profesores que han sido introducidos entre 2000 y 2005 en los Países Bajos. La evidencia disponible plantea cuestiones sobre la viabilidad de aprendizaje acelerado por futuros profesores en el lugar de trabajo. Las evaluaciones llevadas a cabo se limitaban a menudo a procedimientos de selección, mientras que se solía prestar menos atención al asesoramiento de los candidatos. En su lugar de trabajo, el proceso de aprendizaje de los futuros profesores fue relegado a segundo plano a causa del trabajo. Resultó que los futuros profesores recibieron poca tutoría y que se les ofrecieron pocas oportunidades de cualifarse en todos los aspectos de la enseñanza. Se sacan conclusiones y se hacen recomendaciones en cuanto al desarrollo de programas alternativos

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#### 22 N. Brouwer

de formación del profesorado a base de cinco criterios de calidad para la formación del profesorado.

In diesem Forschungsbericht werden die Ergebnisse von sechs Evaluationsstudien zu den zwischen 2000 und 2005 in den Niederlanden eingeführten alternativen Lehrerausbildungsprogrammen zusammengezogen. Die Befunde lassen Fragen über die Realisierbarkeit von beschleunigtem Lernen während der Arbeit durch ankommende Lehrer aufkommen. Zulassungsprüfungen beinhalteten meistens Ausleseverfahren, wobei der Beratung von Kandidaten weniger Aufmerksamkeit geschenkt wurde. In dem Lernen von Kandidaten während der Arbeit war der Arbeitsaspekt haüfig stärker vertreten als das Lernen. Sie empfingen wenig Betreuung und erhielten wenig Gelegenheit, sich in allen grundlegenden Lehrerfähigkeiten zu qualifizieren. Es werden Schlussfolgerungen und Empfehlungen bezüglich der Entwicklung von alternativen Lehrerausbildungsprogrammen formuliert aufgrund von fünf Qualitätsstandarden zur Lehrerausbildung.

## Introduction

As in many other countries, the education system in the Netherlands is struggling with teacher shortages. To counter these shortages, several policies and projects have been put into place, both by government, employers and trade unions. Since 2000, alternative certification programmes targeting new groups of teacher candidates have proliferated. Besides certified teachers who entered other professions but decided to return to teaching, these new audiences consist of career changers who want to switch to the teaching profession. The participants in the new programmes are on average ten years older than the teacher education students in the regular pre-service programmes. They typically combine three or four days of teaching with attending one day of college-based seminars per week (Inspectie van het onderwijs, 2003). The advent of re-entering teachers and career changers has sparked a trend in the Dutch teacher education system that may be called 'programme differentiation'. An important assumption underlying this trend is that the participants in the new programmes are able to attain professional teaching competence within a shorter time span than students in the regular programmes. The participants in the new programmes are expected to do so, because their earlier experiences in training, work and life should enable them to transfer already existing competencies and knowledge to their new profession. However, as this assumption is being operationalized in the form of accelerated learning in the workplace, concerns have been raised about teacher quality. How do the graduates from the new 'alternative routes' actually function in the teaching profession? Is accelerated workplace learning a feasible arrangement for educating teachers? Such questions need to be answered, before any definite conclusions can be drawn about the success of alternative teacher education programmes.

The purpose of this article is to review strengths and weaknesses of alternative teacher education programmes as introduced in the Netherlands on the basis of all the evaluation studies available to date. Assessing these strengths and weaknesses requires criteria for the quality of teacher education programmes. Therefore, we first introduce five quality standards pinpointing conditions for programme impact. Then, the structure and the changing context of the Dutch teacher education system and the six evaluation studies constituting the database for this review are described. On this basis, we are presenting the main findings. In the discussion, we use the quality standards as a framework for conclusions and recommendations regarding the development of alternative teacher education programmes and future research.

# Quality standards

Judging the quality of teacher education programmes should ideally take place on the basis of empirical evidence about relationships between programme features on the one hand and learning outcomes in graduates on the other. So far, such a knowledge base is incomplete (Zeichner & Schulte, 2001; Stronge, 2002; Cochran-Smith & Zeichner, 2005). What one would like to know is what kinds of conditions teacher education programmes should fulfil, if they are to encourage their clients to develop themselves as competent and thoughtful teachers. For an answer to this question, we do not have to grope in darkness. Studies from the United States (Darling-Hammond, 2000, pp.167–168) and Germany (Dann et al., 1978, 1981; Müller-Fohrbrodt et al., 1978; Hinsch, 1979) indicate that approaches in teacher education in which student teachers' practical experiences are closely linked to theoretical reflection may strengthen graduates' in-service teaching competence. In the Netherlands, it was shown that programmes which succeeded in stimulating prospective teachers to develop innovative kinds of teaching competence were characterized by a combination of features which led candidates to move back and forth between action and reflection in collaborative settings (Brouwer & Korthagen, 2005).

The evidence accumulated in these studies suggests that the impact of teacher education programmes may depend to an important degree on how programme features are combined within one coherent learning environment. This would mean that, in order to achieve powerful learning environments in teacher education, a number of conditions should be fulfilled simultaneously. To describe these conditions, we propose five quality standards based on the studies referenced above, other relevant literature as well as the developments in Dutch teacher education during the last 25 years. These standards describe how teacher education institutions might organize and implement their curricula in order to stimulate the integration of practice and theory in teacher learning (cf. for a similar discussion from the perspective of individual teacher educators' actions, Korthagen *et al.*, 2005).

The standards proposed here are meant to apply not only to regular preservice programmes, but also to the new alternative routes. It is arguably a venture to try and derive quality standards for judging teacher education programmes from an incomplete knowledge base. However, the labor market, the schools and society as a whole confront teacher education with an increasingly pressing need to deliver quality teachers in sufficient numbers. Practice cannot wait until theory is complete.

# Longitudinal programming

I. Goals and activities for learning to teach are programmed in consecutive cycles which gradually increase in complexity. In the Netherlands, programme features influencing graduates' in-service competence were identified in a longitudinal study of 357 teachers spanning  $4\frac{1}{2}$  years (Brouwer & Korthagen, 2005). Most prominent among the influential programme features were the following. A planned alternation of student-teaching and college-based periods gave students opportunities to reflect in college on experiences made during student teaching and to reorganize teaching plans. A gradual increase in the complexity of student-teaching activities enabled student teachers to experience success in using theoretical ideas offered by the programme, while at the same time perceiving the limits of their current competence. Learning settings involving cooperation between student teachers, cooperating teachers and university supervisors created opportunities for mutual support and for reflecting on individual concerns.

Success in learning to teach, then, appears to depend at least in part on a careful build-up of practical learning experiences. A gradual increase in the complexity of teaching activities can give prospective teachers opportunities to practice purpose-fully the many skills required in teaching. Conversely, a lack of gradualness in a teacher education programme may increase the risk of 'transition shock' (Corcoran, 1981) or 'reality shock' or 'practice shock', as this phenomenon was named in the German research which originally clarified it (Dann *et al.*, 1978). From this work and also our own study (Korthagen *et al.*, 2001; Brouwer & Korthagen, 2005), the principle of 'cyclical programming' was derived.

This principle entails adjusting learning activities in the teacher education institution and in the school to each other in both time and content. We distinguish four consecutive cycles in which teacher education programmes can sequence specific activities to promote their students' learning: the Orientation cycle, in which the candidate explores whether teaching is a realistic perspective for him or her; the Basic cycle, in which the acquisition of basic instructional skills and self-confidence in classroom performance are central concerns; the Elaboration cycle, in which the candidate consolidates and elaborates these skills and develops an awareness of pupils' learning and his or her own influence on it; and the Transition cycle, in which the candidate functions as a team member and develops a professional identity as a teacher. For each cycle, an explicit set of behavioural objectives has been formulated (Brouwer et al., 2002). These cycles of teacher learning represent an average trajectory, a sequence of stages of development which may be expected on the basis of theory, research and teacher educators' experience. Any individual who is becoming a teacher will more or less deviate from this pattern. Therefore, teacher education programmes should offer prospective teachers opportunities to make the

concerns and goals underlying their personal learning explicit and to address these in trajectories that may differ depending on pace and interest (Fuller, 1969).

## Professionalization of teacher educators

II. Teacher educators and cooperating teachers have completed professional development in the areas of mentoring and supervision; curriculum development and action research. Educating teachers has a multiplier function for a country's education system. This is why teacher educators—just as pupils and teachers—need and deserve opportunities to develop themselves in their work (Tharp & Gallimore, 1988, pp. 22–26 and 82–92). The professionalization of teacher educators and school mentors may be considered a necessary element in the functioning of teacher education, because educating teachers is a specific expertise.

Integrating practice and theory and encouraging personal learning in prospective as well as experienced teachers require from teacher educators expertise foremost in the field of mentoring and supervision. Quality in this expertise includes more than giving practical, local advice and moral support. It is also about facilitating and eliciting personal, reflective learning (Crasborn & Hennissen, 2005). Mentors and supervisors in teacher education should therefore be enabled—both by training and otherwise—to fulfil their roles and duties in such ways that teachers' practical experiences and concerns are systematically built upon and linked to relevant theoretical notions and insights (Korthagen *et al.*, 2001, pp. 108–130; Korthagen & Vasalos, 2005).

On the level of programme development, an expertise to do action research is also needed for teacher educator professionalism (Bisman & Hardcastle, 1999; Mills, 2003). When teacher educators develop such expertise and put it to use in transparent self-studies of their work (Loughran *et al.*, 2004), the systematic improvement of programmes may become standard practice in teacher education.

## Networking with schools

III. Teachers are educated by institutions which maintain collaboration with schools for a continuous number of years, so that stable support structures can serve candidates' learning needs in the workplace. To implement teacher education programmes that can stimulate aspiring teachers to integrate practice and theory in their learning, a stable and workable division of labor between teacher education institutions and schools is needed. Empirical evidence about the impact of professional development schools (PDS) is relatively scarce. In her review of PDS research in the United States, Book (1996) draws attention to the fact that schools and teacher education institutions differ with respect to their core goals and responsibilities, i.e. educating pupils and teachers, respectively. By virtue of this difference, both types of institutions also characterize themselves by distinct cultures and views on teaching, the one focusing on locally feasible practices and concepts, the other on more generic principles and theories.

## 26 N. Brouwer

A realistic perspective for creating effective learning environments for prospective teachers would, therefore, seem to be that teacher education programmes and the schools associated with them share responsibilities on the basis of a well specified division of roles. The school would contribute an environment in which prospective teachers gather authentic experiences that help them acquire professional teaching competence, while the teacher education programme arranges and supports opportunities for them to interpret these experiences on a more general level. Prospective teachers can place their experiences in a wider context by comparing them in a peer group with others' experiences in different schools. Such a setting of collegial exchange can create impulses for achieving a deeper understanding of teaching (Tigchelaar & Korthagen, 2004).

# **Electronic learning environments**

IV. An ICT infrastructure specifically geared to teacher learning is available and teachers know how to use it for supporting each others' and their own learning. In the digital age, ever more information is becoming available independently of time and place. As a consequence, not only teachers, but also pupils are getting a greater say in who receives which information when. This development is already bringing about profound changes in schooling. Teachers' work with groups is changing character from being mainly knowledge delivery to providing learners with support in processing information and transforming it into personally meaningful knowledge. These cultural shifts have considerable implications for teachers' work. Searching, selecting and structuring information will become more important teacher tasks. In addition to being a leader of interaction in groups, the teacher also becomes an "e-moderator", someone who acts more as a "guide on the side" than as a "sage on the stage" (Salmon, 2000). Along with this role change, teachers will be required to guide and support cooperative learning and help learners acquire the metacognitive skills they need for lifelong learning (Bolhuis, 2003).

What can teacher education do to prepare teachers for these new roles? So far, combining distance learning with learning in personal contact—'blended learning'— appears to hold the greatest promise for professional training. At the same time, implementing this type of learning places high demands on how learning environments are structured as well as on learners' capacity for self-direction (Smith, 2003). A number of ICT applications may contribute especially to powerful learning environments for teachers. Digital delivery of resources (Inglis *et al.*, 2000) can help teachers address personal learning needs, if these resources are made accessible in a structured way and activity formats for learning from them are provided. One interesting activity for teachers to engage in is the design of domain-specific, "educative curriculum materials" (Davis & Krajcik, 2005). Another promising perspective for teachers wanting to develop themselves professionally is to participate in virtual communities, where streaming video is used to share and discuss authentic representations of each others' work (Barab *et al.*, 2004; Brophy, 2004).

#### Balancing formative and summative assessment

V. In formative and summative assessments underlying intake, progress and certification decisions, instruments and procedures are used which support the candidate in directing his or her own learning trajectory. In the daily practice of educating teachers, formative as well as summative assessment is necessary throughout all phases of candidates' learning trajectories. When candidates are admitted to a teacher education programme, they need specific advice about how to proceed. When prospective teachers are allowed to make the transition from one programme cycle to the next, they are well served if they can reformulate their learning goals on the basis of an assessment. At the time of certification, newly graduated teachers can benefit from a specification of their current competence and from suggestions for professional development. These different functions of assessment are summarized in Table 1.

Intake, progress and certification decisions in teacher education are typically part of high-stakes performance assessment (Andrews & Barnes, 1990; Shinkfield & Stufflebeam, 1995). For this reason, formative and summative assessment should be implemented in relation to each other (Shepard, 2000). Candidates should always receive a timely and acceptable motivation for decisions, not only in case of positive decisions, but especially in case of negative ones. Whoever is rejected at any time has a moral right to receive advice about remediation or redirection of his or her efforts.

Even so, formative and summative assessment functions appear hard to implement in a balanced way. In the debates about the operationalization of teacher competencies and teacher appraisal, two approaches can be seen opposing each other. The one, product-oriented approach is legitimized from an accountability point of view. When teacher candidates are selected, some form of objectified decision-making on the basis of external criteria is necessary. The product-oriented approach aims at selection on the basis of external assessor ratings of finished products such as portfolio documents and work samples. Also, where possible, a limited number of direct observations are made (Straetmans & Sanders, 2001). A drawback of this approach is that it tends to take the form of 'one-shot' procedures capitalizing on self-reports and other kinds of indirect data. Accordingly, it risks distancing itself from and yielding a meager or even biased representation of a person's development in the context of his or her studies and work. On these grounds, the validity of product-oriented teacher assessment and its adequacy as a basis for advising candidates can be called into question.

Use	<i>Formative</i> :←	→Summative:			
Moment	Guidance: diagnosis & feedback:	Appraisal & selection:			
Intake	Gauging of acquired competence Advice	Admission Allocation to learning trajectory			
Progress Graduation	Specification of personal learning goals Advice for professional development	Promotion to next programme cycle Certification			

Table 1. Functions of assessment in teacher education.

#### 28 N. Brouwer

The other, process-oriented approach is more context-bound, tends to use more qualitative instruments such as repeated direct observations by school mentors, teacher educators and school leaders involved in a person's learning. It also seeks to maintain a dialogue with candidates about their progress through mounting levels of competence on the basis of criteria specified in a local setting. The procedures used here risk being less structured and reliable and thus generate more subjective judgments than the product-oriented approach.

From a validity point of view, assessment decisions should ideally be based on repeated measures and ratings of development. In practice, such data are most efficiently produced by teaching personnel who is closely involved with candidates' learning processes, i.e. mentors and teacher educators. By virtue of their roles as advisors and guides, however, they cannot be external assessors. In teacher assessment, then, there exists a tension between reliability and validity requirements, if only for practical reasons.

Considering the psychometric intricacies (Moss, 1992, 1994; Messick, 1994) surrounding teacher assessment, we would advocate an 'expedition model', in which schools and teacher education institutions share a commitment to creating learning environments for aspiring teachers that combine formative and summative assessments. Teacher candidates should simultaneously be supported in pursuing personal learning goals and engage in critical dialogue with colleagues, mentors, school leaders and teacher educators about their achievements in acquiring professional teaching competence. This requires an explicit set of operational criteria as well as procedures that are practicable in the context of daily school life.

## Context

Teacher education in the Netherlands is organized in full time as well as part-time programmes in 55 school subjects, arranged in 7 clusters in both general and vocational education: languages, natural sciences, social sciences, health, art, technology, and agriculture. These programmes are provided by a relatively large number of institutions, most of which cater for a specific region: 7 non-university institutions, which educate teachers for the lower strata of secondary education. The non-university institutions offer four-year undergraduate programmes, in which subject study and pedagogical training are integrated; the universities offer one-year postgraduate programmes with a specifically pedagogical emphasis.

During the nineties, these programme forms have become widespread in Dutch pre-service teacher education. In all regular programmes, the four programme cycles described under quality standard I are recognizable. In particular, they include a final cycle consisting of an internship, in which prospective teachers get full responsibility for approximately three classes. During this cycle, which lasts one halfyear, they are paid to teach about 13 hours per week and receive supervision from a mentor teacher from the school, who is absent from the classroom. This setting affords the prospective teacher opportunities to function as a fully responsible member of the school team, while keeping 'transition shock' within manageable proportions. This internship was designed and first implemented in Utrecht University (Koetsier, 1991; Koetsier & Wubbels, 1995), named 'individual transition practice (ITP)' (Brouwer, 1987) and further developed in non-university programmes, where it received positive reviews from successive national audit committees (Ginjaar-Maas *et al.*, 1997, pp.53–125; Stokking *et al.*, 2003; Kil-Albersen *et al.*, 2004, pp.263–297).

Until the twenty-first century, the Dutch teacher education system consisted exclusively of full time and part-time programmes with uniform durations, so that adult candidates aspiring to teaching as a second career could not be served with tailor-made routes into the profession. However, since 2000, the regular teacher education programmes are expected to cover no more than a quarter of the personnel needs of schools in the near future (Inspectie van het onderwijs, 2003). For this reason, accelerated certification programmes have been introduced both in primary and in secondary education. One of the projects that brought this innovation about was 'Partnership for Education' (abbreviated EPS; documentation is available at www.leroweb.nl), funded by the Dutch government between 2000 and 2004. Besides diversifying routes into the teaching profession, the objectives of EPS were to increase enrollment, numbers of graduates and institutions' organizational efficiency.

## Database

For this synthesis, all the evaluation studies carried out in the Netherlands since the introduction of alternative teacher education have been used. The data sources available are two exploratory studies in secondary education (Bolhuis, 2000; Bolhuis *et al.*, 2001; Bolhuis, 2002); two nationally representative studies (Inspectie van het onderwijs, 2002; Klein & Lubberman, 2002) and one case study in occupational education (Bolhuis & Doornbos, 2000), all situated on the secondary level. The most recent data source is a nationally representative study of alternative teacher education programmes on the primary level (Inspectie van het onderwijs, 2003). During the introduction of the new alternative routes, these studies were commissioned by the Ministry of Education, the Inspectorate of Education and the Association of Employers in Dutch Education. Since 2003, when the new programmes had become a regular part of the teacher education system, investments in specific studies of alternative routes have lapsed.

In each of the studies mentioned, document analyses, interviews as well as questionnaires were used. In the last three studies, also direct observations were carried out. Data were collected about the following topics: enrollment and intake; participation; programming; candidates' learning experiences; and assessment. The main findings from all of these studies were compared and synthesized under these headings. A technical report synthesizing the studies carried out until 2003 is available in Dutch (Bolhuis *et al.*, 2003).

# Findings

#### Enrollment and intake

The first two nationally representative studies show that since 2000, accelerated alternative teacher education programmes have become a recognizable and growing part of the Dutch teacher education system. Specific programmes meant to attract certified, but inactive teachers, have proved to be a temporary phenomenon. This source of new employees appears to have been depleted quite soon (Klein & Lubberman 2002, section 1.3; Inspectie van het onderwijs 2002, section 1.3 and 2003b, section 1.3).

Financial incentives to facilitate adult candidate teachers' switch to education were initially focused on training activities. Meanwhile, schools are receiving increasing funds to place candidates and remunerate them on the level of their last job. The initiative for hiring re-entering or second-career teachers comes mainly from the schools and the candidates themselves. The main motive of school management to place second-career teachers appears to be the need to fill persistent vacancies. In other cases, school leaders prefer hiring already certified teachers or graduates from the regular programmes.

The information and guidance that second-career teachers receive during their transition from their previous jobs to teaching has suffered from coordination problems between national and regional employment agencies, commercial agencies for temporary employment and teacher education institutions. Not all candidates have completed an assessment procedure and it is unknown how many potentially suitable candidates have dropped out for this reason. After finding work and certification as teachers, career changers do not receive much ongoing support from either employment agencies or teacher education programmes.

## Participation

Until 2005, 2000 second-career teachers in primary education and 1550 in secondary education have been certified. At the end of 2005, 1500 of those in primary education and 800 of those in secondary education are at work as teachers (Ministerie van OC&W, 2005). From these figures, it can be calculated that in the Netherlands, 25% of certified second-career teachers in primary education and 48% of those in secondary education are not or not any longer employed in education.

The participants in the alternative routes form a quite heterogeneous group. They differ considerably in age, previous training, work and life experiences and ambitions on the labor market. In most cases, their motivation to work in education is high (Inspectie van het onderwijs, 2003, section 2.1).

# Programming

Since 2000, the number of different audiences and programme types in Dutch teacher education has clearly increased. In contrast to the existing regular programmes, tailor-made training routes with varying durations have now become

possible, as intended by the government. In the programming of alternative routes, considerable differences occur. There is great variation, in particular, in the relative size of practical and theoretical programme components. However, in the programmes serving secondary education, more and more time tends to be spent on workplace learning in combination with one day per week devoted to learning in the teacher education institution (Korthagen *et al.*, 2002).

Table 2 contains an overview of the types of teacher education programmes existing in 2004. In the upper part of the table, the regular pre-service programmes are listed. The lower part contains the new programme types (data derived from Bolhuis *et al.*, 2003). To the left of Table 2, relevant characteristics of the different audiences are described. To the right, characteristics of the different programmes are listed.

As can be seen from Table 2, the programmes differ considerably in study load and learning activities taking place in school and in the teacher education institution. Workplace learning may last for a period varying from a minimum of eight weeks to a maximum of two years. Schools and teacher education institutes cooperate in implementing the programmes, but not very intensively. Only 51% of the candidates in primary education indicated that they regularly had conversations with their mentors and only 26% felt that the programme sufficiently addressed their learning needs (Inspectie van het onderwijs, 2003, sections 5.3 and 5.4).

#### Learning experiences

Candidates from alternative certification programmes adapt themselves relatively smoothly to their new work situation. The workload involved in teaching and learning in the workplace simultaneously is quite a challenge for them and some candidates underestimate this. Also, the transfer of existing competencies to the teaching profession expected from career changers is by no means automatic. Their experiences in training, work and life can promote as well as obstruct their learning and functioning as teachers (Tigchelaar *et al.*, 2003 and 2005).

Guidance and support of second-career teachers often take place 'at a distance', i.e. without a mentor from the school or the teacher education institute being present in the classroom. Both candidates and schools prefer more coordination between practical and theoretical programme components. School mentors are frequently hardly informed about the theoretical components in the teacher education programme or not at all. School visits by teacher educators from the institution are usually limited and in some cases do not take place at all.

The activities and assignments used in the teacher education institutions to personalize learning trajectories show a great deal of similarity. Personal development plans, working in small groups, coaching and producing portfolios are often used. A necessary component of alternative certification programmes for secondary education is developing and using pedagogical content knowledge in practice. In practice, however, subject-specific lectures and meetings are relatively few in

AUDIENCE				PROGRAM TYPE				
Previous training	Certification as a teacher	Teaching experience	Employment as a teacher	Provider	Study load in 40-hour credits	Duration	Full time/ part-time+ teaching level aimed for <sup>a</sup>	Type of curriculum
High-school leaver	_	_	_	Non-university college	168 <sup>b</sup>	4 years	Full-time; lower	Integrated; qualifying
Undergraduate university students	-	_	_	University	4 to 8 <sup>c</sup>	4 to 8 weeks	Full-time or part-time; upper	Undergraduate; orientation
Postgraduate university students	-	- or +	- or +	University	42 <sup>c</sup>	1 years	Full-time; upper	Postgraduate; qualifying
Older student	_	_	_	Non-university college	84 <sup>b</sup>	4 years	Part-time; upper or lower	Evening course; qualifying
Older student with higher education degree	_	_	+	Non-university college and university	40 to 80 <sup>d</sup>	1 to 2 year	rsPart-time; upper or lower	Alternative certification program; qualifying
Older student	+	+	_	Non-university college	7 to 8 <sup>c</sup>	12 to 16 weeks	Full-time or parttime; upper or lower	Program for reentering teachers
Older student	+	e	+	Non-university college	7 to 8 <sup>c</sup>	12 to 16 weeks	Full-time or part-time; upper or lower	Certification in additional subject

<sup>a</sup>in case of secondary education; teaching certificates for secondary education distinguish between levels on the basis of pupil age: lower (12–15 years) and upper (15–18 years).

<sup>b</sup>**in**cluding study of major subject

<sup>c</sup>excluding study of major subject

<sup>d</sup>size of subject study depends on intake

<sup>e</sup>in the subject of training

number. One reason for this is that most Dutch alternative routes are organized by relatively small-sized departments.

#### Assessments

Second-career teachers are admitted to training through intake assessments. The instrument used in most cases is *Bewezen geschikt* [Proven suitable] (Klarus *et al.*, 2000). The Inspectorate of Education notes that in the current intake assessments, too few direct observations are used and too few subject-matter experts from the schools are involved. This is one of the reasons why these assessments are often too general in nature for second-career teachers and their teacher educators to be able to derive really tailor-made learning trajectories from them (Inspectie van het onderwijs 2002, Appendix VII and 2003, section 4.6). Similar indications follow from an evaluation by Tillema and Verberg (2002). These findings have both to do with the nature of *Bewezen geschikt* and with the way it is being used in practice. In an external evaluation of this instrument, shortcomings have been pointed out regarding validity, reliability, standardization and the balance between costs and benefits (LTP Advies, 2002).

Regarding the question on which level second-career teachers are functioning in their new work, the inspectorate derives a judgment from 48 direct observations of lessons. This judgment is that during their first year in education, second-career teachers function on a level comparable to beginning teachers. Shortcomings are seen to occur in the area of activating pupils and in their pedagogical content knowledge (Inspectie van het onderwijs, 2003, section 6.2).

## Discussion

Since 2000, Dutch teacher educators have introduced alternative certification programmes with impressive fervor. Within a few years, these new programmes already contribute to combatting teacher shortages. This is an absolute necessity, because these shortages are expected to stay for at least a decade. In 2005, an economic recession driving personnel from the commercial to the public sector and a demographic decline lowering pupil numbers work together to hide the structural shortage of teachers, but from approximately 2010, a wave of retiring teachers is expected (Ministerie van OC&W, 2005) and the numbers of graduates from teacher education programmes will not be sufficient to fill all the places they leave behind. But this is only about the quantitative aspect.

Here, we want to focus on the strengths and weaknesses of alternative routes. This qualitative issue will determine, at least in part, what these routes can and will contribute to the Dutch education system as a whole. Evaluating the findings from the studies synthesized against the quality standards proposed earlier raises a number of issues to be taken into account in developing alternative certification programmes.

# Are tailor-made routes effective?

Organizing tailor-made routes which fit each candidate's personal learning needs was the proclaimed goal of developing alternative routes. To what extent has this goal been achieved? Considering the evidence, it is a real possibility that teachers certified in Dutch alternative routes were offered too few opportunities to qualify themselves in all basic aspects of teaching, at least within the relatively short time span available to them. While a gradual increase in the complexity of teaching activities is now a standard feature of all regular Dutch teacher education programmes, candidates in alternative routes may enter the teaching profession in ways that are too abrupt and may therefore lead to drop-out. Drop-out is a material risk in accelerated training programmes for professions such as teaching (Donaldson, 2001; Kasworm, 2001). The drop-out percentages reported for Dutch second-career teachers after graduation (Ministerie van OC&W, 2005) suggest that a 'revolving door effect' (Smith & Ingersoll, 2004) may be at work detracting from the effectiveness of the new alternative routes. It is not unlikely that a reintroduction of 'practice shock' is responsible for this phenomenon.

Teaching competence is a complex and integrated whole of qualities, which a person cannot develop in a rush. Instead, candidates would profit more from a gradual build-up of activities, during which learning and work are adjusted to each other, practical experiences are taken as a starting point for theoretical reflection and learners are given co-responsibility for their own professional development. It is interesting to note that the principle of sequencing programmes gradually appears to emerge in alternative routes in the USA. The existence of some form of preparatory period, at least, is beginning to be considered a quality feature of such programmes (McCabe, 2004).

Future research surrounding alternative routes should not, in our view, confine itself to estimating how many employees they may produce in the struggle against teacher shortages, but also seek to assess how different programme features relate to the outcomes of these programmes. This requires follow-up studies of graduates' development in the profession. By clarifying the determinants of drop-out and retention such studies could lay a basis for more effective recruitment and inform programme development.

## Do candidates receive sufficient support from professional mentors?

Candidates in Dutch alternative teacher education routes receive relatively little mentoring. Also, there is no guarantee that their mentors have received sufficient training in supervisory skills. If more time became available for mentoring and all mentors received specific training for their task, second-career teachers would have better opportunities for reflecting on their experiences and consulting with colleagues about how to reorganize and improve their teaching. The provision of professional mentoring in the workplace could greatly contribute towards the effectiveness of alternative routes. Fulfillment of this condition is another quality feature of such programmes emerging in the US (McCabe, 2004).

The training of teacher coaches in alternative certification programmes could well focus on the skills and awareness needed to address the specific learning needs of second-career teachers in making the transition to teaching (Tigchelaar *et al.*, 2005). A relevant issue for research is how the effectiveness of training teacher coaches can be monitored and enhanced (Crasborn & Hennissen, 2005).

## Do schools and teacher education institutions cooperate effectively?

The studies synthesized here show that during enrollment and intake, considerable drop-out occurred. Therefore, in order to retain potentially suitable candidates, the coordination between placement agencies, schools and teacher education institutions should be improved. Schools and teacher education institutions draw up contracts in order to create a suitable environment for second-career teachers' workplace learning, prescribing conditions such as maximum hours for work and minimum hours for mentoring. In practice, however, these conditions can often not be fulfilled and work overrides candidates' learning. Attempts at improvement are sometimes obstructed by a perverse dilemma. It is the schools with the most pressing teacher shortages—often inner-city schools—that are in the most unfavourable position to offer second-career teachers the support they need.

To help solve these problems, the Dutch government is encouraging schools to professionalize their personnel policies and to strengthen long-term working relationships with teacher education institutions. Developing professional development schools is a sensible course to take, but if this is to be successful, sustained investments will be needed. An important area to focus upon, both for policy and for evaluation research, will be how schools and teacher education institutions divide their roles and tasks as well as how different divisions of labor influence the outcomes of their collaborative efforts.

# Is good use being made of electronic learning environments?

As adult learners, who often combine family and work responsibilities, second-career teachers have specific needs for a flexible organisation of their learning. Online study materials and opportunities for collaboration can function as flexible programme elements and make a wealth of resources available to candidate teachers. It is therefore a positive development that digital delivery of study materials and computer-supported collaborative learning are becoming standard components of prospective teachers' learning environments in the Netherlands (Inspectie van het onderwijs, 2004).

Precisely how electronic environments are being used in Dutch alternative routes is as yet unknown from research. In order to assess and improve the usefulness of digital learning tools for second-career teachers, it would be worthwhile to study to what extent and in which ways they use offline and online content and assignments. A related question requiring closer examination is which design features these materials should possess in order to elicit 'deep' interactive learning in teachers.

## Are formative and summative assessments balanced?

In the Dutch situation, an unresolved issue is on which grounds different categories of teacher candidates are channelled into different alternative certification programmes. We cannot now be sure that suitable candidates are being selected and unsuited candidates are being rejected on any more than chance levels. The procedures used currently for intake assessments function more as a mechanism legitimizing selection and recruitment than as a setting for advising candidates. These assessments are not systematically directed at taking placement decisions. Investments are needed in advising candidates, so that they will have a better basis for deciding how to direct and shape their learning as teachers.

In the Netherlands, convincing examples are available of assessment approaches in which formative and summative aspects are addressed in balanced ways. One is an alternative certification programme enabling steel workers to become teachers in secondary vocational education (Bolhuis & Doornbos, 2000). Another is a programme for teaching in general secondary education named 'Made to Measure' (Tigchelaar, 2003). In both programmes, assessment of existing competencies is linked systematically to advising candidates along their personal learning routes.

The predictive validity of intake assessments in alternative teacher education programmes is a problematic issue about which little is known (Ackley *et al.*, 2007). To improve the outcomes of placement, more research is necessary, preferably with longitudinal designs, which may clarify which types of indicators might adequately predict success in teaching (Zumwalt & Craig, 2005).

## Conclusion

This synthesis shows that since the introduction of alternative routes in the Dutch teacher education system, a great deal has been achieved in a relatively short time. However, there is also a great deal left to be improved. 'School-based teacher education' does not by itself guarantee valuable outcomes of training, as government tends to believe (Ministerie van OC&W, 1999). So far, the available facts only allow the conclusion that quite a few conditions remain to be fulfilled, before we can be confident that second-career teachers are offered ample opportunities to acquire all the teaching competence they need to fulfill their mission.

## Notes on contributor

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