From Student to Teacher: reducing practice shock and early dropout in the teaching profession

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SUMMARY *Shortage of teachers is one of the major challenges facing the teaching profession. One of its causes is the high proportion of dropout in initial teacher education and during the start of the career. Since 1995, a nation-wide project has been underway in the Netherlands, aiming at a decrease of dropout by incorporating an intensive practice period in the final year of the initial teacher training programme. An evaluation of the project shows that the practice shock and the resulting dropout rate were indeed reduced. Relevant factors seem to be the degree to which student teachers were accepted and deployed in the school, the supervision and mentoring provided, encouragement of reflection, and the gradual increase of independence.*

RÉSUMÉ *Le déficit des enseignants et un des défis sérieux de la profession. Une des causes est la haute proportion qui quittent la formation et la profession en début de la carrière. Depuis 1995 un projet nationale a été accompli en Hollande, orienté à diminuer la proportion quittant par une période intensive de la pratique pendant l'année dernière de la formation. Une évaluation montre que le 'practice shock' et le nombre d'abandons peuvent être diminués. Des facteurs pertinents concernent le degré d'installation sociale des étudiants dans l'école, la supervision et le monitorat, la mesure de réflexion, et l'occasion pour le développement graduelle de l'autonomie.*

RESUMEN *La profesión de docente enfrenta un desafío importante: para facilitar la transición de la formación hacia la profesión y para reducir el índice de 'dropout'. Desde 1995, se está desarrollando un proyecto a nivel nacional en Holanda, orientado a reducir el 'drop-out' por uno periodo intensivo de prácticas en año último de la formación inicial. La evaluación demuestra que el 'choque de la practica' y el índice de 'dropout' pueden ser reducidos. Los factores relevantes concernir la medida que los estudiantes-docentes se establecen en la escuela, la supervisión y el soporte que se les ofrece, el grado de reflexión, y la oportunidad de gradualmente desarrollar autonomía.*

ZUSAMMENFASSUNG *Der Mangel an Lehrer ist einen der seriöse Herausforderungen des Lehrerberufs. Eine Ursache ist der Ausfall in der Lehrerausbildung und im Anfang der Karriere. Seit 1995 ist ein Nationales Projekt in Ausführung in den Niederlanden, orientiert an eine Verringerung des Ausfalls durch einen intensiven Praxisperiode im letzten Ausbildungs-*

jahr. Eine Evaluation zeigt daß der Praxischock und der resultierenden Ausfall verringert werden können. Relevante Faktoren sind der Maß worin die Studenten ihren Platz in der Schule finden, die vorhandene Aufsicht und Begleitung, das Niveau der Reflexion, und die Gelegenheit um allmählich mehr Autonomie zu entwickeln.

Introduction

Increasing the number of recruits, and reducing their dropout before or during the start of their career, are among the main challenges facing the teaching profession. The popularity of the profession has decreased, training institutes have difficulty adjusting, and many new teachers quit the profession within a short period. In many countries, steps are being taken to increase the flow of entrants into teaching, to create alternative training paths, and to limit the dropout rate (Odell & Ferraro, 1992; Townsend, 1994; Evans, 1997; Criblez, 1998). In surveying the academic literature, we focus on measures to smooth the transition from training to professional practice, as a means to prevent dropout. Possible measures to be taken are closer cooperation of schools and training institutes, more intensive and realistic internships, proper supervision and mentoring, and a greater emphasis placed upon reflection. We describe a Dutch national project aimed at bridging the gap between training and practice. We report on the question, design, method, execution and results of a study on this project and its effects, and discuss the lessons learned.

Dropout and Practice Shock

Large numbers of teachers leave only a few years after commencing professional practice. Dropout rates vary between countries and periods, but are disconcertingly high. According to Odell and Ferraro (1992), 30% of teachers in the USA drop out within two years and 40% within five years, while Bullough (1997) cites 50% within five years. The Dutch figures are 40% within two years and over 50% within six years (Commissie Toekomst Leraarschap, 1993). Moreover, many graduates in education do not commence working in education at all. In Austria, Norway and Spain, 60% to 70% stay in education, and in Germany, Italy and the Netherlands only about 50% stay. To make things even worse, many drop out during teacher training, with the dropout rate in the Netherlands being as high as 10–15% in the first year of training (Centraal Bureau voor de Statistiek, 1999).

Much has been written about the possible causes of these dropout rates. A first explanation is that the profession is *simply too demanding*. According to Day (1999), 23% of teachers in England suffered from a stress-related illness during 1995, and many devoted 55–70 hours a week to their work. What problems do beginning teachers face? Veenman (1984) cites the following: handling classroom discipline, motivating pupils, dealing with differences between pupils, assessing learning results, communicating with parents, organising classroom work, working with the materials at hand and coping with the problems of pupils. However, Veenman makes no distinction between problems faced by trainee teachers and those of beginning teachers, and maintains that even experienced teachers suffer them. Bullough (1997) argues that beginning teachers do not go through clear transition stages, and that teachers vary individually.

A second explanation is that many may have *false expectations* of the profession. We all form our particular views of the teaching profession as students during childhood. However, the reality of teaching is significantly different when seen from the teacher's

perspective (Britzman, 1986; Bullough, 1997). School culture may also be relevant. Bullough (1997) perceives a clash between a modern culture within schools (fixed structures and procedures) and a post-modern culture outside them (change, diversity, complexity and insecurity). Edwards (1995) thinks that education is increasingly considered in terms of management, encouraging oversimplification, and Criblez (1998) perceives a trend towards deprofessionalisation, giving way to demoralisation. Managerial attitudes and deprofessionalisation stem from concerns about educational standards, which in a number of countries have led to the implementation of policies encroaching upon the autonomy of schools and teachers (Bullough, 1997; Criblez, 1998).

As a third explanation, it may be that during training, teachers receive *insufficient preparation* and that many leave the profession as a result of the inevitable shock that occurs from entering practice. In many professions, beginning practitioners experience a shock when faced with the full reality of the workplace, and have difficulty coping with the transition (Benner, 1984; Coffey & Atkinson, 1994). The extent of such difficulties depends on the training they have received, the level of responsibility they experience, and the support they are given. The teaching profession is no exception (Biddle, 1997; Veenman *et al.*, 1998). However, it is not clear how intensive the practice shock actually is for teachers. Power (1981) suggests it is less so than one might think, while Britzman (1986) considers the most startling aspect to be the teacher's emotional experience of the classroom situation. Bullough (1997) argues that being suddenly given full responsibility in the first teaching job and being confronted with very high levels of interaction makes for a shocking transition into this occupation.

Although the first two explanations of dropout from teacher education programmes may be valid in their own right, a thorough and realistic preparation of candidate teachers may reduce their negative effects as well, thus increasing the total lowering effect upon the intensity of the practice shock and the resulting dropout of prospective and novice teachers.

Potential Solutions on Different Levels

In the academic literature, potential measures to buff the practice shock and thereby retain candidate and beginning teachers, are described on four different levels (see the bottom half of the first column in Table 1): institutional (cooperation between training institutions and schools), curricular (structuring the transition period), relational (supervision and mentoring), and individual (reflection).

Cooperation between Training Institutions and Schools

In a number of countries, the case has been made for giving schools a larger part to play in the training of new teachers, in closer cooperation between teacher training institutes and schools. The USA in particular has taken a number of initiatives (Winitzky *et al.*, 1992), the most recent being the Professional Development School (PDS). However, the PDS has encountered difficulties in achieving its objective of systemic change. There are significant differences between training institutes (Criblez, 1998), within training institutes (Burstein *et al.*, 1999) and between schools (Townsend, 1994). Often there is no coherent vision of learning, teaching and learning to teach (Winitzky *et al.*, 1992; Howey, 1996). Staff continuity is often a problem, which weakens cooperation (Winitzky *et al.*, 1992; Imig & Switzer, 1996).

According to Burstein *et al.* (1999), integration is not necessary. Everyone can be left to do what he or she is good at, provided that there are safeguards for consistency. The roles, views and intentions of the mentor at the school and those of the supervisor from the training institute must be clear to the student (Zimpher *et al.*, 1980; Atkinson, 1994).

In England, an increasing number of schools wish to train their own teachers, a goal supported by national policy makers (Townsend, 1994). However, schools are not geared towards training teachers, and mentor teachers will most likely put their own pupils first (Edwards, 1995; Criblez, 1998). Bullough (1997) argues that qualified teachers in schools cannot be simply expected to take on the training of new teachers on top of their own jobs. Many writers emphasise the necessity of support for schools and the professional development of mentors (Townsend, 1994; Atkinson, 1994; Verloop, 1994; Bullough, 1997). In Scotland, the General Teaching Council for Scotland encourages cooperation between schools and teacher training institutions with regard to the induction of new teachers into the profession (McNally, 2000; Brisard, 2002).

Intensified cooperation between training institutions and schools entails care in the selection and preparation of mentors and their allocation to students, while mutual expectations must be specified and agreements reached concerning the advice and support to be provided. A proper balance must be struck between mentor, student and the training institute concerning tasks, responsibilities, and results (Zeichner, 1982; Gold, 1996). Problems with this approach include a lack of time and the absence of a culture encouraging cooperative learning and development (Wildman *et al.*, 1992; Williams, 1993; Vermeulen & Koopman, 2000).

Structuring the Transition Period

The fact that beginning teachers appear to go through no distinguishable stages in the transition to practice (Bullough, 1997) does not mean there are no theories about how teachers develop. There are theories about the concerns of teachers, their socialisation, and their cognitive development (Veenman, 1984). In her review, Kagan (1992) finds confirmation of certain theories (about concerns and about expertise), and concludes that beginning teachers learn mainly in terms of knowledge about pupils, their self-images as teachers, and routines in classroom management and instruction. The differences relate to their tasks (characteristics of pupils and subjects) and the support received from colleagues. Kagan argues that beginning teachers should first learn only the necessary basic skills. In the beginning, their reflection should remain focused on their own biographies, as they must have more experience before being able to reflect upon their didactic performance. Grossman (1992) has firmly criticised Kagan's review, arguing that teachers should not concentrate first on teaching procedures and routines, because teachers who work on the basis of routines no longer engage in reflection and this tends to perpetuate the focus on classroom activities rather than on pupils' learning. According to Grossman, from the outset teachers should cover all aspects of classroom management, content, student learning, moral issues, and their own identity.

It is clear that the initial development of teachers is not a natural process, but a matter of programming. In particular, the practice shock seems to depend upon the structure of the transition period. The percentage of training time that students spend in schools varies between training institutes and schools (Lanier & Little, 1986, report

on a variation by a factor of three). Perhaps even more importantly, activities in internship are not always representative of the scope and responsibility of the tasks of regular teachers. It can be argued that acceptance in the team and a gradual increase in independence are important learning conditions (Brisard, 2002). Also the control of the learning process is differently allocated: to formal national standards, as in the English NQT-scheme (Spindler & Biott, 2000); to the training institute, as at the University of Colorado (Rhodes & Bellamy, 1999); to the mentor, as in the Open University programme (Kerry & Farrow, 1996); to the students, as in a school-based internship programme in Australia (Young, 1994); to all participants in cooperation, as in a Canadian programme (Hébert & Mandin, 1996); and to a well-defined structure of activities, as in the Utrecht University postgraduate one-year immersion teacher education programme (Koetsier & Wubbels, 1995).

Mentoring and Supervision

There are many ways to stimulate, guide and support the development of professionals. The known and studied models include apprenticeship, induction, supervision, intervention, counselling, peer support, coaching, clinical supervision, cognitive coaching and mentoring (Houtveen & Van der Vegt, 1991; Veenman *et al.*, 1998; Ellinger & Bostrom, 1999). 'Mentoring' is usually taken to mean the advising and supporting of trainee teachers by more experienced teachers in a school setting, whereas 'supervision' is the most common term for advice and support from staff members of the training institute.

While the literature maintains a distinction between mentoring teachers for initial teacher training, induction, and professional development, the involved aims and approaches tend to overlap. Many states in the USA have mentoring programmes, both for mentoring trainee teachers and for helping teachers settle into new workplaces (DeBolt, 1991; Evertson & Smithey, 2000). In England and Australia, mentoring is principally for trainee teachers, stimulated by the growing role of schools in training new teachers (Hawkey, 1997; Kerry & Farrow, 1996). Mentors are usually formally allocated, but the role of mentor is often interpreted personally (Little, 1990; Williams, 1993). Hawkey (1997) describes this personal interpretation as unavoidable yet desirable, whilst Little (1990) argues that it weakens the position of the mentor. While the increasing rate of change and pressure of work have now prompted a shift towards more structured mentoring programmes (Johnson *et al.*, 1999; Douglas & McCauley, 1999), personal characteristics are still seen as important. A good mentor must want to be a mentor, make time available, have interpersonal skills, involve himself/herself in the student's training, provide specific and constructive feedback, reflect and encourage reflection, and help the student to develop confidence (Wildman *et al.*, 1992; Williams, 1993; Gold, 1996; Kerry & Farrow, 1996; Veenman *et al.*, 1996; Stanulis & Russell, 2000). McIntyre and Hagger (1996) and Glover and Mardle (1996) conclude that the school must clearly establish mentoring, ensure the availability of experienced teachers, recognise the mentor's role, provide time and resources and develop the school.

Until the 1980s, the mentoring process consisted of the mentor's acting as a model for teaching activities. Since the 1980s, the focus has shifted towards reflection, with the mentor becoming more of a partner for dialogue and cooperation (Franke & Dahlgren, 1996). In England since 1988, policy has been more strongly geared towards the training, assessment and qualification of teachers with the aid of targets, to such an extent that some argue that mentors should act as a counterbalance by focusing on

settling the teacher into the team, on reflection and on personal development (Lawson, 1992; Tomlinson, 1995; Spindler & Biott, 2000). Others have fewer objections to an initial focus on developing a basic repertoire of classroom management and instruction skills, because more variation in instruction, reflection and professional cooperation can be introduced at a later stage (Schaffer *et al.*, 1992; Hawkey, 1997; Veenman *et al.*, 1998; Fairbanks *et al.*, 2000). Finally, there are writers who believe that action and reflection are matters of different levels and that both must be given constant attention (Grossman, 1992; Tomlinson, 1995).

Little precise research has been done into the effects of mentoring (Little, 1990; Stanulis *et al.*, 2000). Veenman *et al.* (1998) identified the effects of an experimental training programme for mentors. These include better classroom organisation and management skills, more sophisticated instruction strategies, more effective planning, greater self-confidence, more positive attitudes towards being a teacher, more contact with other teachers, and a greater tendency to remain in the teaching profession. Evertson and Smithey (2000) found that the students of trained mentors gave better-organised lessons and used clearer concepts and rationales in describing and accounting for them. Non-experimental studies have identified fewer effects (Bova & Phillips, 1984; Vermeulen & Koopman, 2000).

The effects of mentoring are not necessarily limited to the students. Tomlinson (1995) believes that mentors through their role are prompted to reconsider the teaching profession and their own approach to it. Koerner (1992) and Fairbanks *et al.* (2000) argue that incorporating newcomers breaks through the isolation of the teacher (the mentor). Glover and Mardle (1996) perceive effects on the reputations of schools and their cooperation with training institutes.

The guidance and support of students also involves a supervisor at the training institute. Mentor and supervisor often have little contact and differ in what they bring to their contact with the student. The supervisor is often more precise, critical and evaluative, owing to the requirements set by the training institute. The contribution of the mentor is generally estimated to be greater than that of the supervisor, but a mentor who takes a reticent approach offers little inspiration or challenge (Zimpher *et al.*, 1980; McIntyre, 1984; Gold, 1996; Franke & Dahlgren, 1996; Hawkey, 1997). The individualistic and egalitarian culture of the education system could present major problems. Students generally are averse to getting little clear and constructive feedback. However, mentors often have difficulty in giving support and feedback and making judgements, prefer not to be too personal or confrontational, and have trouble devising stimulating challenges (Williams, 1993; Kerry & Farrow, 1996; McIntyre & Hagger, 1996; Hawkey, 1997; Zanting *et al.*, 1998).

Stimulating Reflection

Reflection is often described as being relevant to the professional development of teachers. The meaning of 'reflection' is rarely specified in terms of the *cognitive activities* involved. According to Zeichner (1982), it involves taking time to think, analysing, discussing, questioning and wanting to learn. For Calderhead (1989), it includes analysing, studying critically, evaluating and looking at things differently, while for Korthagen and Wubbels (1995) it involves the mental process of structuring and restructuring experiences, problems and/or knowledge. More often, authors specify the *contents* of reflection. It should critically consider actions of oneself and others, accompanying thoughts (intentions, assumptions, arguments), the teacher's own role in the

situation, and the organisational, moral and political context (Zeichner, 1982; Zeichner & Liston, 1985, 1987; Calderhead, 1989; Sparks-Langer *et al.*, 1990; Fairbanks *et al.*, 1995).

Some argue that student teachers hardly reflect at all (Zeichner, 1982; Calderhead, 1989; Tomlinson, 1995). However, according to Sparks-Langer *et al.* (1990), significant differences in reflection may be found across the student population at the beginning of teacher training. Korthagen (1992) identified more reflection among students subject to internal direction compared to those subject to external direction (attaching particular importance to practical guidelines and concrete feedback). LaBoskey (1994) found a division between reflective students who desired to learn, and students who had difficulty in engaging in reflection, owing to shortcomings in their cognitive and/or emotional skills.

Several authors argue that students themselves should be able to select a school and a mentor, and to determine their own activities and learning aims (Zeichner, 1982; Zeichner *et al.*, 1987; Freese, 1999). Students should be made not only to give lessons but also to analyse the culture and context of the school, to bring up matters for discussion during supervisory contacts and to talk about their intentions and ideas. Furthermore, at the training institutes, students should be enabled to exchange stories and discuss their experiences, to structure them and to write about them. These activities are expected to stimulate reflection. According to several writers, reflection is a condition for learning and professional development (Zeichner, 1982; Korthagen, 1992; Franke *et al.*, 1996; Freese, 1999). If student teaching practice should contribute to the development of reflection, the latter can also be seen as an important criterion or effect variable.

Pulling Together the Main Points

The range of potential remedies for the practice shock and dropout problems includes: an increase in the cooperation between training institutes and schools; adequate selection and allocation of schools, mentors and students; proper preparation of all persons involved and establishment of clear agreements among them; a more adequate structure for the transition period, being more realistic (intensive, for a longer period, with real responsibilities), of a broader scope (not restricted to the classroom) and better supported (the student being a member of a team and allowed gradually to grow in independence); implementing more effective forms of supervision and mentoring; and encouragement of reflection. See the bottom half of Table I, showing the main points from the literature (first column) and the specific points as incorporated in our study (third column).

A Dutch Experiment

In the Netherlands, policies have been developed that aim to attract back into the profession teachers who have dropped out, to recruit professionals from other disciplines who wish to work in education, to increase the attractiveness of the profession with salary increases, to improve the supervision and mentoring given to beginning teachers, and to reduce the practice shock (CTL, 1993; Vermeulen & Koopman, 2000).

The Netherlands has three groups of teacher training institutes: 35 'PABOs', which are higher education institutes for training primary school teachers, 12 'NLOs', which

TABLE I. Survey of criteria and factors in the literature, the Dutch policy, and our research

	The literature	The Dutch national policy	Our research	Our results
Criteria, effect variables	Practice shock Reflection	Starting competence Practice shock Growth competence	<i>Main criteria:</i> Starting competence Practice shock Reflection <i>Other criteria:</i> Follow-up: experiences and satisfaction	Positive (1) Positive Slightly positive
	Dropout (rate)		Follow-up: labour market position Development of (the relationship between) the training institutes, supervisors, mentors and schools	Positive Positive
	The cooperation between training institute and school	Selection and allocation of schools, mentors, students Preparation and agreements	Selection and allocation of schools, mentors, students Preparation and agreements Students seeking their own internship position	Little change No relation Positive (2) Positive
Factors, influencing variables	The structure of the transition period	More realistic internship Not only teaching but also other tasks (school, parents) Gradual growth in responsibility and independence	Duration and intensity of the internship period Not only teaching but other tasks (school, parents) Gradual growth in responsibility and independence Being taken seriously as a teacher and a team member Supervision and mentoring	Positive Positive Positive Positive Positive Positive
	Supervision and mentoring	Supervision and mentoring		Positive
	Encouragement of reflection		Students setting and working on own learning goals General characteristics of the participating organisations and individuals	Positive No relation

(1) 'Positive' w.r.t. the criteria means: a statistically significant ($p < 0.05$) change in the positive direction during the project

(2) 'Positive' w.r.t. the factors means: implemented, and statistically significant ($p < 0.05$) positively related to one or more main criteria

are higher education institutes for training specific-subject teachers for the first three years of secondary education, and 6 'ULO's' at universities, for training specific-subject teachers for the final three years of secondary education. During the 1990s, about 9500 new teachers qualified per year, which was insufficient to meet the projected demand (Van Riessen, 1999).

A Committee on the Future of Teaching, set up by the Minister for Education, recommended making the profession more attractive and narrowing the gap between training and practice (CTL, 1993). The proposal was to make the transition from training to practice more gradual, by incorporating an intensive practice period into the final year of training. During this period, the student teacher would have full responsibility for a class (in primary education) or a number of lessons (in secondary education), and would also participate in other tasks performed by teachers in schools, while being supervised and mentored from a distance only. In 1995, Parliament approved the plans. It was not easy to achieve consensus amongst the parties concerned, and it was therefore left to the training institutes to decide whether they wanted to begin immediately or not, with the projects concerned being labelled as experiments. The main policy aim was to reduce the practice shock experienced by new teachers, by increasing their starting competence, and by developing their competence for professional growth. These results should be reached by more realistic internships in the last year of the training programme, in which the student teacher gets a gradually increasing responsibility and independence (see the second column of Table I; the factors attended to in the policy documents did not cover all points in the literature—the main points being summarised in the first column and the specific points shown in the third column).

When starting these projects, the training institutes were left to decide whether they wished to involve all final-year students or only some of them, taking into account the estimated independence of the students and the number of schools able to offer suitable internships. The institutes were also able to decide on how to structure the supervision of the student; the coordination between supervisor and mentor; the selection and allocation of students, schools, classes and mentors; their preparation; and the agreements between institutes, schools and students. In 1995–1996, 17 projects were started, involving 600 students. That year was one of experimentation and finding remedies for teething troubles. By 1996–1997, 24 projects were underway, involving 2400 students. On average, there were two students working at each school (1.5 at primary schools and 2.5 at secondary schools), each with his/her own mentor.

Research Question

The research question was formulated as 'What are the structure, progression and effects of the projects, and what are the factors of influence?'. Taking into account the literature discussed above and the policy aim set out, three main criteria were chosen (see the third column in Table I): the starting competence in performing as a teacher; the extent of the practice shock; and the degree of reflection, as an indicator of the competence for professional growth and likelihood of continuous development. The following criteria were added: the experiences, satisfaction and position of former students nine months after qualification; and the development of (the relationship between) the training institutes, the supervisors, the mentors and the schools.

As shown in Table I, according to the literature reviewed above, the following groups of factors were chosen as potentially relevant: the selection and allocation of

students, schools, classes and mentors; the preparation of those involved and the agreements reached; whether students were seeking their own internship position or not; a number of aspects of the structure of the transition period; the supervision and mentoring provided; and activities stimulating reflection. A number of general characteristics of the institutes, schools, supervisors, mentors and students were added. In our research study (see the third column in Table I), we tried to cover the main points from both the relevant academic literature (first column) and the Dutch national policy (second column).

Method

Operationalisations

All relevant concepts were operationalised in single questions or items for Likert-type scales. We describe here the operationalisation of the main criterion variables.

The *starting competence* was operationalised in two ways. Firstly, six scales were used to measure the extent to which teachers display professional behaviour (Houtveen *et al.*, 1991) in their personal contact with pupils, the prevention of classroom disruption, motivating pupils, introducing variation in activities, working according to plan, and taking account of differences between pupils. Houtveen *et al.* found significant differences between beginning teachers, those who had worked for a slightly longer period, and those with more experience. Secondly, a scale constructed by Van Opdorp (1991) was used for the self-assessment of a number of problem areas experienced by beginning teachers, as identified by Veenman (1984). The *practice shock* was operationalised in three ways. Firstly, a scale that measures students' work-stress experiences was adopted. The scale was developed by Van Opdorp (1991) as a synthesis of the work of Lefebvre and Sandfort (1985), and Needle, Griffin and Svendsen (1981). Secondly, two scales developed by Brekelmans (1989) were selected to measure the extent to which the teacher believes that he or she must dominate events in the classroom and the extent to which the teacher considers personal contact with pupils to be important. Thirdly, a scale developed by Prick (1983) was used to measure job satisfaction, to investigate how satisfied students are with their choice of profession and how likely they are to leave the teaching profession. The *competence for professional growth* was measured using Korthagen and Wubbels' scale (1989) for the ability to reflect, covering the teacher, the pupils, the lessons and the school.

Research Design and Data Collection

The research was commissioned in the spring of 1996, and consisted of three parts.

Part I

At the end of the school year 1995–1996, all local project leaders, supervisors, mentors and student teachers were asked questions about the first experimental year.

Part II

In the school year 1996–1997, supervisors, students and mentors were surveyed twice by written questionnaires, once-only questionnaires were issued amongst the other

teachers and the directors at the schools offering internships, and oral interviews were conducted with the project leaders. The questionnaires were issued on a per-project basis, around the beginning of the internship (first measurements) and towards its conclusion (second measurements).

Part III

In the spring of 1996, a telephone survey was conducted amongst former students who had qualified at the end of the school year 1995–1996.

We report here about the second and third parts of our research.

Response

Part II

Data was obtained from all project leaders and approximately 150 supervisors, 900 students, 900 mentors, 450 other teachers at internship schools, and 400 school directors. The average response rate was 50%. The following three checks were made: (i) in a telephone survey a number of questions from the questionnaires were posed to 175 randomly chosen students who had not responded to the first or second measurements; the averages of their answers were not significantly different from those of the respondents; (ii) the response to the second measurement amongst mentors and students was 10% lower than to the first one; in the responses to the first measurement, there was no significant difference between those who responded the second time and those who did not; and (iii) the responding supervisors, mentors and students formed a pair or trio in a number of cases only; the overlap between these groups was about 25% for each pair, and given a response rate of 50% per group, it is plausible that the response was not selective but rather random.

Part III

It was possible to find 537 former students who had concluded their initial training at the institutes taking part in the projects in 1995–1996. A random sample of 300 was taken from this group, 242 of whom could be interviewed by telephone during the period available. It was not clear what sort of internship three students had taken part in; of the remaining 239, 132 had participated in the new internship scheme, while 109 had followed a conventional internship.

Reliability Checks and Data Analysis

The following analyses were carried out: item analyses, to check the reliability of the scales, per group per measurement; descriptive analyses (percentages, averages); analyses of differences between groups (PABO, NLO, ULO); analyses of differences between measurements (particularly with respect to the criterion variables for the students); and analyses of relationships. The analyses of differences and relationships were carried out using t-tests, variance analysis and correlations. In interpreting the results, a significance level of 5% was maintained. Relationships between predictors at interval level of a higher aggregation level and criterion variables at interval level of a lower aggregation level were analysed with variance analysis, after classification of the

predictors into three or four groups of values, to avoid problems in correlational analyses of data sets with partly de-aggregated data. No multilevel analyses or LISREL-analyses were conducted because, in linking data sets, the number of cases with full data decreased relatively strongly, owing to the fact that the responding supervisors, mentors and students formed a duo or trio only in a number of cases, and to accumulation of partial non-response involving more variables in the same analysis.

Results

Likert Scale Reliabilities

Almost all Likert scales proved to be sufficiently reliable, in some cases after the removal of one or two items (criteria: item-rest correlations at least .20, preferably 0.35 or more; Cronbach's alpha at least 0.60, preferably 0.70 or more). A few scales were accepted where item analysis led to an alpha slightly below 0.60 because the scales involved had been incorporated in three or more groups and/or both measurements and had proved sufficiently reliable in all other cases. See Table II for the results with regard to the main criterion variables.

Descriptive Results: criterion variables

Starting competence, practice shock, reflection. With respect to their performance as teachers, the students assessed themselves to be most successful in their contact with their pupils (particularly the PABO students, scoring 5.5 on the 6-point scale used). They had most difficulty with the more didactic and curriculum-related aspects: introducing variation in activities and working according to plan (approximately 3.8). The students attached more importance to their personal contact with the pupils (PABO: 5.4, NLO: 4.7, ULO: 4.6) than to exerting control over events in the classroom (all groups approximately 3.6). They were rather satisfied with the profession chosen (PABO: 4.8, others: 4.2). The practice shock remained limited (on average 1.7 on the 4-point scale used). See Table II.

Between the first and second measurements, there were some significant changes in the desired direction, but those were limited in absolute terms (0.2 to 0.3 points on the 4- to 6-point scales). The self-assessment of the performance of PABO and NLO students improved, as did their degree of reflection. They began to regard themselves as stronger, and the importance they attached to control by the teacher decreased further. Similar changes took place with respect to ULO students, but those changes were not significant, owing to the small numbers involved.

The former students, nine months following qualification. In the spring of 1997, the labour-market position was slightly more favourable for the former students who had taken part in the new internships in 1995–1996 than for the former students who had taken part in conventional internships (79% of the first group and 66% of the second group worked in the education system). During the telephone interviews, the respondents were given the following description of 'practice shock':

It is often assumed that beginning teachers, working in their first job, experience giving lessons to be very different in practice to the expectation they had, based on their experiences during teacher training. This is often referred to as 'practice shock'. Characteristic of this phenomenon is that people experience

TABLE II. Scale names, example items, scale characteristics, and means for the main criterion variables

Scale name	Example items	Scale-points	Number of items	Range of Cronbach's alpha (i)	Means per measurement moment per type of training institute				
					At the start of the internship period		At the end of the internship period		
					pabo (ii)	nlo	ulo	pabo	nlo
Starting competence									
Functioning as teacher	(see the six scales below)	1-6	42	0.85-0.89	4.4	4.1	4.4	4.6 (iii)	4.3
- <i>contact with pupils</i>	I show interest in what is influencing my pupils	1-6	6	0.63-0.73	5.5	4.9	4.7	5.5	4.9
- <i>handling discipline</i>	In my lessons only one person is talking at any time	1-6	7	0.58-0.70	4.5	4.2	4.3	4.5	4.1
- <i>motivating pupils</i>	I present problems to my pupils as challenges	1-6	8	0.71-0.78	4.4	4.2	4.3	4.6	4.3
- <i>varying activities</i>	I try to prevent my lessons appearing similar	1-6	7	0.71-0.76	4.0	3.7	3.6	4.2	3.8
- <i>working according to plan</i>	I cooperate with my colleagues in the lesson programme	1-6	7	0.71-0.76	3.8	3.8	4.3	3.8	4.0
- <i>taking account of differences between pupils</i>	I let pupils at different levels help each other	1-6	7	0.60-0.79	4.5	4.2	4.2	4.8	4.3
Students' self-assessment	Assessing; helping pupils who stay behind; talking with parents	1-5	11	0.71-0.80	3.8	3.5	3.6	3.9	3.7
Practice shock									
Amount of stress experienced	Being irritated easily; being exhausted at the end of the day	1-4	6	0.72-0.78	1.7	1.7	1.5	1.6	1.7
Importance of own dominance	The teacher should decide on subject matter content and sequence	1-6	8	0.68-0.75	3.7	3.7	3.5	3.4	3.4
Importance of personal contact	As a teacher you should empathise with pupils	1-6	7	0.63-0.80	5.4	4.7	4.6	5.3	4.7
Job satisfaction	I am proud of my profession	1-6	9	0.91-0.92	4.8	4.2	4.2	4.8	4.4
Reflection									
Degree of reflection	I think about the culture on my school	1-4	15	0.71-0.85	2.9	2.8	2.8	3.2	3.0

(i) the Cronbach's alpha was checked per measurement moment per type of training institute

(ii) pabo = higher vocational education institutes for training primary school teachers

nlo = higher vocational education institutes for training subject-specific teachers for the first three years of secondary education

ulo = training institutes at universities for training subject-specific teachers for the final three years of secondary education

(iii) bold italic = statistically significant difference between the two measurement moments

stress and concentrate more upon survival in the classroom, adjusting their manner of giving lessons to achieve this aim and, for a time, less upon the ideals they had during teacher training.

The first group had experienced this phenomenon (38% to a limited extent, 14% to a significant or great extent) to a lesser extent than did the second group (31% and 37% respectively). Furthermore, 50% of the first group found responsibilities in their current first job to be heavier than during their internships, compared with 66% of the second group. The first group had received more opportunities to participate in non-teaching tasks. These students were less inclined to think that the final internship should be changed to increase student independence (20%) and to broaden students' responsibilities (35%) than were the students in the second group (40% and 50% respectively).

The development of the training institutes, supervisors, schools and mentors. There was little change in the relationship between schools and training institutes. The supervisors considered they had learned that supervising students in the new scheme is a professional task and that the new scheme is more of an innovation than they had originally thought. The mentors found they had learned somewhat from mentoring students who followed the new scheme.

Descriptive Results: potentially relevant factors

At each training location, an average of 64 students participated in the new internships, guided, on average, by ten supervisors. The internships were spread across all years of primary education, and over all subjects in secondary education. Most supervisors and mentors had extensive general experience of supervising students.

Almost all training institutes formally disqualified students who were behind with their studies from following the new internship scheme. However, half of the students, the majority being NLO students, had other study commitments in addition to the internship. The training institutes usually initiated school participation. The requirements for schools were the same as for those that offered conventional internships. Most PABO students and half of the NLO and ULO students looked for their own internships. No particular requirements were generally set for mentors.

The internships varied strongly in terms of duration and intensity. Those in primary education lasted from 9 to 26 weeks (average: 15), involving 1 to 5 days per week (average: 3). The total number of days varied from 27 to 60 (average: over 40). Internships in secondary education lasted 10 to 28 weeks, with one exceptional case lasting 40 weeks (average: 18). They involved 6 to 14 hours of lessons per week (average: 10), with the total number varying from 150 to 360 (average: about 200 hours).

Almost all students had one particular mentor, and about a quarter also had a confidential advisor. In some cases, the school's director also played a supervisory role. Guidance took the form of talks with the mentor (on average once per fortnight), talks with the supervisor (often together with the mentor, on average once per five weeks) and days spent back at the institute (on average once per fortnight). Students generally valued guidance given by their mentors somewhat more than guidance given by their supervisors.

Two-thirds of *mentors* considered that they had played a role different from the supervisor in discussing and assessing the progression of the internship. From their

answers on open questions, it appears that many mentors see themselves as geared more towards practice (the profession, the lessons, the didactic) and as one who supervises the student at closer quarters, has more information than the supervisor, is in a position to react more quickly and can point out things to the supervisor. By comparison, the supervisor works at a greater distance from the student. According to a number of mentors, the supervisor assesses the progress of the internship more from the perspective of the training course as a whole, and their respective responsibilities are different. Some mentors see themselves as having a more all-round perspective on the student (in comparison with which the supervisor assesses the situation more from the theoretical viewpoint), while other mentors see their role rather as limited to the progress of the practical side of the student's training (in comparison with which it is actually the supervisor who has a more all-round perspective of the student). In response to an open question concerning the tasks carried out by the mentor, an average of four tasks were described, executed on a weekly or fortnightly basis. The most often cited tasks (in decreasing order of frequency) were: discussing lessons beforehand and afterwards, planning the study material, tests and pupils' progress. In addition, the following matters were cited (in decreasing order of frequency): familiarising the student with the school and supervising students' participation in school activities, discussing classroom performance and relationships with pupils, discussing the student's own learning process and reflecting on the job of teacher, supervising the completion of assignments for the training institute, and supervising contacts with parents.

Ninety percent of *supervisors* considered that they played a role different from the mentors. It appeared that many supervisors have the same perception of the relationship between mentor and supervisor as the mentors have (see above). A number of supervisors regard themselves as having ultimate responsibility for the successful progress of the internship, and for the assessment in terms of the aims of the training programme. A number of supervisors also think they have a role to play in supporting the mentor and solving problems in the mentor-student relationship. In response to the open question on the tasks carried out, an average of four tasks were noted, carried out up to once a fortnight. Those varied from maintaining contact by telephone and visiting the school, to dealing with those days on which students return to their training institutes, supervisory interviews with students, progress discussions together with the student and mentor, studying and discussing the internship plan, logbook and lesson preparation, and discussions with colleagues at the training institute or intervention. Three-quarters of the supervisors believed that supervising students made new and different demands, with the mentor being more closely involved, and supervision by the training institute taking place from a distance, geared towards learning goals that the student had set for himself/herself.

The internships complied reasonably to very well with what had been aimed at. The students assumed broad responsibilities and achieved a high degree of independence. On average, students were regarded as fully-fledged teachers. In primary education, the main emphasis was on giving lessons, while students also participated in team meetings and contacts with parents. In secondary education, students were often expected to carry out a particular duty for the school or assignment given by their training institute. In most cases, the student was gradually able to become more independent. In some cases, the mentor had difficulty in allocating responsibility to the student. On the other hand, students at some training institutes or schools were immediately 'thrown in at the deep end'.

Relationships between Main Criterion Variables and Potentially Relevant Factors

The criterion variables were not related to the general characteristics of the training institutes, supervisors, schools or mentors.

There are no indications that a short, intensive internship is 'better' than a longer, less intensive internship, or vice versa.

There were positive correlations between the main criterion variables and the extent to which the mentor's supervision covered multiple aspects of the job of teacher, the allocation of a confidential adviser at the school, and the fulfilment of a supervisory role by the school director.

Where students, mentors and supervisors were prepared for the new internships, where supervisors were familiar with the set-up of the new internships and had a positive view of their educational value, and where students set themselves more learning goals, the students generally scored higher on a number of criterion variables. The students who had to look for a new internship placement themselves scored on average higher upon re-measurement than those who did not have to do so but were permitted to do so; those who had to look for a new placement themselves clearly scored higher than those who were allocated places did. The students with whom the agreements reached were laid down in writing scored on average higher upon re-measurement, with respect to their self-assessment and job satisfaction. Students who had reached agreements on internship within the school teams were more positive about their performance as teachers. The following aspects were clearly *not* related to the main criterion variables: where the initiative for the school to participate came from, whether or not requirements were set for mentors, whether or not the mentor was involved in the selection and allocation of the student, and the extent of the student's introduction to the school.

Those students in projects in which they were gradually able to grow into more independent roles (rather than being 'thrown in at the deep end') recorded higher scores on a number of the main criterion variables.

The extent to which the new internship realised its aims was also related to a number of criterion variables. The extent to which the student was regarded as a fully-fledged teacher, the number of hours per week that the student spent giving lessons, the extent to which the student participated in activities at the school, and the extent to which the student worked towards achieving his or her own learning goals, were correlated with the student's self assessment of his/her performance as a teacher. The more the student was regarded as a fully-fledged teacher, the less stress he or she experienced. The more the student worked towards the learning goals he or she had set, the higher the degree of reflection. The more teaching hours the student engaged in per week, the higher the self-assessment, the importance attached to personal contact with pupils, the job satisfaction, and the measure of reflection.

Conclusions and Discussion

In the Netherlands, since 1995 teacher training institutes have experimented with projects including a new intensive and realistic internship period in the final year of the initial training programme. The projects studied varied greatly, in terms of the direction taken by means of selection, allocation, preparation and agreements made; the duration and intensity of the internships and the responsibilities they entailed; the supervision by the supervisors at the training institutes and the mentors at the school; and the activities

and independence of the students. Taken as a whole, the intended characteristics of the new internship scheme were clearly achieved: it was intensive, with a greater scope, a broad range of responsibilities and much independence, with students being regarded as fully-fledged teachers at the schools.

The students grew to a certain extent in their professional competence, experienced only a limited practice shock and developed slightly in terms of reflection. Supporting these findings, a small follow-up study of former students who had participated in the projects showed that more of them were in work and that of these more were in education, that they had experienced less of a practice shock, that they found their first job less demanding in comparison with their internship, and that they found less programme adjustment to be necessary than former students who had participated in a conventional internship.

The following factors related to the main criterion variables: the extent of preparation for the internship of all parties involved, the making of explicit agreements (between the school and the training institute, between the school and the institute on the one hand and the student on the other, and within the school), adequate and sufficiently intensive mentoring, and a proper degree of independence and responsibility (and therefore varying amongst students).

This study confirms a number of the findings and assumptions found in the academic literature. It confirms the importance of both the internship and the role of mentor being established in the school (McIntyre & Hagger, 1996; Glover & Mardle, 1996), of proper preparation of those involved (DeBolt, 1991; Douglas & McCauley, 1999), of the ability of the student to be able to choose his or her own internship place and of making proper agreements (Zeichner & Liston, 1987), and of not limiting the internship to giving lessons but also widening it to include the school context as a whole (Zeichner, 1982; Calderhead, 1989; Little, 1990; Williams, 1993).

However, the study found no confirmation of the following findings and assumptions: the importance of the extent to which the mentor actually wants to be a mentor (Wildman *et al.*, 1992; Williams, 1993; Gold, 1996), of the manner in which students and mentors are allocated (Williams, 1993), and of the mentor's familiarity with and attitude towards the internship (Gold, 1996). The fact that neither the motives nor the allocation play any significant role could mean that, in the Dutch context, the personalities of those paired together are less important than how they actually work together. Given the limited contacts between them, there was no clear evidence of effects upon the relationship between schools and training institutes.

We found no confirmation of the differences between primary and secondary education described by Campbell and Kane (1996). A number of the advantages they cite in organising internships in secondary schools were not applicable to the projects studied, given the small number of trainees per school and their relative overburdening by additional obligations they had to their training institutes.

With respect to the degree of reflection, we did not observe the two clearly distinct groups of students identified by Korthagen (1992) and LaBoskey (1994). That was not due to differences in operationalisation, as the reflection scale used (Korthagen & Wubbels, 1989) covers all four components of reflection (the actions, the underlying motives, the personality of the individual, and the context). The scores were distributed in a normal bell-curve.

We started this contribution discussing the high dropout rates and the factors contributing to it. It seems that the third factor mentioned, the practice shock experienced by beginning teachers, can be neutralised to a fairly large extent by making the

transition from training to the profession a gradual one (confirming the conclusions of Brisard, 2002). It would seem that the second and first factors, excessively idealistic expectations and demanding working conditions, can also be overcome by letting students thoroughly prepare for their internships, look for their own places, and formulate their own learning goals (bringing their preparation within a perspective of further personal development), and by allowing them to build up a realistic body of experience by means of a final internship involving a broad range of responsibilities and much individual responsibility. They should be settled into the school, with supervision that encourages reflection remaining available from a distance.

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