DOCUMENT RESUME

ED 361 306   SP 034 690

AUTHOR   Vonk, J. H. C.
TITLE   Mentoring Beginning Teachers: Development of a
                Knowledge Base for Mentors.
PUB DATE   Apr 93
NOTE   26p.; Paper presented at the Annual Meeting of the
                American Educational Research Association (Atlanta,
                GA, April 12-16, 1993).
PUB TYPE   Speeches/Conference Papers (150) -- Reports -
                Descriptive (141)

EDRS PRICE   MF01/PC02 Plus Postage.
DESCRIPTORS   *Beginning Teacher Induction; Beginning Teachers;
                Elementary Secondary Education; *Faculty Development;
                Foreign Countries; Inservice Teacher Education;
                *Interprofessional Relationship; *Knowledge Level;
                *Mentors; Models; Teacher Supervision
IDENTIFIERS   Knowledge Base for Teaching; Netherlands

ABSTRACT
        The mentoring model described in this paper assumes
teachers to be self-directing professionals, and adopts the
formalized mentor-protege relationship as the starting point and the
individual teacher's professional development as the organizing
principle for the induction of teachers into the profession. The
essential elements of a mentor's knowledge base are described as: the
dimensions in the process of beginning teachers' professional
development, which include the personal dimension, environmental
dimension, and knowledge and skills dimension; a framework witin
which to analyze their classroom teaching and guide them in solving
problems; and a teacher's professional learning process model which
aims at meaningful learning from experience. One recommendation is
that it is best to ensure a strict division between people who are
responsible for mentoring and those who are responsible for the final
assessment of the teacher concerned. (Contains 46 references.)
(JDD)

Mentoring beginning teachers:

Development of a knowledge base for mentors

J.H.C. Vonk
Vrije Universiteit, Amsterdam

Paper presented at the Annual Conference of the

American Educational Research Association

Atlanta, April 1993

BEST COPY AVAILABLE

2

Summary

This contribution has its basis in a longitudinal and close-to-practice research programme, 'The professional development of beginning teachers in secondary education', which was conducted between 1979 and 1992. It concerned a study into the process of professional development of beginning teachers during their first five years of service. Furthermore data were collected from a large number of training courses for beginning teachers, and from training courses for the mentors of beginning teachers - i.e., senior teachers who are responsible for mentoring their beginning colleagues - which were executed in the context of the programme. This paper describes in particular the knowledge base that was developed for mentors of beginning teachers.

The programme considers mentoring of beginning teachers as part of 'Supervision of Instruction'. The mentoring model discussed in this paper assumes teachers to be self-directing professionals, and therefore adopts the formalized mentor-protégé relationship as the starting point and the individual teacher's professional development as the organizing principle for the induction of teachers into the profession.

In this paper we only report about a conceptual framework of the process of becoming a teacher, which is aimed at gaining insight in and understanding of the problematic situations beginning teachers are confronted with, and in how to help them tackle these problems. It describes the following essential elements of a mentor's knowledge base: dimensions in the process of beginning teachers' professional development, a framework to analyze their classroom teaching, and finally a teacher's professional learning process model which aims at meaningful learning. The results of our studies are used as theoretical background for the training of mentors for beginning teachers.

1. Introduction

Nearly everywhere in the world the teaching profession is under discussion today. Next to the status of the profession and the role of the teacher in the educational enterprise, the quality of teaching, the process of teacher professional development and the strategies to influence that process are the central issues. Adequate instructional and curricular leadership in schools - sometimes indicated as 'supervisory leadership' (Glatthorn, 1990) - is often seen as the most effective solution. These leadership modalities promote the enhancement of the individual teacher's quality of performance as well as that of the school organization as a whole. The way these leader hip functions are being implemented depends strongly on the view on the teachers' role adopted by the organizations or government concerned.

The OECD (1988) identified two different teacher models that had been adopted by the governments in the various European countries: the *minimum competency model* and the *model of open professionalism*. In current European educational policies it (=OECD) observes an overriding tendency towards the idea of the teacher's role which can be described as the *minimum competency model*. This model assumes the process of teaching to be a *delivery system*. Decisions about what will be taught and how it is to be taught are taken on the management level above the classroom and the school, i.e. a school curriculum prescribed in great detail. The teacher's job is considered only to be delivering that curriculum to the pupils as effectively and efficiently as possible. In this model it is easy to assess teachers by judging how well they achieve this, and supervision of instruction can be organized in such a way that deficiencies can be remedied. This model assumes the existence of a set of effective teaching skills and expects school management or inspectorate to be capable of diagnosing deficiencies. Clinical supervision models (Cogan, 1973; Hunter, 1984) are seen as appropriate strategies for up-dating teachers' competence regularly and for providing remedial action for those falling short of acceptable norms. This bureaucratic/managerial oriented approach to the educational sector, evident in many schemes for teacher appraisal, often results in emphasizing almost exclusively the instrumental aspects of teaching. This approach sees teaching as a technical activity, as a means to certain ends, i.e., mostly politically attractive goals that are not examined from an educational point of view. All in all, teachers tend to be submitted to a bureaucratic system that, in practice, offers them little more than the right to exercise a limited technical discretion within a restrictive framework of bureaucratic rules and managerial controls (Carr, 1989; Bernier & McClelland, 1989).

The second teacher's role model, identified as *open professionalism*, puts the teacher at the centre of the process of improving the quality of education. Teachers, individually as well as in groups, are

3

responsible for analyzing the needs of the school. They are able and willing to discuss not only among themselves, but with the other legitimate and interested parties, possible solutions or developments in open debate and eventually to take decisions about what shall be done and to ensure its implementation. Teachers are seen as self-improving innovative leaders, who are capable of analyzing their own actions, able to identify pupils' needs and to react to them and to evaluate the outcome of those interventions. In this context Klafki (1988, p.27) stipulates with respect to teacher education: "Any teacher education that deserves this name must refer to the school as the domain of future and already practicing teachers". This means, apart from attractive working conditions, above all a high degree of autonomy in the sense of self-administration and curricular autonomy, freedom of teaching and the possibility to influence the structuralization of the education system.

In the model of open professionalism the responsibility for curricular and instructional leadership functions is not seen as primarily restricted to the position of school management but as a function of the school as a whole (Glickman, 1991). We consider teachers as autonomous self-directing professionals (Vonk, 1991[b], p.119) and therefore everybody in the school organization can be challenged to take this responsibility. The school management's major task is to facilitate and monitor the proper execution of these functions. In this context effective induction of teachers in a certain school depends heavily on the extent to which the instructional and curricular leadership functions are implemented. This is the more true because most teachers still spend the major part of their time isolated from their peers, and, as a consequence, beginning teachers (BTs) do not receive, as is natural in other professions, ongoing direction and assistance from more experienced colleagues (Huling-Austin, 1990). As a consequence, from the first day on beginners have exactly the same responsibility as their colleagues with many years of experience and pupils, parents, colleagues and management often expect them to act as full professionals. Many beginners fail to meet these expectations, and the drop-out rate during the first three years of service can sometimes reach up to 50% (Ooms, 1991). In conclusion, we say that in many schools induction is not a part of their culture. Consequently, effective induction will occur only if schools facilitate induction programmes in one way or another.

We define *teacher induction* as the transition from student-teacher to self-directing professional. It concerns the first two stages in the process after initial training of teacher professional development: the *threshold phase* and the *phase of growing into the profession* (Vonk 1991[a], p.65). Teacher induction can be best understood as part of the continuum of the process of teacher professional development which can be described as follows.
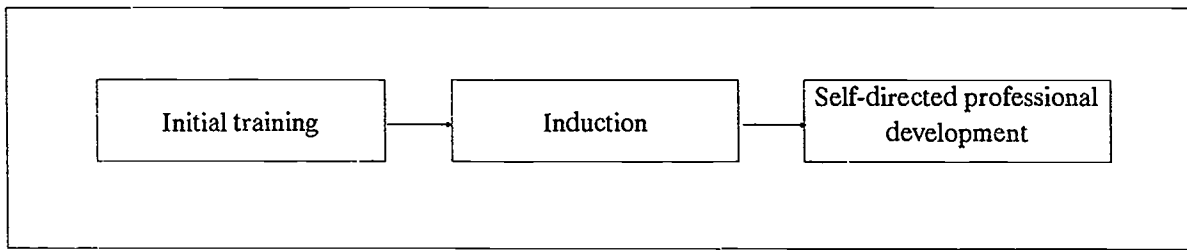
4

5

Figure 1
Continuum of the process of a BT's professional development

Initial teacher training (pre-professional phase) is aimed at developing teachers' starting competencies, induction (threshold phase and phase of growing into the profession) is aimed at helping novices develop a professional identity and an appropriate repertory of actions and finally structure their self-directed professional development. The importance of teacher induction both for beginners and schools is that it contributes to avoiding unnecessary tension and (future) malfunctioning. A good start definitely influences a teacher's abilities and willingness to develop in a positive direction. From studies on teacher professional development we know that teachers who have been left to fend for themselves in their first years of teaching tend to develop a strongly 'survival oriented' repertory of actions[1], sometimes indicated as 'survival kit'. This results from a 'trial and error' approach, from pressure brought on by circumstances and is most often in-flexible in nature. Because of time constraints beginners hardly find time for reflection and if they do, they lack a solid *orientation base*[2]: they do not know what to reflect on. As a consequence, such a repertory offers very few points of contact for expansion and further development. Changes in that repertory demand great effort on the part of those teachers because it could again lead to class control problems, which is something that those teachers definitely wish to avoid anyway (Vonk & Schras, 1987). Currently, in many schools, the reality of teacher induction is still different: systematic induction programmes are almost non-existent. During induction most beginners (with some exceptions) experience that they are left to fend for themselves. They rarely find support or help from colleagues (mentors) or from the school management, and if they do find support, it is mostly inadequate and of little help. Many beginners still experience the induction period as a 'reality shock'.

Adequate mentoring, however, can help novice teachers to tackle the problems they meet effectively and so to cope with the reality-shock. Eventually, we may expect this to result in the development of a more flexible repertory of actions and a more open-minded attitude to change. In this paper the issue of a mentor's knowledge base is discussed.

---

1   *Action* is defined as: A purposive change in the world of objects with which an individual is confronted.
2   *Orientation base* is defined as: a conceptual framework related to a repertory of actions and which is based on an integrated whole of theoretical knowledge and practical experiences.

5

2. Research background of the mentor's knowledge base

The development of the knowledge base we offer mentors in our training programme result from our longitudinal and close-to-practice studies (1979-1992) on the process of professional development of beginning teachers (first five years of service). These studies include:

- (1979-1984) a series of qualitative case studies aimed at the close-to-practice analysis of problems of beginning teachers during the threshold period (first year of service) in their career (Vonk, 1982, 1984);

- (1984-1986) a study (a series of half-open retrospective interviews) on BTs' professional development during the phase of growing into the profession (second to fifth years of service) (Vonk & Schras, 1987);

- (1986-1988) a study on the causes of BTs' problems (an experimental in-service training programme with data collection through interviews and classroom observations) and the description of some heuristics to help beginning teachers to tackle the problematic situations they envisage (Vonk, 1989);

- (1988-1992) a study (experimental course with systematic feedback interviews with mentors and protégés) on mentoring beginning teachers (Vonk, 1992).

The outcomes of these studies resulted, next to gaining insight in and understanding of the process of becoming a teacher, in the identification of a knowledge and skills base needed for the effective mentoring of BTs. Particularly in the last study we could bring together various elements of our previous work and so develop a coherent and practice-oriented training programme for the mentors of beginning teachers (see Annex 1 for the outline of the programme).

Starting points in our studies were two principles. First, a close-to-practice approach was chosen, and second, teacher professional development was viewed from an individualistic perspective[3]. Basic assumptions were:

1. Although the term 'development' connotes internally guided rather than externally imposed changes, *professional development*[4] is considered the upshot of a learning process that is directed at acquiring a coherent whole of the knowledge, insights, attitudes and repertory that a teacher

---

3   We see teachers as individuals who develop during their career their own repertory of actions.
    Our ideas on professional development as developed in the early eighties, strongly match those expressed by Levine (1989) in her book *Promoting adult growth in schools*
4   See: Burke (1987), Fessler et al. (1992) and Kremer-Hayon et al. (1993)

needs for the everyday practicing of the profession - often indicated as the *teacher's professional knowledge and skills base* (Vonk, 1989). Professional development assumes development in a *positive* direction, i.e. optimizing a teacher's knowledge and skills base.

2. If one considers BTs as professionals in the making, it follows that the development of their personal professional knowledge and skills base will play a central role in their learning[5].

3. During teaching, teachers use themselves as instruments. Consequently, we consider the world of teaching not as an objectively measurable unit, but as a function of personal interaction and perception (Merriam, 1991, p.17). This includes the absence of a standardized teaching repertory applicable in any situation. Though considerable knowledge and expertise on teaching skills is available (Reynolds, 1989), teachers always have to make an 'interpretation in context[6]' to attune their actions to the class they are confronted with.

4. Because we are interested in insight, discovery and interpretation, rather than hypothesis testing, we chose a qualitative case study approach (Vonk, 1984, p.16). In that approach every BT or mentor was considered to be a case and we aimed at collecting as many data as possible from each of them (thick description approach). Therefore we took the position of participant researcher. To investigate a BT's processes of professional development we collected data and acted as mentor. Besides, we trained mentors (provisional programme), and after a certain period of time we collected data on the adequacy of the knowledge and skills base provided, by means of retrospective interviews in which the mentors reflected on their experiences as mentors. On the basis of the outcomes of these interviews the provisional programme was adjusted.

To arrive at conclusions (generalizations) the methodology of the continuous comparison of cases (Glaser & Strauss, 1967) was applied. Generalizations in this context are 'hypothesis' to be carried on from one case to the next, rather than general laws to be applied across a population (Brown & McIntyre, 1988). The conclusions were constantly verified and/or adjusted in a series of discussions/interviews with the participants of in-service courses for BTs (annually three groups of 20 BTs) and/or in training courses for mentors (annually 20 to 30 participants).

Because we strongly believe that valuable knowledge in the educational arena results from a permanent interaction between practice and theory, we continually tried to connect our findings (practical theory) with 'academic theory' (explanatory function). In doing so we step by step developed practice-based knowledge of and insight into the process of becoming a teacher; i.e., in

---

5   By *learning* we mean a process with more or less durable results, whereby new behaviour potentials of the person arise or changes occur in those already present. Learning is directed at the change of the learner's cognitive schemes and cognitive skills. As the result of learning we see that the learner's repertory of actions undergoes both quantitative and qualitative changes.

6   That context is defined by the teacher's personal qualities and the environmental constraints

7

the nature, the history and the causes of BTs' problems and in effective strategies to help them tackle their problems. In conjunction we gained knowledge of and insight into the process of mentoring beginning teachers which led to the development of a practice-based mentor training programme[7].

3. The mentor's knowledge base

Mentoring is not just the transfer of existing 'craft' knowledge and skills to a novice (Brown & McIntyre, 1988). It is helping a BT develop his/her own flexible repertory of teaching and classroom management skills, to develop a proper insight in their pupils' learning processes and a perspective on him/herself as a teacher. These four elements are vital in the process of a beginning teacher's professional development. As a consequence, the mentoring model we developed can be seen as an example of the *formalized mentor-protégé model* with *beginning teachers' professional development* as its organizing principle (Andrews, 1986).

We consider mentoring to be a dynamic, reciprocal relationship in a work environment between an advanced career incumbent (mentor) and a beginner (protégé) aimed at promoting the career development of both (Healy & Welchert, 1990). The beginner's interest in the relation is the help he receives from an expert in acquiring a professional identity, i.e., his growth from novice to self-directing professional. The mentor's interest in this relationship is that, in order to be able to help other teachers effectively, he has to reflect[8] continuously on his own professional knowledge and repertory of actions. This nearly always results in improvement of that repertory. Apart from that, in particular for older teachers, the mentoring relationship means practicing 'generativity'[9]. Essential in this definition, however, is the reciprocity. The mentoring relationship contributes to the professional development of both participants, i.e. it boosts the quality of the professional practice of both participants.

In our model, apart from being a qualified teacher with excellent classroom management skills and an expert in the subject and in the subject methodology concerned, a good mentor must have the following personal qualities: open-mindedness, reflectiveness, flexibility, listening skills, empathy, creativity and a helping attitude (see:Vonk, 1992[10]). Apart from these personal characteristics, those responsible for mentoring BTs must meet some prerequisites. The first is a *knowledge base*.

---

7   See Appendix 1 for the outline of the programme.
8   *Reflection* includes analyzing one's own professional knowledge and repertory, i.e. putting it in a wider context and relating it to existing knowledge and research. See Schön (1987) and Calderhead (1988) for a more detailed analysis.
9   Levine (1989), p. 62, quotes Erikson: "Generativity is primarily the interest in establishing and guiding the next generation or whatever in a given case may become the absorbing object of a parental kind of responsibility".
10   Elements of this model are described in English in Vonk (1993)

Mentors need to understand the nature of the process of the BT's professional development, the nature of the problems beginners experience and what causes these problems, and above all, they must have insight in the essentials of the teacher's professional learning process. The second is a *skills base*. In the mentor-protégé relationship a mentor has to play a variety of roles: observer, provider of feedback, instructor, and evaluator[11]. The setting of the relationship is like counseling: mentors can be considered 'skilled helpers' (Egan, 1986). To act effectively a mentor must have mastered a wide range of types of interpersonal behaviour and know how these types of behaviour affect their protégés, and what type of behaviour is appropriate in what situation. It will be clear that mentors have to be selected carefully: not all teachers meet the prerequisites mentioned above or the abilities to develop them. After selection they will still need substantial training to be able to act effectively as a mentor.

Next to expertise in the subject and the subject methodologies, a mentor's basic knowledge base exists of three elements: first, insight in and understanding of the process of BTs' professional development, second, knowledge of strategies how to guide and/or advice BTs as effective as possible to tackle their problems, and finally, insight in and understanding of the process of learning from experience. In the following sections these issues will be discussed.

3.1 Issues in the professional development of beginning teachers

In the last decade many studies have appeared on the process of teachers' professional development[12]. The following phases in a teacher's career may be distinguished:
  - the *pre-professional phase*, the period of initial education and training;
  - the *threshold phase*, the first year of teaching;
  - the *phase of growing into the profession*, generally the period between the second and seventh year of service;
  - the *first professional phase*;
  - the *phase of reorientation towards oneself and the profession*, sometimes indicated as the mid-career crisis;
  - the *second professional phase*;
  - the *phase of winding down*, the period before retirement.

In this paper only the characteristics of the threshold phase are described. Our mentoring activities mainly focus on BTs' professional development during this phase.

---

11   For a detailed description of these roles see: Vonk (1993).
12   For an overview of these studies see Fessler: (1992), Ch.1.

The *threshold phase* concerns the first year of teaching (probational period) when BTs are confronted with all the teacher's responsibilities at the same time. They have to learn to act as a teacher, to reframe their knowledge and to meet the expectations of the school environment. Because many BTs do not know what to do under these circumstances they meet and/or create numerous 'problematic situations' with which they have to learn to cope. This phase is often indicated as the "survival period", the novice's major concern is *how to maintain him/herself* in the difficult to control situations they encounter. They are mainly focused on the day to day mastery of their new job (Vonk, 1984; Veenman, 1984; Ryan, 1986), and strive for acceptance by pupils, colleagues and school management. Müller-Fohrbrodt, et al. (1978), describe the first year of teaching as a "praxis shock". In general nine problem areas for BTs in secondary schools are identified: subject content, classroom discipline, motivating pupils, dealing with individual differences, assessing pupils' work, contacts with parents, classroom management, inadequate teaching materials and supplies, and the problems of individual pupils[13]. Veenman (1984) identified the same problems except 'subject-matter' for primary school teachers. Our close-to-practice analysis of the problems BTs experience during the threshold phase added two major problem areas: the area of BT's development as a person, and the area of adapting to the school environment. This led to the distinction of three dimensions in the nature of the problems BTs meet in their professional development during the threshold phase.

We also succeeded in identifying those experiences that marked BTs' transition from the 'threshold phase' to the 'phase of growing into the profession'. With respect to BTs' functioning at the classroom level, the following experiences reported were characteristic for that transition: on the one hand feeling accepted by the pupils in one's role as a teacher and on the other hand feeling confident that one has chosen the right job (basis for self-confidence); starting to feel familiar with the subject content at pupil level; starting to gain insight in the differences in structure between various classes and feeling able to react adequately to those differences; feeling able to appraise pupils' reactions properly. At the school level they reported: feeling at home in the school, i.e. being accepted by their colleagues and having gained insight in the culture of the school.

3.2 Dimensions in BT's process of professional development

For mentors it is important to understand both the origin and the nature of BTs' problems. In order to help mentors analyze those problems we distinguish three dimensions in the complex process of teacher induction: *the personal dimension*, *the environmental dimension*, and finally *the professional*

---

13 For a detailed overview of the problems of first year teachers see: Vonk (1984).
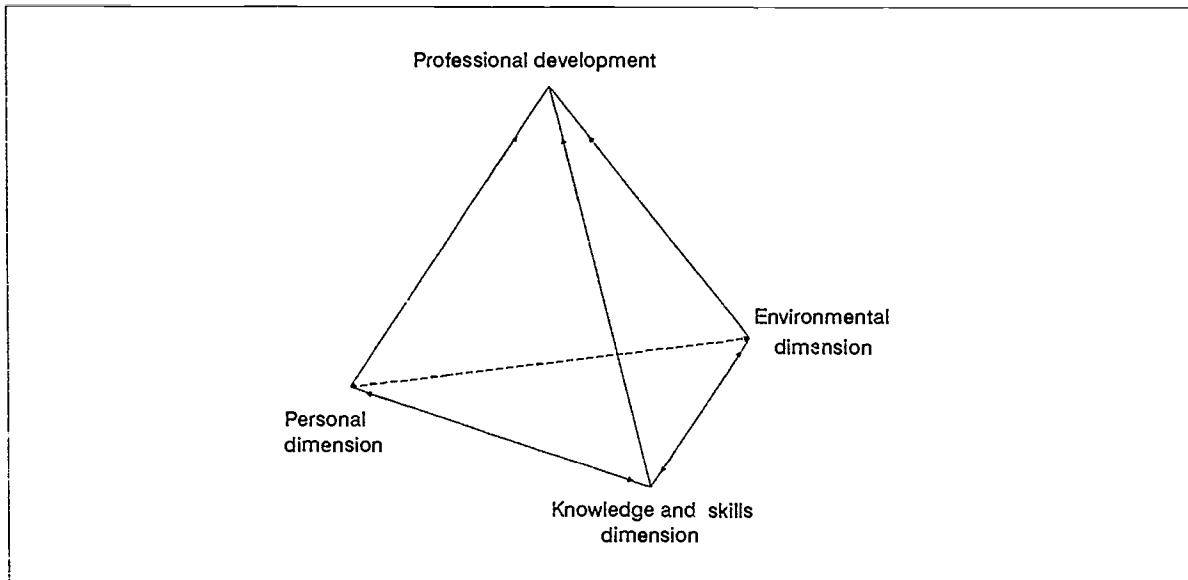
Figure 2
Conceptualization of a BT's professional development

knowledge and skills dimension. Experiences in all three dimensions interact and form the basis of the beginning teacher's professional development (Figure 2).

The personal dimension

An essential characteristic of being a teacher is that in teaching-learning situations the teacher uses himself as a means. Therefore, in education the teacher as a person is always at issue. Many beginners experience this as frightening and stressful. Because the majority of the beginners is still in the transition stage from adolescence to adulthood, for many of them becoming a teacher means growing to maturity under high pressure. They have to develop a new perspective on themselves - 'I as a teacher', and to learn to develop professionally. In the beginning, many young teachers, do not have the slightest idea for example, how they will behave under environmental pressure or in situations of great stress. They are so self-concerned - i.e. survival oriented - that they hardly make a distinction between problems that originate from them being in a transition stage and those that originate from the organization. As a consequence, they tend to either blame only themselves or the organization for all the failures they experience. All in all, they lack experience in this regard and therefore have to develop new behaviour to cope with these situations and sometimes they even have to adjust their self-image. Mentoring in this context is in particular concerned with helping the novices develop a clear perspective on themselves and their situation.

11

The environmental dimension

The situation of the beginning teacher in school is characterized by a confrontation with:

- *new responsibilities*: from the first day and the first lesson on, beginners have exactly the same responsibility for the classes they teach as those teachers who have been teaching for twenty years.
- *a school environment in which various teaching cultures exist*: each school and each department has its own set of written and unwritten rules (Hargreaves, 1992). Most often novices discover the rules concerned by surprise, i.e. they are so obvious for the sitting teachers that nobody explains them in advance.
- *expectations concerning the way in which one functions*, i.e. colleagues, school management, pupils or students and parents. Novices are supposed to meet these expectations; however, they do not precisely know what the expectations are and if they discover them they do not know how to cope.

The above mentioned confrontations compel beginners to *reorient* themselves with regard to their own ideas about 'I as a teacher' and to their already gained knowledge and skills - what worked well during initial training, will not always work in the new school environment. Apart from that, many novices have to make the change from identifying themselves with the pupil role to that of the teacher role. This process of reorientation is often accompanied by feelings of uncertainty and stress. Furthermore, the organization and physical resources of a school, and perhaps more significantly the beliefs that are not only held and valued within the institution (written rule pattern) but have become embedded within its many taken-for-granted practices (unwritten rules), inevitably exert a powerful influence upon the novice teacher (Calderhead, 1992). Especially in situations where beginners do not receive any support, they experience the first months of their induction rather as a *rite of passage* than a valuable learning experience (Vonk, 1984). Though the process of adaptation to the new school environment is interactive in nature, we distinguish, based on our research, three major adaptation strategies. First, those teachers who feel familiar with the existing school culture simply *adopt* that culture. The second group of teachers *adapt strategically* to the culture of the school, because they feel they first have to show their colleagues and pupils that they are able to function in the existing school culture before changing their teaching approach. The last group does not agree with the existing culture and decides to *follow their own pace*. The members of the last group only survive if they have considerable frustration tolerance. From their studies on teacher socialization Lacey (1978) and Zeichner & Tabachnick (1985), reported similar adaptation strategies.

12

Professional knowledge and skills dimension

The professional knowledge and skills a BT has to develop further concern three sub-dimensions: pedagogical content knowledge, classroom management skills and finally teaching skills.

Pedagogical content knowledge. In general, novices have an elaborate academic background. They do not expect to meet problems with subject matter. Quite soon, however, they experience that they do not master their subjects at 'school' level. Because beginners have major problems in translating the academic knowledge into school knowledge, they have to *reframe* their subject knowledge base[14]. The publications of Shulman (1986) and Wilson et al. (1987) have led to a number of studies which investigated the changes in novice teachers' understanding of the subject they teach. Research shows that a large amount of time during the first two years of service is spent on re-learning the subject matter (Vonk, 1984). Shulman suggests that in order to teach a subject a teacher needs both *breadth and depth* of knowledge, a rich factual knowledge base with many interconnections which represents a much more thorough understanding than that which one achieves purely as a learner. In addition, teachers develop a wide repertoire of knowledge which enables them to facilitate understanding in pupils and to cater for pupils' individual differences. Shulman refers to this knowledge as *pedagogical content knowledge*. The concept as such is rather vague. Ashton (1990) sees it as the integration of pedagogy and content knowledge. Apart from knowledge of pupils' pre-conceptions, examples, anecdotes, experiments and difficulties that are commonly experienced by pupils and that help teachers communicate about subject matter, it consists of a systematic examination of the structures of the disciplines and how pupils come to understand them. Many novices lack that particular knowledge.

Classroom management skills. Research shows that most beginning teachers have poor classroom management skills, i.e., they are not able to organize their lessons in such a way that an *on-task* working climate emerges and can be maintained effectively (see the model of Figure 4). They have problems with reacting adequately to unrest and discipline problems, because they have no overview of what happens, they lack an adequate set of classroom rules and, if they have established such a set, they do not know how to maintain it, and finally, they do not know how to deal effectively with those who break those rules (sanctions).

One of the major origins of the problems of beginning teachers is that they are not familiar with the complexity of the classroom in which they have to work (ecology of the classroom). Classroom teaching is one of the most difficult modes of teaching: one teacher is brought together with

---

14   For a detailed overview of problems on this issue as reported by novices, see Vonk (1984), pp. 110-112.

twenty-five to thirty pupils in one space, and that group is expected to be engaged in activities that lead to externally defined objectives as they are laid down in the curriculum. The conditions of teachers' actions (directed at maintaining desired pupil activities - i.e., on-task behaviour - are listed in Figure 3).

For the beginners this 'learning' environment is characterized by:
- *multi-dimensionality* - during teaching a teacher has to do many things: teaching, monitoring, helping, discipline, etcetera;
- *simultaneity* - most of those things have to be done simultaneously;
- *immediacy* - a teacher has to react immediately to pupils' actions, in particular to those that tend to disturb the working climate in the class;
- *unpredictability* - many things that happen in class are unpredictable, as a consequence teachers have to improvise constantly;
- *publicness* - teachers act in public, i.e., their actions are subject to discussion in various groups: pupils, colleagues, parents, community etcetera;
- *history* - every class (group) has its own history and because a teacher sees that class only for a limited number of periods a week, a teacher has only few opportunities to influence the behaviour of that group.

Figure 3,
Characteristics of the conditions of classroom teaching (Doyle, 1979, 1986)

The main question for them is how to manage a group in such a complex environment. A mentor has to consider in what way he can help, support and advise a beginner to function properly under these stressful conditions.

Teaching skills. At the start of the threshold phase BTs experience numerous problems with ordinary classroom teaching. Although they have learned a number of teaching strategies, both in theory and school-practice, they still seem to lack effective classroom teaching skills, such as: the skills to structure the teaching-learning environment in order to tackle the time-on-task problem, to vary learning activities which last a limited amount of time, to monitor the individual pupil's progress, etcetera. An even more difficult problem is to adapt their teaching to individual differences between their pupils. During their fists months of teaching many BTs do not even see individual pupils in

their classes; to them a class is an unstructured noisy group with some nasty pupils who permanently attract their attention.

The whole situation in which the beginning teacher operates can be characterized as a *difficult control situation*. For beginning teachers who have a number of different classes it is even more problematic to act adequately under those circumstances. At the same time, it appears that the concept of the teacher's role they developed during initial teacher education barely offers them a basis to tackle the difficult control situation (Vonk, 1984, pp. 11-14, p. 109).

3.3 How to assist BTs to improve?

Most BTs start their career in a rather traditional school environment where classroom teaching is the usual mode of teaching. Most of our findings with respect to BTs' professional development corresponded very well with the findings of Brown & McIntyre (1988) from their investigation on 'Professional craft knowledge of teachers'. From our studies on BTs' problems and from our experiences with in-service courses we learned that the most crucial problems for beginners are:
- the planning, organization and management of teaching and pupils' learning activities (maintaining continuity in 'pupils' activities' and maintaining 'progress in pupils' learning');
- adapting the subject content to pupils' abilities (for most BTs, however, this particular issue did not become a problem until they had ended the threshold phase, i.e., crossed the threshold in the second half of their first year of service).

BTs' actions are mainly directed at maintaining a desirable state of pupil activity and at making desirable progress. Starting from a permanent evaluation of the situation in terms of the state of pupils' activities and of making progress, they take appropriate action based on their professional knowledge and skills, their personal dispositions and the estimation of environmental constraints.

In our mentor activities we have placed these issues in a central position because many other problems BTs experience originate from the two mentioned above. With respect to the first issue our help is based on the principle:

> *A good lesson is a lesson during which all pupils are engaged all the time in one activity or another aimed at making progress (i.e., contribute to achieving the objectives set for that particular lesson).* (Vonk, 1989)

This principle is, amongst others, supported by the research from Matthijssen (1984) and from Brown & McIntyre (1988). Matthijssen was interested in the extent of pupils' 'off-task activities' (escape

activities) during different patterns of classroom teaching. He observed a great number of lessons and afterwards interviewed both teachers and pupils, and concluded that in a highly *teacher centred* pattern, in which the teacher acts in a *directive* way (strict control and little pupil initiative), little escape (off-task) activities occur. In these lessons all activities were task-oriented and the course of the lessons was strictly functional. In more *open* (decentralized and more pupil initiatives) lesson patterns the extent of off-task activities was much higher. It strongly depended on the teacher's management skills whether he was able to keep pupils' initiatives within acceptable (task-oriented) limits or not. Lack of those skills often led to disruption of the working climate in the class.

Brown & McIntyre observed lessons of 'excellent' teachers (selected on the basis of interviews with pupils, staff and management) and interviewed them afterwards. They came to the conclusion that the "teachers evaluated their lessons in terms of maintaining particular *normal desirable states of pupil activity*"; i.e. they evaluated a lesson as satisfactory as long as pupils continued to act in those ways which were seen as routinely desirable (p. 43). Teachers' second criterium was that the activities should result in progress. Dependent from the contextual factors (factors that co-define the teaching-learning environment) teachers directed their actions at maintaining pupils on-task activities and on maintaining progress.

Starting from our own findings with respect to problems in BTs' classroom teaching, we developed a model of classroom teaching in which *the continuity in pupils' activities* and *making progress* are the central topics (see Figure 4). It is a variation on the model developed by Brown & McIntyre (1988). We added the permanent evaluation (also seen as the 'observation' and 'interpretation' stage in Figure 5), and the element of 'teacher qualities'. On the basis of this *classroom management oriented* model the nature and the origins of BTs' problems with classroom teaching can be made transparent.

This management directed approach is an effective strategy for BTs to create a workable working climate in their classes. The more so, because during the first couple of months most BTs do not have sufficient 'classroom knowledge' of their classes[15], which makes for them a more open classroom management nearly impossible. Essential in this approach is that BTs plan, organize and manage pupil activities instead of planning and organizing only their own teaching activities. For many BTs this means a fundamental shift in thinking about their teaching. Mentors' most important task is to help their protégés develop proper classroom knowledge during their first months of service. A

---

15   We borrowed this concept from Doyle (1986). *Classroom knowledge* represents the cognitive scheme a teacher has from a certain class. It contains information about pupils' behaviour, learning results, background information, like and/or dislike of certain pupils, expectations a teacher has for individual pupils and from the class as a whole, etc., and the experiences the teacher has is dealing with that class as a group. Classroom knowledge is the basis for teachers' acting in that class.
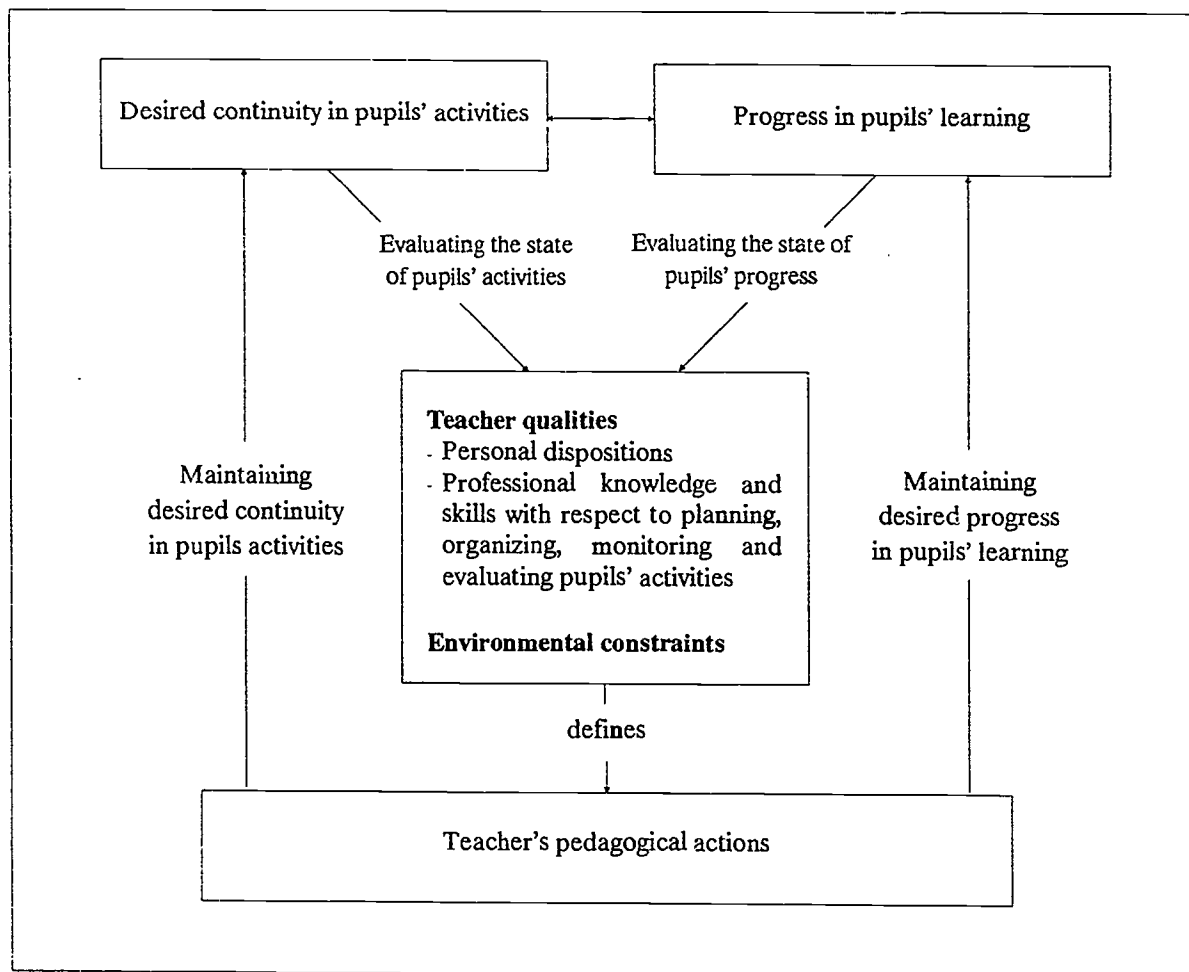
16

Figure 4
Classroom teaching: Concepts and relationships
(Variant on the scheme of Brown & McIntyre (1988))

second task is to help their protégés develop a more directive, task-oriented way of planning, organizing and managing their pupils' (learning) activities.

Only planning and organizing pupils' learning activities is not sufficient: Learning has to be meaningful to the pupils. Teaching is more than simply transferring academic knowledge to pupils, which often leads only to rote learning. Here we come to the second issue in which mentors can play a crucial role at helping their protégés: BTs have to reframe their subject-knowledge base. Teachers are expected to be experts in translating academic knowledge into *school knowledge* that can be understood by their pupils. In this context professional teachers may see teaching as *open-ended exploration* in which they express their pedagogical knowledge in action; i.e., the view of *teaching as*

17

an inquiry informed by a self-consciously held body of principles in which these principles are put to the acid test of practice. We share Stones's view on teaching: "teachers as inquirers attempting to solve pedagogical problems" (Stones, 1992, p. 14). Pedagogical problems, however, mainly concern 'the conceptual structure of the subject to be taught and the most effective method of teaching aimed at meaningful learning'. In this context, Kirkham (1992) argues that "with the help of a mentor, the student-teacher/novice could make a systematic attempt to match the structure and the coherence of the subject-matter to the cognitive and affective development of a particular group of children in a specific context" (p. 68). Through assistance with the preparation of lessons, the analysis of the subject content, and the selection of methods that lead to meaningful learning, a mentor can be of great help to the BT. However, not only BTs will profit from all this but their pupils will as well.

3.4 Learning from experience

With good mentoring, the novice would learn to refer to theory for insights about a particular situation both in the planning of lessons (pupil activities) and in examining the consequences (in terms of normal desirable pupil activities and progress) afterwards (Kirkham, 1992). At first however, many beginners tend to think their theoretical luggage of little use to tackle the problems they meet in practice. Obviously they will not refer to theory to develop that insight and understanding. Only when theory can be connected with their practical experiences - most often dealing with problematic situations for which they are trying to find a solution - and provides an explanation and/or a perspective on a solution it will be accepted by the BT. A mentor can help a BT examine the problematic situations they are confronted with and try to help him/her reflect on that situation[16]. This examination, however, requires from a mentor a well-developed insight into how professionals learn from their experiences, and especially, how these experiences have to be processed in order to lead to new flexible behaviour, i.e. to result in meaningful learning. The diagram of Figure 5 illustrates the model of 'learning from experience'. In that process we distinguish the following steps.

When teaching, a teacher acts (participates) in a teaching-learning environment, in which he has to deal with a series of pedagogical problems. He observes what happens in relation to those actions which are aimed at solving those problems, and gives meaning to those observations (interpretation in terms of desired/undesired pupil activities) - so far he only *experiences*. Subsequently, he stores the observations together with the meaning given in his cognitive system related to the class

---

16   The development of meaningful knowledge and theory about teachers' actions is possible only as the result of continuous interaction between academic knowledge and the practitioner's knowledge and expertise (Vonk, 1991a, p. 68). In fact, theory and practice are best conceived of as two aspects of the same process. In that context, Stones (p. 13) proposes as a working definition of 'theory': "bodies of principles that have explanatory power and the potential of guiding teacher action".
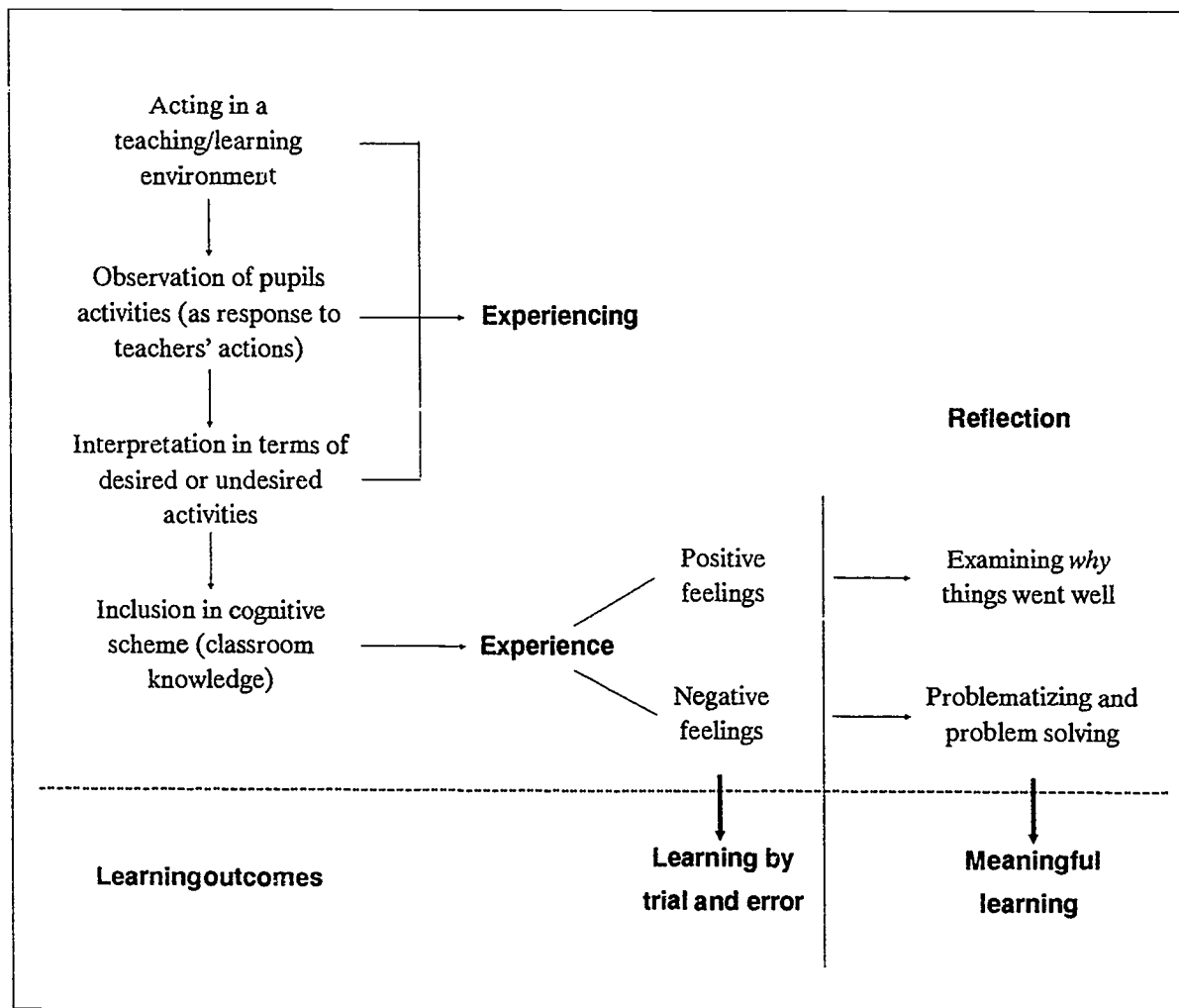
Figure 5
Learning from experience

concerned; now it has become part of his classroom knowledge - he can verbalize it. At this point we speak of an *experience*. This experience is accompanied by either positive (success) or negative (failure) feelings. If he does not reflect on his experiences, the teacher can only try to repeat the experiences of success and to avoid those of failure. We say that a repertory developed in this way is based on *trial and error* learning. The result of this mode of learning is mostly a *survival kit*. Such a repertory is inflexible. To develop a flexible repertory of actions, however, one has to analyze (reflect on) both the experiences of success - why did it go well, and in what other situations is it usable - and of failure - why did it go wrong and how to act more appropriate in comparable situations. The latter will lead to a processes of problematizing - translating a (negative) experience into a

19

20

problem which can be solved - and problem solving. In answering the 'why' question one has to confront or relate the experience to existing, more general, research based knowledge of teachers' actions and other educational theory. Processing experiences in this way a BT will develop a flexible repertory of actions (resulting in heuristics which lead to pupils' meaningful learning) and a solid professional knowledge base[17]. In that case we speak of *meaningful learning* from practical experiences.

4. Conclusion

So far issues in BTs' professional development during their first year of service were discussed and connected with the knowledge base mentors need to be able to act effectively. We also emphasized that mentoring of BTs should be regarded as an element of staff policies in schools.

In this context every school should establish a plan for the mentoring of beginning teachers. The mentor activities should be set out, and the rights, obligations and responsibilities of both parties - BT and school - should be established. Some of these points can be set out in a mentor contract. In order to carry this out, the school should establish a mentor plan and ensure that at least one of those involved is independent and not concerned with the final assessment of the beginner. Mentor activities are in the first place intended for the beginners, although the school will certainly profit from the successful mentoring of those beginners.

To each beginner who applies the existence of a mentor programme in the school and the associated rights and obligations are pointed out. If the beginner is appointed he is given a mentor for the first year of teaching. The school (in casu the mentor) as well as the beginning teacher are obliged to participate constructively in the mentor programme. Beginners who react otherwise often appear to have difficulties with reflecting on their own performance, which is often associated with inflexible behaviour.

An argument on the part of the school for this obligation is that every beginning teacher still has to learn the trade which results in unrest in certain classes and in the school. In many cases, the pupils' scores suffer. The school has a responsibility towards the parents to avoid this. A mentor programme has proved to be an adequate means of help. On the other hand the school is obliged to organize a mentor programme for beginners as well as possible and to select the most able teachers to carry out the task. By no means all teachers are suitable. Only those teachers who have an extended experience in teaching - i.e. considerable practical and theoretical knowledge - who have a reflective attitude, who are open minded, empathic, communication oriented and flexible, are suitable for the

---

17   Gilroy, 1989, p. 104-109: discusses the concept of 'Professional knowledge'.

function of mentor. Apart from that, the teachers selected should also be allotted a certain amount of time to carry out their tasks.

The school management which believes that they themselves should be responsible for the beginning teacher underestimates the differences between a beginner's position and that of the more experienced teacher. Practice proves that the roles of mentor and assessor are difficult to separate. In such a situation it is not unthinkable that a beginner is not given tenure at the end of his first year of teaching because he discussed too many problems with his mentor who also happened to be the Director or Head. Although one must have good faith, this situation can give rise to frustration. Therefore, it is best to ensure a strict division between people who are responsible for mentoring and those who are responsible for the final assessment of the teacher concerned. Assessors have other means at their disposal to gain information that they think necessary to assess the beginning teacher. Apart from that, a school management should consider whether they have the knowledge and skills to act effectively as mentors: Managers who do not teach any longer tend to lose sight of the nitty gritty of every day's classroom teaching.

In our model of teacher induction which is based on the idea of the teacher as a self-directing professional, we see the mentoring of BTs as a contribution of the profession to the supervisory function of the school as a whole. However, to perform their tasks effectively mentors need additional training. Mentors of beginning teachers should be attributed with a status in the school similar to that of a 'confidential person', i.e. the code of silence applies to them. The school has to assure the BT that mentoring and assessment are two entirely separate issues. All matters discussed with the mentor are 'confidential' and may not be used in an assessment.

In this paper we have outlined some elements of the knowledge base for mentors. Although the paper is written from a European perspective, it has to be regarded as a contribution to the improvement of the 'Supervision of Instruction' with respect to BTs in schools.

Amstelveen, March, 1993.

21

References

Andrews, I.H. (1986), *An investigation of the academic paradigms underlying induction programmes in five countries*. Paper presented at the annual meeting of the AERA, San Francisco.

Ashton, P.T. (1990), Editorial. In: *Journal of Teacher Education*, 41, 2, p.2.

Bernier, N.R. & A.E. McClelland (1989), The social context of professional development. In: Holly, M.L. & C.S. McLoughlin (Eds), *Perspectives on teacher professional development*. London (The Falmer Press). pp.19-55.

Brown, S. & D. McIntyre (1988), The professional craft knowledge of teachers. In: *Scottish Educational Review*. Special issue: The quality of teaching. Edinburgh (Scottish Academic Press).

Burke, P. (1987), *Teacher development*. New York (The Falmer Press).

Calderhead, J. (1988), The development of knowledge structures in learning to teach. In: Calderhead, J., *Teachers' professional learning*. London (The Falmer Press).pp.51-65.

Calderhead, J. (1992), *The professional development of teachers in changing Europe*. Paper presented at the 17th Annual Conference of the Association for Teacher Education in Europe. Lahti, Finland.

Carr, W. (1989), Understanding the quality of teaching. In: Carr, W. (Ed.), *Quality in teaching*. London (The Falmer Press). pp.1-18.

Cogan, M. (1973), *Clinical supervision*. Boston (Houghton Mifflin).

Doyle, W. (1979), Making managerial decisions in classrooms. In: Duke, D.L. (Ed.), *Classroom Management*. (78th Yearbook of the National Society for Studies in Education). Chicago (University of Chicago Press). pp.42-72.

Doyle, W. (1986), Classroom management and organization. In: Wittrock, M.C. (Ed.), *Handbook of Research on Teaching*. New York (MacMillan). pp.392-432.

Egan, G. (1986), *The skilled helper. A systematic approach to effective helping*. Belmont, Calif. (Wadsworth, Inc.). 3rd ed.

Fessler, R. & J. Christensen (Eds) (1992), *The teacher career cycle*. Boston (Allyn & Bacon).

Gilroy, P. (1989), Professional knowledge and the beginning teacher. In: Carr, W. (Ed.), *Quality in teaching*. London (The Falmer Press). pp.101-115.

Glaser, B.G. & A.L. Strauss (1967), *The discovery of grounded theory: Strategies for qualitative research*. Chicago (Aldine).

Glatthorn, A.A. (1990), *Supervisory leadership: an introduction to instructional supervision*. Glenview, Il. (Scott, Foresman & Co.).

Glickman, C.D. (1990), *Supervision of instruction: a developmental approach*. Boston (Allyn & Bacon).

Hargreaves, A. (1992), Cultures of teaching. In: Hargreaves, A. & M.G. Fullan (Eds), *Understanding teacher development*. London/New York (Cassell/Teachers College Press) pp.216-241.

Healy, C.C. & A.J. Welchert (1990), Mentoring relations: a definition to advance research and practice. In: *Educational Researcher*, 19, 9, pp.17-22.

Huling-Austin, L. (1990), Teacher induction programmes and internships. In: Houston, R.W. (Ed.), *Handbook of research on teacher education*. New York (MacMillan Publishing Co.) pp.535-549.

Hunter, M. (1984), Knowing, teaching, and supervising. In: Hosford, P.L. (Ed.), *Using what we know about teaching*. Alexandria, VA (Association for Supervision and Curriculum Development). pp.169-192.

Kirkham, D. (1992), The nature and conditions of good mentoring practice. In: Wilkin, M. (Ed.), *Mentoring in schools*. London (Kogan Page Ltd) pp.66-74.

Klafki, W. (1987), Lehrerausbildung in den 90er Jahren. In: Hübner, P. (Ed.), *Lehrerausbildung in Europa vor den Herausforderungen der 90er Jahre*. Berlin (Freie Universität/Association for Teacher Education in Europe).

Kremer-Hayon, L., J.H.C. Vonk & R. Fessler (Eds) (1993), *Teacher professional development: A multiple perspective approach*. Amsterdam/Berwyn, PA (Swets & Zeitlinger).

Lacey, C. (1978), *The socialization of teachers*. London (Methuen).

Levine, S.L. (1989), *Promoting Adult Growth in Schools: The Promise of professional Development*. Boston (Allyn & Bacon).

Matthijssen, M.A.J.M. (1984), Ontsnappingsverschijnselen bij oudere leerlingen (Escape symptoms amongst older pupils). In: *Pedagogisch Tijdschrift*, 9, (1), pp.2-11.

Merriam, S.B. (1991), *Case study research in education. A qualitative approach.* San Fransisco (Jossey-Bass Publishers)

Müller-Fohrbrodt, G., B. Cloetta & H.D. Daun (1978), *Der Praxisshock bei jungen Lehrer. Stuttgart (Klett).*

OECD (1988), Documentation for the conference on: *Teacher training for basic education.* Novi Sad (Y), 3-5 October 1988.

Ooms, C. (1991), Dropout of beginning teachers. In: Voorbach, J.T., J.H.C. Vonk & L.G.M. Prick (Eds), *Teacher Education 7. Research and developments on teacher education in the Netherlands..* Amsterdam/Lisse (Swets & Zeitlinger). pp.131-145.

Reynolds, M.C. (Ed.) (1989), *Knowledge base for the beginning teacher.* New York (Pergamon Press).

Ryan, K. (1986), *Induction of teachers.* Bloomington (Phi Delta Kappan Educational Foundation).

Schön, D.A. (1987), *Educating the reflective practitioner. Toward a new design for teaching and learning in the professions.* London (Jossey-Bass).

Shulman, L.S. (1986), Those who understand: knowledge growth in teaching. In: *Educational Researcher,* 15, 2, pp.38-44.

Stones, E. (1992), *Quality teaching. A sample of cases.* London (Routledge).

Veenman, S.A.M. (1984), Perceived problems of beginning teachers. In: *Review of Educational Research,* 54, 2, pp.143-178.

Vonk, J.H.C. (1982), *Opleiding en Praktijk.* Amsterdam (VU-Uitgeverij) (diss.). (Abbreviated version in English: Vonk, J.H.C. (1984), *Teacher Education and Teacher Practice.* Amsterdam (Free University Press).

Vonk, J.H.C. (1989), *Beginnend leraarschap.* Amsterdam (Free University Press).

Vonk, J.H.C. (1991a), Becoming a teacher, brace yourself. In: Ho Wah Kam & R.J.L. Wong (Eds), *Improving the quality of the teaching profession: an international perspective.* Singapore (Institute of Education). pp.63-82.

Vonk, J.H.C. (1991b), The professional preparation of primary and secondary school teachers in Europe. The analysis of some trends. In: Voorbach, J.T., J.H.C. Vonk & L.G.M. Prick (Eds), *Teacher Education 7. Research and developments on teacher education in the Netherlands..* Amsterdam/Lisse (Swets & Zeitlinger). pp.161-189.

Vonk, J.H.C. (1992), *Begeleiding van beginnende docenten.* Amsterdam (Free University Press).

Vonk, J.H.C. (1993), Teacher induction. The great omission in education. In: Galton, M. & B. Moon (Eds), *Handbook of teacher education in Europe.* London (David Foulton Publishers). (In press).

Vonk, J.H.C. & G.A. Schras (1987), From beginning to experienced teacher. A study of the professional development of teachers during their first four years of service. In: *European Journal of Teacher Education,* 10, (1), pp.95-110.

Wilson, S.M., L.S. Shulman & A. Richert (1987), '150 different ways' of knowing: Representations of knowledge in teaching. In: Calderhead, J. (Ed.), *Exploring Teachers' Thinking.* London (Cassell). pp.104-124.

Zeichner, K.M. & B.R. Tabachnick (1985), The development of teacher perspectives: Social strategies and institutional control in the socialization of beginning teachers. In: *Journal of Eduction for teaching,* 11, pp.1-25.

The author

Dr J.H.C. Vonk, Associate Professor

Teacher Education Department, Vrije Universiteit

De Boelelaan 1115, Prov. I, Room A-127

1081 HV Amsterdam (NL).

Appendix

A programme for the training of mentors

The programme is workshop oriented, i.e., we train mentors on the job. Although there is a programme, the mentors can bring in their problems every session and if a problem fits in the programme of that day it is included: i.e., topic for discussion, object for exercising problem solving or as element in a practicum. For all those problems that do not fit, every session has a questioning hour (30-45 minutes), during which these problems are discussed in either a plenary session or in small group work sessions.

We start with a two-day workshop during which the theoretical background of mentoring beginning teachers is explored, i.e., the process of teachers' professional development, the nature and origin of problems of beginning teachers, the nature of the mentor role and of the skills necessary for effective mentoring, an introduction into effective classroom teaching from the beginner's point of view, and finally a start is made with mapping out each participant's theoretical and practical knowledge (professional knowledge base).

First day:	Morning session,	09.00 - 12.30.
	Afternoon session,	14.00 - 17.30.
	Evening session,	19.00 - 21.00.
Second day:	Morning session,	09.00 - 12.30.
	Afternoon session,	14.00 - 16.00.

This two-day workshop is followed by ten half-day sessions. Each of these sessions comprises two parts: exchange of and discussion on recent experiences and or problems of the participants in their role as a mentor. In principle these experiences are related to the over-all theme of the session. The main activities are (practical) theory followed by practice and feedback.

Session 1, 15.00 - 17.30; 19.00 - 21.00 hrs.
Conferencing skills 1: talk, listen, interpretation, non-verbal behaviour, information transfer.

Session 2, 15.00 - 17.30; 19.00 - 21.00 hrs.
Conferencing skills 2: conferencing procedure(s) and practice, report on learning experiences.

24

Session 3, 15.00 - 17.30; 19.00 - 21.00 hrs.

Observation skills 1: basic observation skills, developing observation schemes.

Session 4, 15.00 - 17.30; 19.00 - 21.00 hrs.

Observation skills 2: interpretation, pitfalls, further practice.

Session 5, 15.00 - 17.30; 19.00 - 21.00 hrs.

Observation skills 3: classroom observation, i.e., collecting, arranging and analyzing of data. Discussions on the basis of a life situation (one way screen observations).

Session 6, 15.00 - 17.30; 19.00 - 21.00 hrs.

Conferencing skills: recall techniques. instructions + practice.

Session 7, 15.00 - 17.30; 19.00 - 21.00 hrs.

Providing feedback: feedback discussions, classroom knowledge, practical knowledge, transformation of professional knowledge to the beginning teacher's level.

Session 8, 15.00 - 17.30; 19.00 - 21.00 hrs.

Counselor skills: counseling/advice, improving relations, counseling skills.

Session 9, 15.00 - 17.30; 19.00 - 21.00 hrs.

Evaluation 1: rating teacher performance, rating scale, discussion on the interpretation of the results.

Session 10, 15.00 - 17.30; 19.00 - 21.00 hrs.

Evaluation 2: collecting and interpreting data, making a report, discussions on the report.

At the moment mentors attend this course on a voluntary basis. It has not been decided yet whether the course will be rounded off by an official examination or a certificate. It may be expected that in the long run, attending this course will provide opportunities with respect to staff differentiation in schools.

25