DOCUMENT RESUME

ED 256 712 SP 025 795

AUTHOR Vandenberghe, Roland
TITLE Teacher's Role in Educational Change.
PUB DATE May 84
NOTE 24p.; Paper presented at the European Seminar of the World Confederation of Organizations of the Teaching Profession (Athens, Greece, May 6-8, 1984).
PUB TYPE Speeches/Conference Papers (150) -- Information Analyses (070) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Change Strategies; Educational Change; *Educational Innovation; Elementary Secondary Education; *Inservice Teacher Education; *Teacher Attitudes; *Teacher Participation; *Teacher Role; Teacher Workshops; Work Environment
IDENTIFIERS *Stages of Concern about the Innovation

ABSTRACT

The involvement of teachers in large-scale innovations is critical if attempts to improve schooling are to succeed. An analysis of the teacher's role in educational change is presented with particular focus upon teacher concerns about innovations. A description is given of the Concerns-Based Adoption Model, which identifies the individual teachers as the primary target of interventions designed to facilitate change in the classroom. The factors that encourage or discourage participation on the part of teachers in an innovation project are explained, and an outline is presented of the six stages of concern that teachers undergo in gradually accepting and internalizing an innovation. The important factors which emerge during the implementation stage of an innovation are explored, and recommendations are made for developing effective inservice training programs that will encourage teachers to participate in eductional changes. (JD)

TEACHER'S ROLE IN EDUCATIONAL CHANGE

Dr. Roland Vandenberghe
Catholic University Leuven,
Belgium

Paper presented at the European Seminar of the World Confederation of Organizations of the Teaching Profession, Athens, May 6-8, 1984.

Correspondence address: Prof. Dr. R. Vandenberghe, Department Educational Sciences, Vesaliusstraat 2, 3000 Leuven, Belgium.

Teacher's role in educational change

R. VANDENBERGHE
University of Leuven,
Belgium

1. Introduction

School personnel, particularly teachers and principals, are a vital link in school improvement efforts. At the classroom level teachers are significant, if not the most important players. It's clear that change will not take place without the support and the commitment of teachers. And according to Crandall, "failure to understand the relationship of teachers to the school improvement process can result in a corresponding failure to improve the level of education provided by our schools" (Crandall, 1983, p. 6). In other words: educational change and improvement depend on what teachers think and do. This is a very simple statement. But an analysis of the process-side of this statement will make clear that simple statements can be very complex.

If the teacher plays a central role in educational change and school improvement, then it's important to consider the working conditions as a main determinant of the change process. We assume that effective educational change in practice cannot occur without improvements in the teacher's work life. After having analysed these conditions, Fullan concludes that they have deteriorated steadily over the past two decades (Fullan, 1982, p. 107). It is a fact that teachers are valued less by the community and the public than they were even a short time ago. The teaching profession is considered as a clear-cut and flat career (at least in the European tradition). Nevertheless, it's remarkable that, due to the economic crisis, during the last two years more youngsters go to the teacher training college. Teacher stress and alienation from the profession appear to be at an all-time high. The fact that a lot of teachers want to leave the profession in a clear indication for the alienation phenomenon. The National Education Association conducted polls in the U.S. in 1967 and 1979. It's worthwhile to compare the results of the two polls. One of the questions was the following: "Suppose you could go back and start over again. Would you become a teacher?" The answers can be summarized as follows:

	1967	1979
- Certainly would become a teacher	53%	30%
- Probably would	25%	29%
- Probably would not become a teacher	7%	22%
- Certainly would not	2%	10%
- Not sure	13%	10%

(Cit. in Fullan, 1982, p. 111).

In 1967 over one - half of the respondents were positive that they had made the right choice. In 1979 it's only one - third. Most striking is the finding that in 1979 one out of every three teachers "probably" or "certainly" wished that he or she had never become a teacher.

Nowadays schools and teachers are confronted with a broad range of educational goals and sometimes unclear expectations. In a lot of West-European Countries, elementary and secondary school teachers are involved in "large-scale projects". A large-scale project can be considered as a "bundle of innovations" (Van den Berg & R. Vandenberghe, in press). The project "Renewed Primary School" which started in 1973 is an illustration of a large-scale project. The main goals of the R.P.S. are related to the following themes.

- Enhanced integration and interdependence between the kindergarten (2,5 years - 6 years) and the elementary school (6-12 years).
- Increased and more effective individualization during the elementary grades, particularly in relation to reading and arithmetic.
- Enhanced contact and collaboration among classroom teachers and between classroom teachers and a remedial teacher, so that pupils with special problems in regular classrooms will be worked with more effectively.
- Increased emphasis on the socio-emotional and creative development of the pupils.
- Better interdependence with resources in the community environment, in terms both of the pupils going out into the community to learn and of people from the community being used as resource-people on an ad-hoc basis within the school.

The philosophical theme of this innovation-bundle is more interdependence among educational resources to support a more individualized, humanized and effective response to pupil.

From this example, it's clear that a large-scale innovation project is characterized by its multi-dimensionality; a number of important objectives

must be accomplished simultaneously and coherently. Each innovation, as part of a reform, points to significant objectives. The implementation of all these innovations leads to difficult tasks for the schools and teachers involved. One can hardly overestimate the difficulties created by broadly formulated objectives and unclear expectations found in most policy documents.

A fourth issue related to the working conditions of the teachers concerns the ambivalence of youth about the value of education. It's sometimes very difficult for teachers to understand the reactions of youngsters; it's even more difficult to fight against pupils' decreasing motivation.

In summary, one could say that the involvement of teachers in large-scale innovation projects and the confrontation with demotivated pupils and students could lead - at least for a part of the teaching profession - to stress and alienation from the profession. This, combined with the fact that teachers are socially valued less than some years ago, creates intorable conditions for sustained educational development and satisfying work experiences.

Making an analysis of the teacher's role in educational change, implies a deeper understanding of the subjective world of teachers. It's a necessary precondition for engaging in any change effort with them.

2. How teachers construct "meaning"

Teachers involved in a change project always have typical questions and reactions. One can use these questions and reactions as a basis for the construction of the "subjective world" of teachers. According to Doyle and Ponder it's important to analyze the decision-making process which appears to underlie teachers' reaction to change proposals (Doyle & Ponder, 1977-78). Teachers give a meaning to a variety of messages intended to modify and improve their practice. The decision-making process - and also the construction of meaning - is in fact an evaluative process which is a central ingredient in the initial decision teachers make regarding the implementation of a proposed innovation (see 2.1).

In a next section (2.2) we will explore teacher concerns as a basis for facilitating and personalizing staff developments (Hall & Loucks, 1978a; see also Van den Berg & Vandenberghe, 1981; Vandenberghe, 1983). Here we accept the assumptions of the Concerns-Based Adoption Model (CBAM) that the individual teacher is the primary target of interventions designed to facilitate the change in the classroom and that individuals involved in change go through stages in their perceptions and feelings about the innovation (see : Stages of Concerns).

Another attempt to understand the typical reactions teachers have when confronted with an innovation, is to look at the teachers' preferences for the organization of in-service training. The teacher, for instance, will certainly premise that the in-service training must be such that it leads to a real implementation of the change proposals. In other words: the teachers agree on condition that the in-service training be centered on their practice. In section 2.3 we will explore the meaning of the demand of a "practice-centered" in-service training (Vandenberghe, 1978).

In a last section (2.4) we will look at factors which encourage or discourage participation in an innovation project. Teachers agree to start with a project for different reasons. But it's also important to know why teachers are prepared to make supplementary efforts during the implementation stage.

2.1 How teachers evaluate change proposals

If one listens carefully to the way teachers talk about innovations and also about proposals for in-service activities, it soon becomes clear that the concept "practical" is used frequently. Doyle and Ponder have made an analysis of what they call the "practicality ethic". According to them, the study of the "practicality ethic" is the study of the perceived attributes of messages and the way in which these perceptions determine the extent to which teachers will attempt to modify classroom practices (Doyle & Ponder, 1977-78, p. 3). More specifically, the term "practical" is an expression of teacher perception of the potential consequences of attempting to implement a change proposal in the classroom. Recommendations - and also innovative proposals - perceived as practical are ones which a given teacher will most likely try to incorporate into classroom procedures. Those perceived as impractical have little change of being tried. Studies of the formation of teacher expectations further suggest that teachers are prone to make judgments rapidly, with minimal experience or evidence (Brophy & Good, 1974). This means that teachers will judge the practical merits of an innovation very soon after exposure to it.

The major question is: What determines practicality ? Or : what attributes of an innovation tend to elicit the perception of practicality from teachers? A teacher comes to the conclusion that a change proposal is practical on basis of three criteria, namely, instrumentality, congruence and cost. The meaning of these criteria is summarized in Figure 1.

Figure 1: Classificatory scheme for the 'practical'

Instrumentality	Congruence	Cost
1. How specific and clear the curriculum communicates procedural content?	1. How well the curriculum fits in with the way the teacher normally conducts class?	1. How much of a reward the teacher will receive for using the curriculum, whether it be in terms of money or recognition and student enthousiasm and potential learning?
2. How well the curriculum translates principles, objectives and outcomes into appropriate procedures?	2. How closely the nature of the setting under which the curriculum was tried previously matches the teacher's own school situations? And how credible the experiential credentials of the person making the recommendations are?	2. How easily the curriculum can be broken down into smaller units for short-term trials?
	3. How compatible the curriculum is with the teacher's self-image and preferred way of relating to pupils?	3. How much time and effort are required to implement the curriculum?

The criteria of instrumentality, congruence, and cost would seem to define the fundamental content of the "practicality ethic". This is confirmed by Fullan, who presents the same criteria. According to him teachers use three main criteria:

> "- Does the change potentially address a need? Will students be interested? Will they learn? (see congruence)
> - How clear is the change in terms of what the teacher will have to do? (see instrumentality)
> - How will it affect the teacher personally in terms of time, energy, new skill, sense of excitement and competence, and interference with existing priorities?" (see cost)
> (Fullan, 1982, p. 113)

In an analysis of initial assessments of the innovation by teachers in 12 sites, Huberman and Miles also describe some data which are clearly related to the two foregoing analyses (Huberman & Miles, 1982, p. 88-94). One dimension of the initial perceptions is called "personal fit". It's interesting to see that Huberman and Miles too came to the conclusion that: "There was, in effect, a very quick assessment of the innovation when users first saw or heard of it - - a sort of 'trying on' the requisite skills and materials, much as one mentally tries on a dress or a suit in a store window. More carefully appraisals came later, but these early assessments were hard to shake" (1982, p. 93).

Behind the responses concerning the "goodness of personal fit" were three somewhat distinct judgments. "First, users connected goodness of fit to congenial ways of relating to pupils. This point emerged more frequently when the fit was poor, often in cases of high-prescriptive innovations" (see Doyle & Ponder: congruence). "A second meaning relates to the familiarity of the innovation. A good fit occurs when the project demands skills that are "in my routine" or "are under my belt" (see Doyle & Ponder: congruence). "Finally, there is a normative or philosophical dimension; goodness of fit means it "sounded like what I believe in" or "what these kids really need" (see Doyle & Ponder: congruence; Fullan: need). (Huberman & Miles, 1982, p. 94).

The three illustrations presented until now, make it clear that the incentives and disincentives from the perspectives of the teachers helps explain the outcome of change efforts. According to Fullan: "Need, clarity, and the personal benefit/cost ratio must be favorable on balance at some point relatively early during implementation. Ambivalence about whether the change will be favorable in nearly always experienced prior to attempting it. It is

only by trying something that we can really know if it works. The problem is compounded because first attempts are frequently awkward, not providing a fair test of the idea. Support during initial trials is critical for getting through the first stages, as is some sign of progress"(Fullan, 1982, p. 114, own italics)".

3.2 A concerns-based approach (Hall & Loucks, 1978a)

The development of the Concerns-Based Adoption Model (CBAM) is based on extensive experience with educational innovation in school and college settings. First, we will describe some of the underlying assumptions. Second, we will present the so-called Stages of Concerns (SoC).

A first assumption is that one should consider an educational change as a process, and not as an event. The reality is that change takes times and is achieved only in stages. During that process positive and negative experiences are valued. Sometimes the innovation undergoes several modification (Hall & Loucks, 1978b).

Second, the individual must be the primary target of the interventions. Other approaches, such as Organizational Development, view the school as the primary unit of intervention. The CBAM, however, emphasizes working with individual teachers in relation to their roles in the change process.

Third, change is a highly personal experience. This is an important assumption because one can often observe that change facilitators or principals pay too much attention to the content and/or the technology of the innovation. They ignore the perceptions and feelings of the people experiencing the change process. Since change is brought about by individuals, their personal satisfactions, frustrations, concerns, motivations, and perceptions generally all play an important part in determining the success or failure of a change initiative. In other words: teachers as well as promotors of educational innovations should be aware of the fact that the implementation of an innovation implies always a learning process, which takes times. When it comes to change, we have a lot to learn (Fullan, 1982, p. 119).

Fourth, the change process is not an undifferentiated continuum. Individuals involved in change go through stages in their perceptions and feelings about the innovation, as well as in their skill in using the innovation. To deliver relevant and supportive in-service training, change facilitators need to diagnose the perceptions and the feelings as well as the way teachers are using an innovation. We limit ourselves to one aspect of the change

process, namely the concerns of individuals about the innovation (for further information about CBAM, see Hall & Loucks, 1978b; Hall & Loucks, 1977; Hall, Loucks & Rutherford, 1975; Hall, Zigarmi & Hord, 1979).

In the CBAM, the concept of "concerns" has been developed to describe these perceptions, feelings, and motivations. Research studies have initially verified a set of stages that teachers appear to move through when they are involved in innovation implementation. These Stages of Concerns about the Innovation provide a key diagnostic tool for determining the content and delivery of staff development activities (Hall & Loucks, 1978a). Research in other countries - for instance in Belgium and the Netherlands - has made it clear that teachers working in another cultural context, demonstrate the same concerns as their American colleagues (Van den Berg & Vandenberghe, 1984; Vandenberghe, 1983).

Seven Stages of Concerns were identified (see figure 2). Apparently a person's stages of concern move through the progression from self, to task, to impact.

Figure 2: Stages of Concern about the innovation *

6 REFOCUSING: The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. Individual has definite ideas about alternatives to the proposed or existing form of the innovation.

5 COLLABORATION: The focus is on coordination and cooperation with others regarding use of the innovation.

4 CONSEQUENCE: Attention focuses on impact of the innovation on students in his/her immediate sphere of influence. The focus is on relevance of the innovation for students, evaluation of student outcomes, including performance and competencies, and changes needed to increase student outcomes.

3 MANAGEMENT: Attention is focused on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling, and time demands are utmost.

2 PERSONAL: Individual is uncertain about the demands of the innovation, his/her inadequacy to meet those demands, and his/her role with the innovation. This includes analysis of his/her role in relation to the reward structure of the organization, decision making and consideration of potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may also be reflected.

1 INFORMATIONAL: A general awareness of the innovation and interest in learning more detail about it is indicated. The person seems to be unworried about himself/herself in relation to the innovation. She/he is interested in substantive aspects of the innovation in a selfless manner such as general characteristics, effects, and requirements for use.

0 AWARENESS: Little concern about or involvement with the innovation is indicated.

---

* Original concept from Hall, G.E., Wallace, R.C., Jr., & Dossett, W.A., A developmental conceptualization of the adoption process within educational institutions. Austin, Research and Development Center for Teacher Education, The University of Texas, 1973.

Data gathered in several studies make it clear that an individual teacher does not have concerns on only one stage at a time. There is a concerns "profile" with some stages being relatively more intense and other stages having lower intensity concerns. It appears that during the initiation of an innovation (and during the first implementation period) Stages 0, 1 and 2-concerns will be most intense. As implementation begins, Stage 3, Management concerns, become more intense, with Stages 0, 1 and 2 concerns decreasing in intensity. In time, the Impact concerns of stage 4, 5 and 6 become the most intense. The development of the intensity of concerns is presented in figure 3.

Insert Figure 3 here

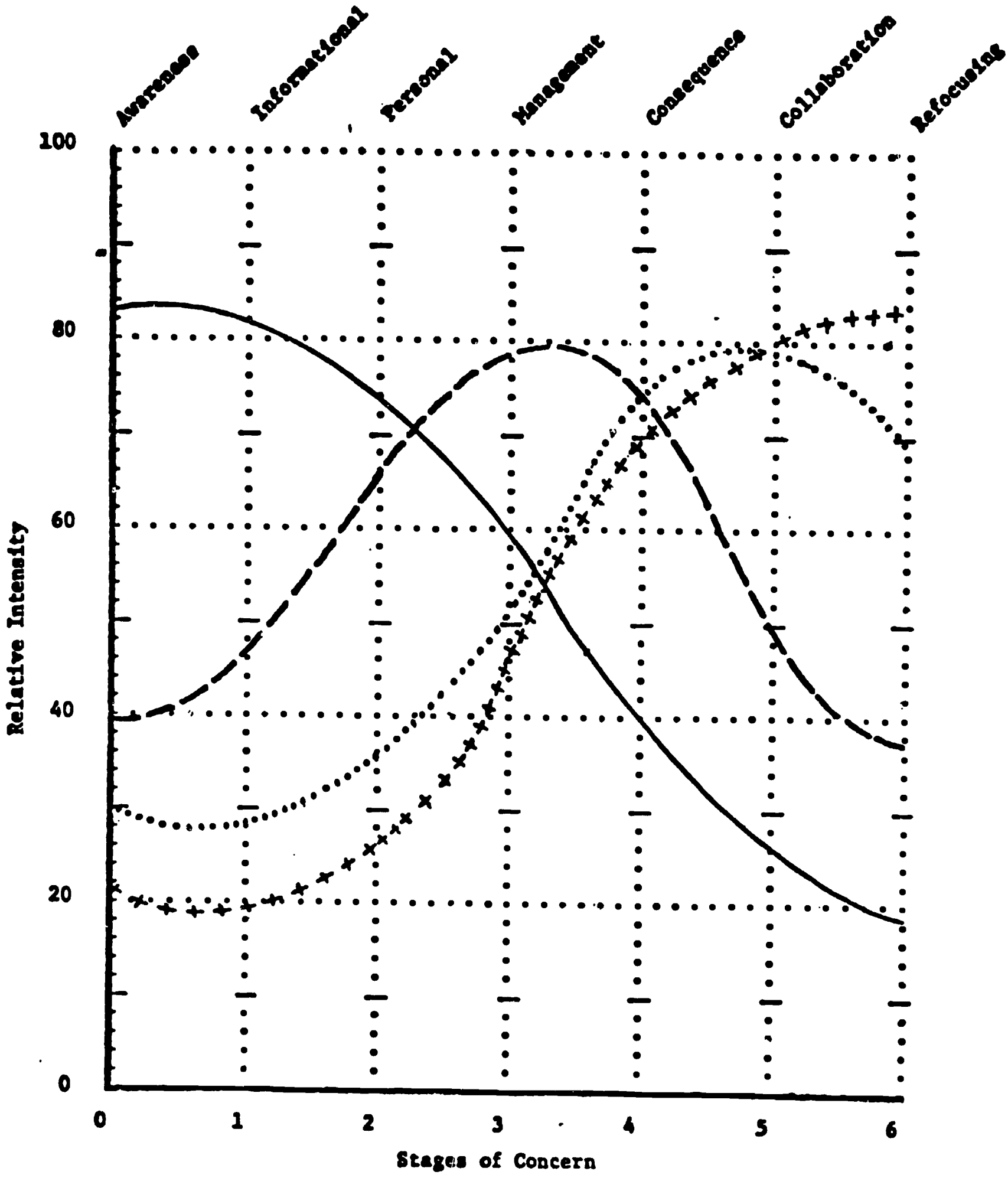
A staff developer or change facilitator can collect information about teachers' concerns in several alternative ways. The simplist is "informal conversational assessment": let teachers talk about the innovation and in particular about their feelings, positive and negative experiences, questions and maybe about their frustration. According to Hall and Loucks: "This seat-of-the pants assessment can be used to confirm or up-date more formal data and is most valuable to the experienced facilitator who wants to keep in "real time" contact with the progress of an adoption process" (Hall & Loucks, 1978a, p. 11).

More formally, a change facilitator can ask a written response to the question: "When you think of (the innovation), what are you concerned about?" The CBAM-researchers have developed a procedure for scoring this simple assessment device (Newlove & Hall, 1976).

The most formal and precise measure of Stages of Concerns is the SoC Questionnaire (Hall, George & Rutherford, 1977). The questionnaire consists of 35 items, each of which has a Likert scale (not true of me now ... very true of me now) on which respondents indicate their present degree of concern about the topic described in the item.

In their paper, Hall and Loucks (1978a) summarize some key principles concerning staff development taking into account the basic assumptions of the CBAM and data about the (development of) Stages of Concern. A diagnosis of the current concerns of teachers involved in an innovation project makes it possible to attune interventions to the needs and the expectations of these teachers. Differences among teachers are accepted. Personal concerns for in-

Figure 3: Hypothesized Development of Stages of Concern



stance need to be recognized as a legitimate concern because they are a real part of the change process. In other words: "It is okay to have personnal concerns" (Hall & Loucks, 1978a, p. 25). It is the responsibility of the change facilitators to accept these early concerns, or the individual will not be able to resolve these and move on to for instance Impact concerns.

Another implication, related to the first one, concerns the fact that those who present the innovation must attend not only the innovation's technology, but also the teachers' concerns. During the initiation stage and also during the beginning implementation, change facilitators emphasize only the technology of the innovation. They talk about the underlying principles, about the advantages for pupils or students (which is related to the impact concerns), about the existing material, etc... neglecting the concerns of a nonuser or an inexperienced user. These two categories are less interested in general principles and learning outcomes; the real questions they have are related to the daily activities in the classroom (management concerns) and to the survival as a professional (personal concerns). In other words: change facilitators mostly have impact concerns (the focus is on relevance of the innovation for students and on the coordination and cooperation with others regarding use of the innovation). However, it does not necessarily follow that the teachers will have impact concerns too. This difference will certainly be present at the beginning of a change effort. As Hall and Loucks point it out: "Teachers' concerns may not be the same as those of the staff developers" (1978a, p. 25).

A third implication regards the development of the concerns. Because change is a process, entailing developmental growth and learning, it will take time. "One-shot programs will not implement a program; long-term follow-up is necessary. - Policy and decision makers must also become aware of this fact, and, in response, stop assuming that their decrees and mandates will result in instanteneous cures out in the field" (Hall & Loucks, 1978a, p. 25).

2.3 The meaning of a 'practice-centered' in-service training

In 1972, we organized, in collaboration with the 'Christen Onderwijzersverbond' (union of teachers of the primary) an inquiry about in-service training activities. A written questionnaire was sent round. 2044 completely filled in questionnaires came into account for computation. This investigation has already been reported amply (Vandenberghe & Vermeulen, 1973-74; Vandenberghe & Vermeulen, 1974; Janssens, 1975; Vandenberghe, 1978).

In a subdivision of the questionnaire the teachers were asked to classify on a six-point-scale the thirteen proposals concerning staff development activities of the IST (1 = very little preference; 6 = very much preference). For each proposal the number of teachers who gave one of the three highest scores of preference (notably 6, 5, 4) was examined.

Table 1 shows in descending sequence the ratio of approval of each proposal.

The IST in the shape of a direct intervention within one's own school situation is clearly preferred by a large number of teachers (76,1%). This general tendency is confirmed by the answers to questions about wishes concerning the intervention in the 'practical' (see further on).

Some four proposals group themselves obviously round a 'practice-centred' IST, namely assisting at practice lessons and discussing them, training skills intensely, exchanging one's experiences about a previously accomplished task and assisting at demonstrations by experienced teachers in their own classes. These IST-activities have a number of joint characteristics: for the teachers they bear a clear relation to their own activities in their classes and they suppose that the teachers are directly concerned in them. In other words, it is as if the teachers themselves can see to it that the IST-activities are in a rather close relation on the one side with the way they used to teach up to now and on the other side with their own conception of good teaching (see the criterion congruence in the classificatory scheme by Doyle & Ponder).

Some five proposals enjoy the definite preference of only a small number of teachers, namely listening to lectures followed by discussion, visiting exhibitions of didactical equipment, following courses via TV, doing researches in one's own class led by an educational psychologist and visiting other schools. Some of them take place outside the school. It is perhaps therefore that they are considered as less useful. Important is the ascertainment that only one half of the teachers appreciate highly a working method mentioning explicitly the collaboration with an educational psychologist. Yet, as to its content, this description is very akin to the working method that enjoys the preference of 76% of the teachers (see table 1). Perhaps in this description more attention was given to 'in one's own school' than to 'experts', wheras in the other description the term 'educational psychologist' could have been more decisive.

Following written courses and assisting at lectures without discussion are considered by only one third of the respondents as very important. In the light of the foregoing we can suppose that both these proposals are consi-

Table 1: Preferences of primary school teachers (N=2,044) for variants in the staff development activities

Order of preference	% teachers having given the scores 6, 5 and 4
1. Collaborating with experts in one's own school	76.1
2. Assisting at practice lessons and discussing them	63.8
3. Training skills intensely	62.7
4. Exchanging with colleagues one's experiences about a previously accomplished task	62.0
5. Watching demonstrations in one's own class	59.9
6. Listening to lectures followed by discussion	53.2
7. Doing researches in one's own class led by an educational psychologist	53.1
8. Visiting other schools	49.5
9. Visiting exhibitions of didactical equipment	48.8
10. Following courses via T.V.	46.5
11. Listening to lectures	28.3
12. Written courses of staff development	27.7
13. One or two teachers of one's school following staff development courses and informing the whole school team	20.8

dered as activities that have only little to do with the teachers' concern.

Thus far we have no unanimous interpretation of the little interest in the thirteenth proposal. Is a colleague with whom one collaborates every day not considered as a 'tutor'? Or is this possibility of collaboration not yet integrated in the conception of the primary school teacher's role ?

As a conclusion we can say that the teachers prefer a 'practice-entered' IST, preferably in their own schools and in connection with their own 'practicals'. These ascertainments must not lead to the rather naive conclusion in our view that IST-activities only make sense when they start from a diagnosis of the teachers' problems or if after this diagnosis one considers alternative solutions, etc. This reminds us clearly of the Problem-solving-strategy which is propagated in literature in an often unvariegated way. Nevertheless, in our opinion, the foregoing means that teachers must indeed receive answers to the question as they feel them in their daily practice. On the other hand, the Problem-solving strategy easily gets an administrative and bureaucratic character whereby the experts of IST-activities, as it were, force on the teachers the problems and the way of thinking about their own mission (S.D. Sieber, 1976-77).

The answers to the other questions concerning the intervention in the 'practical' confirm the tendency to see the IST-activities in connection with the problems met with in the daily class practice.

81% of the respondents think that an IST-course is only useful when it is followed by an intervention in the 'practical'. It supposes that the teachers are willing to get advice from outside. Also most of the respondents (91.6%) find this necessary.

Another question about the guidance of the 'practical' has relation to the persons who have to supply it. 53.2% of the respondents think that the head teacher is the first to be considered for that task. In the second place the inspector is referred to and in the third place special responsibles for IST. The head teachers themselves have a somewhat different opinion about it. There are in proportion fewer head teachers than teachers who find that the head teacher is the first one responsible for the guidance in the 'practical'. This guidance belongs obviously less to the conception the head teacher has of his function. He himself refers rather to the inspector.

The question concerning the function of inspector and head teacher in the general pedagogical and didactical intervention has proved to be of little relevance. 70% of the respondents think that both have to play an important part. However, we noticed a difference between older and younger teachers

concerning the help they hoped to get from the inspector. In proportion there are fewer young teachers (younger than 26 years) who think that the inspector has to fulfil an important task in the pedagogical and didactical intervention than is the case with the older ones. We notice the same tendency in the opinion about the inspector's task in the intervention in the 'practical' as a special form of IST.

In another question the problem of the intervention in 'practicals' is specially applied to the case of new teachers. 46.3% of the respondents consider it as a task for colleagues who are not head teacher but 41.1% as a task for the head teacher. Here too the pronouncements differ according to age: 60% of the teachers of 26 years or younger are in favour of an intervention by colleagues not head teachers; 29% prefer an intervention by the head teacher; only 2% choose the inspector. According to the teachers older than 35 years it is the head teacher who ought to be considered for it in the first place.

This data will probably have made clear that for the present we can maintain the starting-point, namely the explicit wish of participation in a 'practice-centred' IST.

2.4 Teacher participation in educational innovation

In this last section, we will try to explore important factors which emerge during the implementation stage and which encourage or discourage continued participation. If successful implementation occurs it is in large part due to the efforts of teachers. But why (and how) are these changes being brought about? In other words, we are interested in factors that contribute to success (Crandall, 1983, p. 7).

We find an answer to the question in a paper by Dawson (1981). She reports data from an intensive one and one-half year study of educational change projects in five schools. The five schools participated in basic skills or career education projects developed collaboratively by the schools and a team from a regional educational laboratory (Research for Better Schools). We will compare these data with findings of the DESSI-study (A study of Dissemination Efforts supporting School Improvement). Crandall summarizes some findings in an article (Crandall, 1983).

First: Dawson found that many participants became committed during the implementation. For instance, they became convinced that it was important to increase student engage time (in order the increase the basic skills) or to teach career education. Some other participants developed a sense of having invested so much in the projects, that they could not withdraw without feeling

that their efforts had been wasted (Dawson, 1981, p. 15). Also Crandall in the DESSI-study discovered that commitment developed after implementation, after teachers were actively engaged in using a new practice (Crandall, 1983, p. 7). But he emphasizes the fact that teacher commitment has a positive influence in interaction with other factors. So, "we found that with clear, direct leadership from building and central office administration, training by a credible person in the use of a practice that was know to be effective, teachers tried the new practice, mastered it, saw results with their students, and developed a strong sense of ownership. And this with little or no early involvement in problem solving, selection, or decision making" (Crandall, 1983, p. 5, own italics). Increasing commitment during the implementation of a change project refers to the fact that for teachers involved the innovation gets more and more meaning. From working with the innovation, from discussions with other teachers, from positive and negative experiences, the underlying principles become more and more clear; they find out what the innovation means for their daily teaching activities.

Increased internal communication is a second factor that influences positively a continued participation in a change project. According to Dawson many teachers experienced the increased interaction among teachers and between teachers and administrators as very supportive. During the projects meetings, teachers had the opportunity to share ideas about students reactions, about the use of materials, about teaching strategies, etc... Participation also increased people's knowledge of other classrooms, particularly in the basic skills schools (Dawson, 1981, p. 15).

We too found that, having the opportunity for discussions about the innovation, sharing ideas and looking collaboratively for solutions is very important for teachers involved in a large-scale innovation project. After having analyzed 24 schools involved in the Renewed Primary School-project in Belgium, it became obvious that in schools with a high degree of implementation, the possibility for an ongoing negotiation process, was valued very much (Van den Berg & Vandenberghe, 1984, ch. 8).

The importance of interaction among teachers is confirmed by Fullan. "Within the school, collegiality among teachers as measured by the frequency of communication, mutual support, help, etc... was a strong indicator of implementation success. Virtually every research study on this topic has found this to be the case.... Significant educational change consists of change in beliefs, teaching style, and materials which can only come about (except for the odd religious-type conversion) through a process of personal development in a context of socialization" (Fullan, 1982, p. 121).

Third: teachers' attitudes toward participation is influenced by perceived relationships between project and school or classroom goals (Dawson, 1981, p. 16) (see Doyle & Ponder: congruence). The experience that a proposed innovation can solve a student problem will influence positively continued participation. Teachers feel that they can master a situation; they experience a sense of efficacy. A growing congruence between the innovation and the school and classroom situation, together with a belief that the teacher can help even the most difficult or unmotivated students, have a positive effect on continued participation (see also Berman & McLaughlin, 1978, p. 32).

Fourth: all teachers know that the costs of participating in a change project are often very high. Participating implies extra meetings, extra preparation time, use of new materials, etc. (Dawson, 1981, p. 17). In many cases personal costs are high and student benefits for instance are low. That situation will mostly lead to non-implementation or at least a lot of problems will arise. A change facilitator can solve these problems by giving concrete and continuous help. Direct and clear support from the principal is also important (Crandall, 1983, p. 9).

In this last section we have explored four factors which have a positive or negative influence on continued participation. Other factors can be added, such as the organization of in-service activities (see 2.3), the relationship between external and internal change facilitators, the role of the principal, support structures in the school, etc...

It becomes clear from the foregoing discussion that change in educational settings is possible and that teachers are prepared to engage in change process if supportive conditions are created. Although we have already explored some of these conditions, we will try to complete the picture in the next section.

3. Some practical implications

As we already pointed out, teachers engaged in a change process, have to go through a learning process. They have to learn new skills; they have to accept new principles, they have to try out new materials, they have to master new insights, etc... Innovation must be considered as a process and not as an event. From that point of view a permanent clarification of the innovation is a pre-eminent activity during the implementation. This is certainly the case with large-scale innovations, as appears from a number of research results. "... highly structured innovations involving only a small amount of change (such as computer-assisted instruction) required specificity before implementation, but less structured innovations (such as open education) achieved specifity during implementation...

Moreover, Berman & McLaughlin's case study analysis of unstructured innovations suggested that achieving specificity involved learning-by-doing activities in which individuals become clearer about the project's philosophy as well as its operational objectives. In other words, clarification is a process whereby each user develops his or her understanding of - and belief in - the innovation as its evolves during implementation. Insofar as staff become clear in their own terms, specification can occur almost as a post hoc codification of shared understanding among participants" (Berman, 1981, p. 273).

Individual teachers are very important players in the innovation game. Nevertheless we should keep in mind that they are members of an organization. In other words: their role is complemented by other roles such as the principal, the central office administrator, the inspector, the change facilitator, the parents, the pupils, etc... We have already underlined the importance of an organizational structure which creates opportunities for discussions and and professional activities among teachers.

Cox found that principals who were active in successful school improvement made it clear to all instructional staff that the successful implementation of the innovation was a top priority. There was a clear communication towards the teacher about the importance of the adopted innovation. These principals were also able to make available all the requisite materials. They give teachers time to actually use the new practice through help with classroom scheduling and through facilitating schoolwide scheduling. In other words: structural changes supported the individual efforts. And teachers, parents and central administrators were working in a realistic time frame and did not feel pressured by premature evaluation (Cox, 1983, p. 10). In summary: consideration of change, discussions about the underlying principles, implementing new practices are experienced as a regular part of the job.

At last, it is important to look at some characteristics of an effective in-service training. From the Rand Studies (Berman & McLaughlin, 1978) we already know that concrete, teacher-specific and on-going training is necessary. The most effective training experiences are those that involved training at several points in time (see also : Louis, 1983). Further, external change facilitators or principals - or in general: those who are responsible for the in-service training of teachers engaged in change project - should offer relevant, practical advise on a "on-call" basis. On-the-spot assistance seems to be very effective. Regular project meetings organized in the school provide an opportunity to share successes, problems, and suggestions and is also a vehicle for building the staff morale and cohesiveness important to effective implementation (Berman & McLaughlin, 1978, p. 29).

From a more general point of view, research on in-service training has made it clear that for maximum effectiveness the following components should be included: presentation of theory or discription of skill or strategy; modeling or demonstration of skills or models of teaching; practice in simulated and classroom settings; structured and open-ended feedback (provision of information about performance), and coaching for application (hands-on, in classroom assistance with the transfer of skills and strategies to the classroom) (Joyce & Showers, 1980).

4. Literature

BERMAN, P., Educational change: an implementation paradigm - In : LEHMING, R. & KANE, M. (Eds), Improving schools. Using what we know. London, Sage Publications, 1981, 253-286.

BERMAN, P. & MCLAUGHLIN, M.W., Federal programs supporting educational change, vol. VIII: implementing and sustaining innovations. Santa Monica, Rand Corporation, 1978.

BROPHY, J.E. & GOOD, T.L., Teacher-student relationships: causes and consequences. New York, Holt, Rinehart & Winston, 1974.

COX, P.L., Complementary roles in successful change. Educ. Leadership, 1983 (41), nr. 3, 10-13.

CRANDALL, D.P., The teacher's role in school improvement. Educ. Leadership, 1983 (41), nr. 3, 6-9.

DAWSON, J.A., Teacher participation in educational innovation: some insights into its nature. (Paper presented at the annual AERA-meeting, Los Angeles.) 1981.

DOYLE, W. & PONDER, G.A., The practicality ethic in teacher decision making. Interchange, 1977-78 (8), nr. 3, 1-12.

FULLAN, M., The meaning of educational change. New York-Toronto, Teachers College Press - Ontario Institute for the Studies of Education, 1982.

HALL, G.E., LOUCKS, S.F. & RUTHERFORD, W.L., Levels of use of the innovation: a framework for analyzing innovation adoption. J. Teacher Educ., 1975 (26), 52-56.

HALL, G.E. & LOUCKS, S.F., A developmental model for determining whether the treatment is actually implemented. Amer. educ. Res. J., 1977 (14), 263-276.

HALL, G.E., GEORGE, A.A. & RUTHERFORD, W.L., Measuring stages of concern about the innovation: a manual for the use of the SoC questionnaire. Austin, Univ. of Texas, R & D Center for Teacher Education, 1977.

HALL, G.E. & LOUCKS, S.F., Teacher concernsas basis for facilitating and personalizing staff development. Austin, Univ. of Texas, R & D Center for Teacher Education, 1978a.

HALL, G.E. & LOUCKS, S.F., Innovation configurations: analyzing the adaptations of innovations. Austin, Univ. of Texas, R & D Center for Teacher Education, 1978b.

HALL, G.E., ZIGARMI, P.K. & HORD, S.M., A taxonomy of interventions: the prototype and initial testing. Austin, Univ. of Texas, R & D Center for Teacher Education, 1979.

HUBERMAN, A.M. & MILES, M.B., Innovation up close: A field study in twelve school settings. Andover, The Network, 1982.

JANSSEN, S., Bijscholing van leerkrachten uit het lager onderwijs. Verslag over de bespreking van de resultaten van een enquête. Pedagogische Periodiek, 1975 (82), 211-220; 264-272. (In-service training of primary school teachers. Report of discussions of the results of an inquiry).

JOYCE, B. & SHOWERS, B., Improving inservice training: the messages of research. Educ. Leadership, 1980 (37), 379-385.

LOUIS, K.S., Dissemination systems: some lessons from programs of the past. - In : W.J. PAISLEY & M. BUTLER (Eds), Knowledge utilization systems in education. Dissemination, technical assistance, networking. Beverly Hills-London, Sage Publications, 1983, 65-88.

NEWLOVE, B.W. & HALL, G.E., A manual for assessing open-ended statements of concern about an innovation. Austin, Univ. of Texas, R & D Center for Teacher Education, 1976.

SIEBER, S.D., The organizational dilemma of educational change models: toward a solution. Interchange, 1976-77 (7), nr. 2, 39-49.

VAN DEN BERG, R.M. & VANDENBERGHE, R., Onderwijsinnovatie in verschuivend perspectief. Tilburg, Zwijsen, 1981.

VAN DEN BERG, R.M. & VANDENBERGHE, R., Grootschaligheid in de onderwijsvernieuwing. Tilburg, Zwijsen, 1984. (Large-scale innovation in education).

VAN DEN BERG, R.M. & VANDENBERGHE, R., Large-scale innovations in education. Leuven, Acco, in press.

VANDENBERGHE, R., Meaning of the demand of a 'practice-centred' in-service training. Brit. J. In-service Educ., 1978 (5), nr. 1, 33-42.

VANDENBERGHE, R., Studying change in primary and secondary schools in Belgium and the Netherlands. (Paper presented at the annual AERA-meeting, Montréal, 1983) ED 233 439.

VANDENBERGHE, R. & VERMEULEN, P., Bijscholing van leerkrachten uit het basisonderwijs. Een verkennend onderzoek naar hun wensen i.v.m. organisatie, vormgeving en inhoud. Tijdschrift voor Opvoedkunde, 1973-74 (19), 270-281. (In-service training of primary school teachers. An exploratory examination of their wishes concerning organization, activities and content.)

VANDENBERGHE, R. & VERMEULEN, P., Bijscholing van leerkrachten uit het lager onderwijs. Pedagogische Periodiek, 1974 (81), 327-372. (In-service training of primary school teachers.)