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RESEARCH-BASED TEACHER EDUCATION

RAZISKOVALNO ZASNOVANO IZOBRAŽEVANJE UČITELJEV

Avtor v svojem prispevku predstavi temeljna izhodišča izobraževanja učiteljev na Finskem (ki traja pet let in je na stopnji našega magistrskega študija, op.C.R.Pučko).

Med ključne značilnosti učiteljskega izobraževanja uvršča kakovostno in sistematično izobrazbo, ki mora učitelja opremiti s temeljnimi poklicnimi kompetencami. Izhajati mora iz koherentnih teoretičnih izhodišč, ki so vodilo za organizacijo in selekcijo vsebin. Idejo, ki usmerja izobraževanje učiteljev na univerzi v Helsinkih, avtor poimenuje "pedagoško mišljenje" in se konkretizira v treh vsebinskih področjih: pedagoško oz. (predmetno) didaktično znanje, teorija izobraževanja in praksa. Vsa tri področja se prepletajo od začetka do konca študija, in sicer predvsem preko raziskovalnega pristopa. Sistematičen uvod v raziskovanje je umeščen na samem začetku študija, raziskovanje je integrirano v vsa področja, vrh raziskovalnega dela pa je magistrska naloga, s katero vsak učitelj zaključi študij.

Glede na naravo učiteljevega dela gre seveda za naravnanost, ki naj da učitelju pečat praktičnega raziskovalca s temeljnim ciljem, da bi bil učitelj sposoben običajnim intuitivnim pedagoškim odločitvam dodati ali jih kdaj tudi nadomestiti z racionalnimi (raziskovalno utemeljenimi) argumenti. Raziskovalno mišljenje (eden od ciljev izobraževanja učiteljev) pomeni, da je učitelj sposoben avtonomnega mišljenja in delovanja, pri lastnem delu uporablja raziskovalni pristop (pogosto gre za akcijsko raziskovanje) in na tej podlagi sprejema pedagoške odločitve. Seveda tudi raziskuje (sam ali v sodelovanju z drugimi), je sposoben napisati raziskovalno poročilo, bere znanstvenoraziskovalno pedagoško literaturo.

Raziskovanje torej ni samo sebi namen, že od samega začetka študija je tesno povezano s pedagoško prakso, ki je sistematično razporejena tako, da prehaja od kratkih enot h kompleksnejšim in daljšim obdobjem. Vsako obdobje pedagoške prakse spremljajo teoretični študij in raziskovalni pristopi.

Glede na to, da je delo razrednega učitelja multidisciplinarno, se mora seznaniti z različnimi metodološkimi pristopi, jih biti sposoben kritično izbirati in uporabljati glede na značilnosti in posebnosti konkretnih pedagoških situacij.

Avtor predstavi tudi nekaj izkušenj in empriričnih ugotovitev o izvajanju opisanega izobraževanja učiteljev na Finskem, saj so program petletnega (magistrskega) študija uvedli že leta 1979. Razumljivo je taka oblika študija (z zaključkom v obliki magistrske teze) na začetku zbujala tudi pomisleke, z leti so postajala stališča bolj pozitivna. Mnogi razredni učitelji vidijo magistrsko tezo že kot izhodišče za doktorski študij, le manjšina (konkretno-tehnološko naravnani študenti) ne vidi smiselnosti v raziskovalni naravnanosti izobraževanja učiteljev.

Na podlagi intervjujev, ki jih je opravil avtor sam (preko 300), zaključuje, da je raziskovalno naravnano pedagoško mišljenje možno le na podlagi lastnega raziskovalnega dela. Študenti naredijo v študiju (in raziskovalnem mišljenju) razvoj od visokih pričakovanj na začetku do spraševanja o smiselnosti raziskovalnega dela, ki pa večinoma dobi potrditev z magistrsko nalogo, ki jo večina študentov danes že vidi kot integralni del svojega študija.

INTRODUCTION

The basic idea of the Finnish teacher education is to educate competent teachers for society's educational system and to develop the kind of professional quality in its teachers to ensure a lifelong teaching career. Behind this idea is the belief that initial teacher education is of paramount importance and any defects arising during it are extremely difficult to correct afterwards. In-service teacher education is naturally inevitable, but the basis for professional competence is laid during the initial teacher education.

This idea implies that some principles should be realized in order to attain the aims and goals inherent in the idea. First of all, the teacher education program should be built systematically. This means that the program has some basic beliefs to guide it and an organizing theme or themes as principles for the selection of the content of the program (Galluzo & Pankratz, 1990). In addition to an explicit program, there are implicit thoughts and conditional factors that guide the system and provide space to exist within this context (Doyle, 1990, pp. 3-4). The program of each faculty of education has its own emphasis within the common frames that contain the width and length of the program, as well as the contents that are necessary to fulfill the requirements defined by the national educational system (cf. Kansanen & Uljens, 1996).

The Department of Teacher Education at the University of Helsinki aims at achieving a balanced development of teacher personality, in which a teacher's pedagogical thinking is essential. This overall purpose is composed of three large content areas: pedagogical content knowledge or subject didactics, the theory of education and practice. These components are in reciprocal interaction and the main organizing theme, from the beginning of the program to the end, is a research-based approach. This approach is integrated into every separate course within the program. Systematic research methods courses are introduced at the very beginning of the studies. The research-based approach culminates in a Master's thesis, which is obligatory for every student. The class teachers (grades 1–6, students from 7 to 12 years) write their thesis in the field of education while the subject teachers (grades 7–12, students from 13-18 years) choose a topic within their major; from a subject that they are teaching. In any case, the level of teacher education is the same for all teachers from elementary to upper secondary school. However, in this presentation I focus on the teacher education program for class teachers.

MAIN ORGANIZING THEME: RESEARCH-BASED APPROACH

Zeichner has presented a classification of the possible teacher education programs (1983) and has divided them into four paradigms: behavioristic, traditional-craft, personalistic and inquiry-oriented paradigms. An open question is whether the paradigms form a hierarchy. It seems that they may be seen as following each other. If so, it implies that e.g. the inquiry-oriented paradigm has elements of all other paradigms within it. The important point is that the specific emphasis decides where the program belongs. The research-based approach is fairly similar to the inquiry-oriented paradigm. All parts in the teacher education program are justified by a systematic totality and focus on a teacher's thinking process, that may be characterized by criteria used in research work. As Rudduck (1985, 288) said, it is, »Research, as a perspective that goes across the curriculum of teacher education courses …«.

REFLECTIVE TEACHING - PRACTITIONER RESEARCHER

Although an all-round understanding of research methods is desirable, the nature of a teacher's work is much like the activities of a practitioner-researcher. Reflection is a way to gain knowledge about one's own doings and about the interaction in the teaching-studying-learning process. Bengtsson (1995) adds dialogue with colleagues and research as other possibilities. In reflection, a certain distance is needed in order to be able to ponder on one's own decisions and their role in practice. In this process, the teacher may utilize his/her knowledge about research-based thinking skills. This also means the competence to read articles in professional journals and research reports.

The aim of research-based teacher education is to be able to make educational decisions based on rational argumentation, in addition to everyday or intuitional argumentation. The skill to think along the lines of research principles presupposes a general understanding of all-round research methods, as well as a positive attitude towards research. This means that the teacher is also able to do his/her own research if needed. However, developing the teacher into a researcher is a much more demanding goal (Cochran-Smith and Lytle 1990; Grimmett 1995; Wong 1995a; Wong 1995b; Wilson 1995; Baumann 1996; Henson, 1996). In the teacher as researcher –movement, the teacher does research either independently or in a collaboration with a senior researcher. The actual objective is to write and publish a report. Research-based thinking, on the contrary, is to use research competencies in one's own teaching and in making one's own educational decisions. It is natural that much of the research described in this way resembles action research and is in line with qualitative research. However, by restricting the process only to action research overlooks a great deal of a teacher's work. A philosophical approach in conceptual analyses and requirements needed in evaluation are important topics in teaching. Readiness and the skill to read professional journals belongs to the methodical competence of research-based teaching.

COMBINING PRACTICE WITH RESEARCH COMPETENCIES

To develop research-based thinking for everyday teaching, the principle of a continuous interaction of research studies and practice is realized, from the very beginning of the program. The final goal is the writing of a Master's thesis at the end of the studies, but several minor systematic papers are required throughout the studies. The idea of a spiral curriculum is applied and courses of basic importance are vertically integrated into the studies. In every phase of the studies, research methods courses are integrated with other studies.

Hytönen (1995) has outlined some integrative principles to combine the essential elements of the program. The basic idea is to integrate the theoretical aspects with practice during the studies. Research-based thinking is seen as the connecting factor in this process.

The first principle is to start practice-teaching as early as possible. Although quite many students have teaching experience from before they began their teacher education studies, it is important to visit the practice schools and to become familiar with their habits and activities.

Secondly, the interaction between practice and educational theory studies is emphasized throughout the entire study time. The totality of educational theory, pedagogical content knowledge and practice form the ideal goal in this respect. This means, concretely, that during the teacher education program there is practice teaching during every study year and during every study period.

Every study period has its own aims and characteristics. There are many practice periods following each other and every period is integrated into the totality of the teacher education program. Practice teaching is organized in the special practice schools, as well as in ordinary schools. In the beginning, the students observe pupils of different ages, their role as group members, and the interaction in the instructional process in different classes and grades. Gradually, the content of practice teaching is extended to different subject matters, teaching methods and to all aspects of a teacher's work.. The ultimate goal of the teacher education program is to develop an autonomous teacher personality, and all the practice periods are planned in order to fulfill this purpose.

Practice teaching proceeds from small units to larger combinations. The special characteristics of different practice teaching periods are taken into consideration. The requirements of class teachers and subject teachers differ in several important ways. Class teachers have quite many different subject matters to deal with, and the total development of each student is of special importance to them. Subject teachers are stronger in content knowledge competence, but their students need special attention due to the particular age group. The larger perspectives of a teacher's work, in the form of co-operation with parents and the home of the students, are of importance. Also, the co-operation of all teacher educators is essential.

Every practice teaching period is combined with detailed theoretical studies that relate to the topic of the practice period. The aim is that, to obtain more knowledge to support their teaching practice, the students may read relevant texts and discuss the subject with each other and with the teacher educators.

Practice teaching in the university practice schools and in the ordinary community schools is organized in turns. The university practice schools also function as normal comprehensive schools, following the same curriculum as in other schools. However, special competence requirements are

expected of the teachers, and they are experienced supervisors. The field schools represent the everyday practice of schools in general.

The main principle of the program is the integration of the various aspects of the teacher education program, through research-based thinking and argumentation. This principle as such is not enough. How we define research and what we mean by research-based approach is also essential.

The special aspect of thesis writing takes place over a longer period, beginning in the third year of study. In two or three project seminars the students present their research plans and together discuss each other's plans (Niemi & Kohonen, 1995, 31-34). Some of them may join a research project in the department. However, most of them choose their own personal theme and proceed independently, in close contact with their supervisor. Parallel with the project seminars, the students are involved in methodological studies. If possible, the theme of one's own research is chosen from personal experiences during the practice teaching.

PEDAGOCICAL THINKING - JUSTIFYING WITH RESEARCH-BASED ARGUMENTS

A teacher's work is very many-sided, and evaluated from the research perspective, it is also multi-disciplined. The different aspects require different methodological approaches. It is not a question of various research methods; the problem in this respect is a greater one. When research approaches regarding teaching and teacher education are presented in textbooks (e.g. Lee & Yarger, 1996), usually all the possible approaches are described. It is, however, impossible to think of applying them all in the same research project. Nevertheless, a teacher in everyday practice, has all these possible variants to deal with. The researcher usually specializes in some approach and methods; a teacher's work contains elements of all possible approaches. In this context, the thinking required of a teacher is extremely extensive. It is self-evident that a teacher cannot function as a researcher. In spite of this, research-based thinking, where the understanding of various research methods and their possibilities are familiar to the teacher, should provide support in making sensible educational decisions. Let's look at some examples.

Although learning is not a causal consequence of teaching and studying, the outcomes of the teaching-studying-learning process are evaluated in relation to the aims and goals set in the curriculum. In this respect, the instructional process is a means to achieve certain results, as a curriculum is a means in a larger context of a societal educational system. To be able to choose relevant methods in this endeavor requires the knowledge of experimentation, and particularly of quasi-experimentation (Cook & Campbell, 1979). Understanding the rules of research designs enables the making of comparisons between various teaching methods and procedures. This may be called mental research in the teacher's thinking. Its power is in the arguments and justifications behind the decisions. Further, knowledge and understanding of the principles of measurement, psychometry and inferential statistics are needed in the deduction. Reliability and validity, as well as the ability to construct achievement tests, are useful in evaluating learning outcomes. It is highly improbable that it would be possible to adopt this kind of thinking without exercise and practicing. Neither is it plausible to compensate for it with everyday thinking. Professional competence in these matters takes years to develop; to be aware of these principles, however, should improve the ability to make educational decisions.

Or, how should one get to know the students? What kinds of methods are needed when getting to know the students and what kind of knowledge on the whole is required. Discussions with the students, personal interviews and observation techniques with various kinds of psychological tests should give a comprehensive description and understanding of a student's personality and manners. The standard error, for example, is a small detail that is required when interpreting any test results; with common sense, the results are treated as centimeters and grams. The given methods also presuppose the knowledge of qualitative research methods and the understanding of the meaning of qualitative empirical material and its background assumptions. Also, all these methods are practically impossible to learn without studying systematically although the difference between qualitative methods and everyday thinking is not as great as in the area of quantitative research methods.

A philosophical approach and a conceptual analysis in defining and analyzing the purpose of education and value questions in the curriculum is another particular area where systematic research-based thinking is needed. This also includes general criticism, which is required of every researcher through all kinds of research approaches. The skill to differentiate between descriptive and normative

assertions is of paramount importance in making educational decisions. The teacher is always working in the context of the curriculum, along with the values behind the defined aims and goals. Values lead to the purpose of the curriculum and of the school. Following them and trying to realize them in the instructional process is the responsibility of every teacher. This deontological side of a teacher's pedagogical thinking is, however, not enough; the teleological aspect must also be taken into consideration. Knowledge of research in philosophical studies may provide the necessary understanding for a teacher's curriculum-making and evaluation. Nevertheless, it is not the intention that a teacher would act as a real researcher, though thinking as a researcher might help in finding arguments and justifications in the teacher's pedagogical thinking.

The idea of an autonomous teacher who is able to think and act independently and justify his/her own educational decisions presupposes a readiness to read professional texts in research reports and journals. Therefore, it is important to be able to choose what to read and evaluate and to criticize the text for one's own use. Everyday intuitional thinking, with justifications from one's own experiences and discussions with colleagues, attracts rational arguments. Although pedagogical thinking is mainly mixed with intuitional and rational arguments, a research-based attitude makes it possible to steer this thinking systematically towards making rational educational decisions.

SOME EMPIRICAL EXPERIENCES

During the twenty years the teacher education program has been realized the program has also been intensively studied. It may be reminded here that the reform in 1979 brought great changes to the study program with the introduction of Master's thesis. The problems of the class teachers and subject teachers are, however, of a different kind. A large part of the subject teachers had already earlier written a Master's thesis, for the class teachers it was a totally new matter.

In the beginning the writing of a Master's thesis was much discussed. Its meaning and importance from the viewpoint of a teacher's work was problematized. The attitudes of the students, nonetheless, were fairly even with about as many positive as negative notions (Lahdes, 1987; Uusikylä, 1990, 130-145). The later results have indicated a more positive attitude. Niemi (1995, 110-119) reports that nearly 80 % of the class teacher students were very positive. In the interviews they emphasized independent knowledge-searching and the learning of thinking skills, as well as the requirement of criticism in their research. In addition, many considered the thesis writing as a good contrast to the rest of the studies. The selection of the topic was often mentioned as important. Thesis writing has also provided the inspiration to continue towards doctoral studies, which are open to all teachers with a Master's thesis. A minority of the students, however, did not see the meaning of research work in their studies. Apparently the reasons for a negative attitude lie deeper in the beliefs about the nature of a teacher's work. It may be interpreted from the interviews that those students had a very concrete and somewhat technological idea about the teaching-studying-learning process.

The subject teachers write their thesis in the subject they are teaching. Most often the themes of the theses deal with the substance of the subject. It is quite rare that the theme would be connected with teaching. A slight trend, however, can be seen towards students more often choosing a theme related to subject didactics.

My own interviews with the students (n ≈ 300) in the department of teacher education at the University of Helsinki confirm these findings. The students emphasize the hard work required. Quite many of them have felt a lack of supervision, and would have wanted to have more. It also confirms the thought that, without one's own research, research-based thinking would be almost impossible. The interviews show that only some of the students considered this kind of approach as relevant to their own work. The development of their attitudes throughout the course of studies is also understandable. At the beginning, it is common to have great expectations that gradually diminish as the work proceeds. When the thesis is finally ready, the attitudes are positive again and the importance of the role of research is also recognized in a teacher's work. The interviews clearly show that the Master's thesis is considered more and more as an integral part of the studies. There are only a few left who regard their own research as useless and irrelevant.

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