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#### ABSTRACT

After Finland's elementary and secondary system was totally reformed in the 1970s, it was determined that the education of elementary and secondary teachers also needed to change. Four new teacher education goals were proposed: (1) developing scientific humanism, (2) creativity, (3) socialization, and (4) a holistic view of individuals. The new plan did not separate general, theoretical, and professional education; it oriented teacher education more toward science and research. Three factors were crucial: integrating theoretical with practical studies; integrating subject studies with pedagogical studies; and preparing prospective teachers to guide the cognitive, affective, and psychomotor development of their students. Finland's reformed teacher education now offers comprehensive programs for elementary and subject (secondary) teachers. Both programs lead to a master's degree and are considered academic curricula. Because subject teachers teach subject-specific classes in comprehensive schools, they study two or three subjects and major in one. Since elementary teachers teach all subjects, they major in educational science and learn the basics of all subjects. The teacher education reform has led to a system that does not differ much from the traditional notion of professionalism on the European continent. (SM)





# University of Helsinki Department of Teacher Education

# Developing Academic Professionals Through the Finnish Teacher Education Curriculum

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The entire Finnish educational system was reformed in the 1970s. Although Finland is not a socialist country, its educational system is structurally unified and centrally governed to a large extent. Therefore, a change in one part of it will have consequences in other parts as well. When the comprehensive school system with a new curriculum and with its compulsory nine years of basic schooling for everyone was introduced throughout the country in the beginning of the seventies, a need was felt also to reform the education of teachers accordingly. The degree reform actually concerned the entire university education. The outlines of the reform were based on the outcomes of the committee work done by different experts, who often also represented different political parties and various interest groups of society. A more detailed planning was conducted within the universities.

The committee (FYTT 1972) that discussed and formulated the university degree reform emphasized that an orientation toward professions was to be carried out through the aims, structure and contents of the degrees based on general societal and educational goals. The scientific and research education was to be directed to the tasks—and development of a profession. The committee relied on the Unesco's report (Faure et al. 1972) and adopted four main goals for education: (i) the development of scientific humanism, (ii) creativity, (iii) socialization, and (iv) the whole personality. A man and his well-being is a value in itself. The science and technology are then of necessity involved in education. A researcher's mind and thinking is necessary for any citizen. This is trained in real and simulated problem-solving situations. In decision-making a scientifically thinking person is able to choose a meaningful alternative that enables him to control natural, production and social resources as well as himself.

The committee wanted to add the social and scientific relevance and creative features to the university studies. A so-called polytechnic model was applied to the degree reform. This meant integrating science- and research-theoretic general education with applications to the requirements of the profession as well as developing a critical attitude and cross-disciplinary problem solving. By not separating general, theoretical and professional education from each other, the reform was aimed at making the professional education more oriented towards science and research. Thus the three central principles of the degree reform were profession orientation, comprehensiveness and polytechnicality.



The committee (Anon. 1975) that discussed the teacher education criticized the prevailing system. The aims of the teacher education had been too narrow in scope since they had been formulated in the subject disciplines and in the practice schools. They should be formulated from a wider perspective. The level of teacher education had to be raised and brought closer to society. The teacher's pedagogical awareness was not adequate for him to be considered a real expert on his field. Therefore, science- and research-based orientation should be increased in order to stimulate a seeker's mind, a will to experimenting and a sound critical mind in prospective teachers (Anon. 1975, 21-22) Also, the separateness of the academic studies and pedagogical studies of the subject-matter teachers had to be removed. The committee emphasized that a democratic society needs intellectually independent, critical, active, responsible, well-informed and responsible citizens (Anon. 1975, 33).

The profession orientation meant for the teacher education that the prevailing school policies and the educatinal aims of the schools had to be taken into account in the studies. Thus the goals and aims of the teacher education were to be determined by the educational aims of the corresponding school systems to a large extent. Such a requirement did not, however, deny the teacher educators the possibility to set their own goals. A reciprocal interaction was supposed to exist between school and teacher education.

The committee (Anon. 1975) formulated the general principles for developing the teacher education. One fundamental principle was to define and determine the educational studies in a new way. Three aims were considered important. The first aim was to provide the prospective teachers with the qualifications to guide the cognitive, the socio-emotional (affective) and the psycho-motoric development of their students alike, that is, to act as an educator in a broad sense of the word. Pedagogics or didactics had traditionally been a central area for teachers but such areas as educational sociology and learning psychology should also be brought in. The former would help to understand the role and status of the educational system in society and the relationships between the different social classes and educational outputs. The learning psychology was necessary for overcoming the learning difficulties of some students. The level of pedagogical studies could be raised by strengthening the theoretical ground, which should enable the teacher meaningfully to orient himself in problem situations. This included an optimistic attitude to the possibilities of education, which could be justified by the research knowledge so far. (Anon 1975, 39.)



The second aim was to integrate theoretical studies with practical studies, and the third aim was to integrate the subject studies with predagogical studies more intimately than before (Anon 1975, 39-40). In this connection the committee emphasizes the importance of subject-related pedagogics, because it can add to the motivation of students and because it relates the subject matter to the educational sciences. Also, it serves as a potential intersection of cross-disciplinary research projects.

The suggestions required educational programmes for prospective teachers: one for subject teachers and another for elementary school teachers. With the three principles it was thought possible to educate citizens who can function flexibly in society and adapt themselves to various professional needs and changes. One of the practical consequences was to give up the traditional degrees in various academic disciplines and instead to form goal-oriented educational programmes with credit unit systems. In educational terms, this change could be interpreted as a move from the traditional academic "Lehrplan" or syllabus type of studies to a curriculum type of programme.

From the broader perspective the framework for the goal-setting can be seen to consist of society, student and the fields of study because education takes place in the domain determined by these factors. From this definition follow the three steps of the teaching process: aims, teaching arrangements and management, and evaluation. The teacher must master these phases and be able to integrate them. The control of these phases can be considered the essential characteristic of the teacher's profession. (Anon. 1975,67-69.) Although the teacher is not educated to be an investigator, he must know the most important educational research methods in order to be able to take a critical attitude to research and empirical findings and in order to be able to apply them to his own teaching and educational work (Anon. 1975, 91).

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In 1974 all the education of teachers for comprehensive and upper secondary schools was then transferred to the universities and was imposed on the faculties of education. The structure and contents of the teacher education was influenced by the processes and trends of development in society and by changes in views on the character of the academic studies. It also brought into being a new field of study for each school subject or subject area called subject-related pedagogics: the fields of mother-tongue pedagogics, foreign language pedagogics, pedagogics of mathematical subjects, pedagogics of



biology and geography, etc. The fields are something similar to what Shulman (1986) means by pedagogical content knowledge. As a warranted proof of the importance of the subject-related pedagogics new professorships in pedagogics of different subject-areas were established for the education of subject teachers. Their task has been to formulate the goals and aims of their fields of study and to follow and lead research within it.

A noteworthy feature of the reform was that it brought the educational programmes of elementary school teachers and subject teachers closer to each other. This was created by expanding the requirements for elementary school teachers and by deepening the pedagogical studies of the subject teachers. A unique feature of the Finnish teacher education is that the programmes lead to a master's degree for both elementary school teachers and subject teachers, and therefore, they can be considered academic curricula. The status of elementary school teachers was thus raised to the academic level of subject teachers.

In the study programme each field of study or discipline consists of three hierarchical levels: (i) general studies, (ii) subject-related studies, and (iii) advanced studies. In the field of education the general studies deal with orientation into the research methodology, empirical investigation and fundamentals of statistical analysis as well as introduction to the development of sciences and research and to scientific thinking. Also, courses in ADP and in planning are included. The second level provides the student with the scientific tools for investigating and solving problems and the necessary conceptual framework, central theoretical and methodological contents, and with general qualifications for applying knowledge and for professional activities. This is the programme for elementary class teachers and forms their major in the field of study of educational sciences, that is, the theoretical part of their education.

The subject teachers undergo the same levels in their major subject and take two other subjects to the second level. In addition to these, they take pedagogical studies up to the second level. Their educational studies are, however, more oriented towards and permeated by subject-related pedagogics. In their second level they work in a seminar, orient themselves with subject-related research and conduct a study of their own and report it. Apart from these theoretical pedagogical studies, both groups work with practical pedagogical studies both in planning their teaching and in practising teaching in the university normal schools as well as in the field schools.



The two major branches of teacher education are the programmes for the subject teachers and the elementary class teachers, respectively. The elementary class teachers teach every school subject to classes 1 to 6 in the comprehensive school. The subject teachers mainly teach classes 7 to 9 of the comprehensive school, and/or classes 1 to 3 in the upper secondary schools, which prepare their pupils for university and higher education. Subject teachers study two or three school subjects and major in one of them. Elementary class teachers study educational science as their major subject, and learn the basics of the school subjects that are taught at the lower levels of the comprehensive school. They specialize in two of the subjects to some extent, but not at the same depth as subject teachers. Both groups take a master's degree and write a thesis in the major subjects.

The educational or study programmes for a master's degree consist of 160 credit units. A credit unit is a technical term and by it is meant the input of work required to complete a certain block of studies, which may include lectures, exercises, independent reading, etc. This investment of intellectual effort amounts to 40 hours of work per week, which gives the term 'study week'. The outlines and structure of these educational programmes are unified in all the faculties of education in Finland, but variations occur to some extent in contents and emphasis from faculty to faculty due to the previous history of schooling and education of these institutions. The following more detailed account is based on the system in the University of Helsinki Department of Teacher Education.

The programme for the elementary class teacher's degree corresponds to 160 credit units or study weeks, which are estimated to take four years to complete, but which, in fact, take about five years or even more, depending on the student's efforts. The subject teacher's degree corresponds to 180 study weeks. Out of them, 40 credit units form the actual educational and pedagogical part of the schooling, given by the Department of Teacher Education. Specialization in the subject-matter takes place in the respective faculties of the University. The elementary class teachers do practically all their studies in the Department of Teacher Education. Both groups practise teaching in the two normal schools associated with the University, apart from a short field practice in an ordinary school.



Table 1. The educational programme for the elementary class teachers estimated in credit units.

Educational studies(such as pedagogical theory, research m	iethods,	
pedagogy (=didactics), educational psychology)		51
Basic knowledge of the school subjects (incl. subject-		
related pedagogy)		38.5
Specialization in two school subjects		30
Teaching practice		20
The rest (native and foreign language studies 8, general		
social and ecological studies 7.5, free choice of studies 5)		20.5
$\overline{T}$	otal	160

Table 2. The educational studies of 40 credit units for subject teachers.

Educational studies (narrower in depth than the above)		12
Subject-related pedagogy and pedagogics		9
Teaching practice		18
Free choice of studies		1
	Total	40

The above tables show that the subject teachers get a deeper understanding of the subject-matter and its epistemic nature both theoretically and practically. In the subject-related pedagogics, the subject teachers also apply their knowledge to a research study of their own, but to a limited extent. Elementary class teachers are taught merely the basics of the current knowledge in the respective fields. They are unlikely to possess a very good basis for understanding the epistemic nature of the school subjects. This also limits their possibilities of understanding and applying knowledge from the subject-related pedagogics, because only a modest amount of it is included in their schooling in the context of the subject studies, and it is more of pedagogical nature than research-oriented.

What the elementary class teachers lack in the subject-related pedagogics is compensated for by their deeper knowledge of general pedagogical rules and regularities that apply to any teaching. This is due to their more profound effort with the teaching phenomena and activities as reflected in the educational research and literature. They also apply that knowledge in doing a research study of their own for the final thesis. We might assume that general educational



aims and pedagogic objectives play a greater role in their minds than merely subject-related aims and pedagogy. Another assumption is that this might also be reflected in their classroom activities more than in the subject teachers'.

The relationship between theory and practice also comes to be seen in how much teaching is practised during the preservice training and how it is practised. The amount of practice is slightly less for the subject teachers (10 per cent of the total credit units) than for the elementary class teachers, whose portion is 12.5 per cent of the whole programme. Its amount is perhaps not so important as how it is planned to function in the programme. Here we must consider the general principles that are stated in the Government Decree and the University regulations. The teaching practice of the elementary class teachers is supposed to take place *both* in interaction with the studies of the school subjects and educational studies *and* concurrently with them. A similar rule applies to the subject teachers: the interaction and concurrence of the subject studies with educational studies and practice must take place during a minimum of two academic years. The rationale behind this is to integrate theory and practice, but the realization of the principle allows various solutions in practice.

In the elementary class teachers' study programme students are offered to be in contact with classroom reality as early as possible. After they have been taught some basic concepts about teaching, they are introduced to classrooms, first as observers of the teacher's tasks and problems, and then in practising teaching in steps at different phases of their schooling. The idea is that educational theory is built mainly on the basis of the practical activities and the students' own experience. Theoretical studies varying alternately with practice should lead to theory. A second principle is that by differentiating the objectives of the individual practice periods, each of them has a special character of its own. (Hytönen 1982.)

Practice Period I and II focus on the general features of the interaction between the teacher and pupils. Period III is scheduled after the students have finished their basic studies of the school subjects, and thus enables them to concentrate on the subject-related pedagogy. Period IV is placed in a field school, where an emphasis is put on the total responsibility of the teacher for his class. Thus planning a series of lessons becomes possible, and also enables the candidate to try out and find his own personal preferences. The fifth period of practice is performed in the normal school, and the teacher candidates are then evaluated and given marks for their teaching skills. (Hytönen 1982.)



The elementary class teachers' programme seems to integrate practice and theory, at least in the curriculum plan. In particular, the stepwise approach to the knowledge by description and by experience might lead to a stronger link between theory and practice. Whether this also happens in the minds of the teacher candidates remains to be seen and empirically to be proven. A positive outcome will lead us to ask whether the impact is permanent. Such questions may be raised because many different people are responsible for the different phases of the schooling. Thus, the integration of theory and practice essentially depends on the teacher candidate's ability to carry it out.

The subject teachers pursue studies in the subject matter for two years before they start their educational studies at the beginning of their third academic year. These then run in parallel with their subject-matter studies. In the original curriculum—they had their first practice period during the spring term of the same academic year, and Practice Period II in the second year oftheir educational studies. Many students and some teachers thought it was too much scattered, so that both practice periods have been combined and placed in the second year of the educational studies, which is also devoted to subject-related pedagogics as well as to a short practice period in an ordinary field school. During the spring term of the third year they take their Final Practice Period and are assessed for their teaching ability. There are some slight variations and continuous revisions in these arrangements in different subjects.

There is no denying that theory and practice are integrated in the curriculum plan, which should allow the teacher candidate to apply his theoretical knowledge to teaching reality. Knowing that and how (Ryle 1949, 28-29) should help the candidate to find empirical solutions in classroom teaching so that his experience becomes meaningful practice. In comparison with the study programme for the elementary class teachers, the integration of theory and practice seems harder for the subject teachers to achieve. It is mainly due to practical difficulties. Many educators and several institutions are responsible for the courses, which requires a lot of joint planning, timing and negotiations at the operative level. Secondly, the realization of the contents of the programme depends on how different educators interpret and emphasize the given aims. The teaching staff in the classroom are not necessarily well aware of the theoretical aspects of teaching, and prefer to stick to their traditional, well-proven practice. This variety of interpretation is likely to make the teacher candidate somewhat confused and insecure in the teaching practice, which may prevent him from constructing a global, integrated, and personal interpretation of his own teaching. (Hellgren 1988.)



The requirement of science- or research-based knowledge for prospective teachers is not unique in teacher education, but we may ask whether such a body of knowledge exists, and if yes, how is it possible for students to evaluate such research-based knowledge. To avoid students having to take such knowledge for granted, as a kind of ideology or through indoctrination, it is necessary to teach them the epistemic nature of scientific and research-based knowledge. For this, intending teachers must be taught on what assumptions and preconditions science and research operate and what methods of inquiry are used. Two broad fields of research come to bear on this: the respective subject-matter, and the educational sciences with the inclusion of the relevant subject-related pedagogics. (Hellgren 1988.)

In this context subject-related pedagogics plays an important role for subject teachers. The new fields of study are yet theoretically in their infancy because they were originally created for the practical purpose of helping to educate subject teachers. Consequently, the body of knowledge partly consists of the traditional lines of pedagogy and the adopted views of how to teach the given subjects. Nevertheless, the reform has stimulated new research and investigation. Professors, however, seem to hold somewhat different theoretical conceptions of subject-related pedagogics (Hellgren 1992). The issues include, among other things, the relation between normative or prescriptive ingredients and descriptive ingredients in pedagogics, methodological approaches to investigation, relations between general pedagogy and subject-related pedagogics on the one hand, and between the discipline of the subject and the educational sciences on the other hand.

The Finnish academic programme attempts to offer a more general and global experience of classroom teaching, because the continuously arising practical problems vary in kind and complexity to such an extent that it is unrealistic to be able to anticipate them all. In this sense, the teacher's profession sharply differs from vocational skills that are required in craftsmanship, for example. Consequently, it is justified to regard teacher education as educating and shaping intellectual capabilities and skills, rather than as training merely a limited set of more or less mechanic techniques and skills. Therefore, it is reasonable to emphasize the academic way of educating teachers. Such schooling provides them with better means of reflective thinking and flexible action and behaviour, which is needed in communicating successfully in the teaching transaction. Routines and habits develop with time.



The purpose and aim of the teacher education reform was to harmonize all the teacher education of comprehensive and upper secondary school teachers, make it more research-based by placing it in universities, and break up the bonds of the narrow academic thinking of the university disciplines by requiring more professional orientation, an integration of education with society, and integrating research and teaching. The plans have come true structurally, but still, the system needs detailed development and improvement as well as continuous revisions in order to be dynamic and capable of meeting the demands in time.

Despite the degree reform, the system does not seem to differ very much from the traditional notion of professionalism on the Euroepan continent. A professional is presumed to have taken a university degree with a major subject chracteristic of the profession, such as medicine for medical doctors, law for lawyers, etc. The education of civil servants was thus imposed on the university. According to this view of professionalism, the frequent discussion in the research literature of whether a teacher's education leads to a craft, trade or profession is solved in favour of professionalism in Finland. This has always been the case of subject teachers, but now it is true of elementary school teachers who take educational sciences as their major field of study and are then educated more or less into civil servants according to the traditional European view.



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