

SELECTED THESES FOR A SUSTAINABLE TEACHER EDUCATION PROGRAMME

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Abstract: *The purpose of this article is to outline conditions necessary for the guaranteeing of sustainable teacher education. Five theses are developed in the text related to the esteem in which a teacher's work is held, selection of student teachers, teaching competencies as aims and goals of teacher education programmes, and basic and conceptual levels in teacher education. Research-based teacher education guarantees the integration of the basic level with the conceptual level through twofold practising. The outcome is a reflective teacher with pedagogical thinking who is able to develop as a practising teacher in changing circumstances.*

Key words: *esteem in which a teacher's work is held, selection for studies in teacher education programmes, basic and conceptual levels in teacher education, research-based teacher education*

To Begin With

A scientific approach as well as the role of research and its academic quality are common characteristics in current literature that addresses teacher education. What the writers really mean by these concepts is mostly left without closer definition. A popular stance might be that the place for teacher education is at universities. In most European countries and in the western world teacher education certainly takes place at universities, but this does not mean that it is academic, based on research, or scientific by nature (Moon, 2003).

It is relatively easy to present some fundamental criteria that characterise the scientific nature of teacher education and the roles played in it by research and academic quality. First of all it is a question of a research university where research and teaching build up a unity. Teachers in a university, that is professors, university lecturers and doctoral students, teach in the area where they do research according to the well-known Humboldt principle. Teaching is founded to a great extent

on research of their own and should be evidence-based on this basis (cf. Hattie, 2009). Students, on the other hand, study their main subject in depth and have supplementary subjects in their programme to strengthen future expertise. The studies culminate in a research thesis at master's level. This has to be a systematic research report, preferably an empirical study based on a theoretical framework. This presupposes studies in research methodology with diversified methods and their practising. A great many essays are included in the programme for the practising of academic writing. Studies in research methodology should be many-sided, and preferably mixed methods by nature. On the one hand, the studies aim at expertise for the consuming of research results in one's own work; on the other hand they aim at solving everyday problems in teaching and producing new knowledge in one's own work.

Criteria of this kind belong among university studies in all subjects – not only in physics, biology, philology, political sciences, etc., but also in education. So why not in teacher education? What is surprising is that research is not necessarily included in studies at master's level. Secondly, teacher education quite often takes place without scientific content and is only school-based or is based mainly on personal experiences. Can we afford such an elementary teacher education?

It is well known that the reputation of education and pedagogy is not particularly high in the academic world. The position of the teaching profession and its academic esteem are two different things. The esteem of both, however, has long been low. In the history of teacher education the status of teachers' colleges has been discussed in the USA (Allison, 1995; Labaree, 1997, 2003) and also similar problems have been addressed in the Nordic countries. Teaching colleges have long been local institutes, their teaching staff has been modestly educated, students have not been drawn from the best academic groups, curricula have been practice-oriented and studies have been lacking in depth.

The status of pedagogy and education and in particular the poor esteem in which they are held, have aroused discussion in the professional journals (Kaestle, 1993; Sroufe, 1997). The most extreme expression has been contempt for education (Prange, 2008). There has been no lack of defenders of education over the years: Gage (1994) and above all David Berliner have responded in a convincing way to the critique (2000, 2002, 2005). The discussion has, among other things, lead to certain professional recommendations (Shavelson & Towne, 2002).

Economy has always played an important role in education; the teacher's salary has never been especially appealing. In spite of this there have always been young people who want to work with children, perhaps because they consider this work some kind of calling. Today we prefer to speak of motivation, of intrinsic motivation in particular. Those who want to work with children are usually highly motivated to do so. Circumstances vary quite a lot, even in the Nordic countries. We know that in certain countries teachers do not stay at schools for long before they start to look for other jobs. Macdonald (1999, p. 837) notes that "... less than 10 % of teachers in Germany reach normal retirement age".

An additional fact is that most student teachers are young women. It is a common trend in the European schools that the proportion of male teachers in schools is subject to a gradual but considerable decrease. Feminisation is not a matter that affects only education; it is a more common phenomenon. In this respect the situation is the complete opposite of the situation that existed in the mid 19th century, at the time of Friedrich Fröbel, when most kindergarten teachers were men.

Spencer (2000; 2001, pp. 804–806) gives an historical overview of the feminisation of teaching in the USA. In the early years of the 19th century there were women teachers only in some schools for small children, but with the development of industrialisation conditions underwent great change. Men moved into administrative positions while women entered teaching in great numbers. Teaching was also one of the first professions that was respected to such a degree that women were encouraged to look for jobs in it. The same happened in the Nordic countries, in even greater numbers.

Since the emergence of feminisation in the teaching profession, the question has been raised of how men react to the fact that they are in a minority. There are only a few research reports that address this question (Spencer, 2001, pp. 808–809). In one study men in four female-dominated professions were interviewed; the men were nurses, librarians, social workers, and teachers. These men did not experience discrimination; instead they were expected to behave in certain ways. As a result the men looked for more prestigious positions as administrators and supervisors. The other side of the coin is that the men reported that the public is often suspicious of the reasons they have for working in low-status, female-dominated occupations. Role conflicts may also arise: if men are too masculine, their competence as teachers may be questioned; if they are nurturing and emphatic, they may be considered feminine. Behaviour considered natural in male teachers at upper-secondary school or grammar school may arouse suspicion when it is displayed by male kindergarten teachers.

Difficulties in encouraging young people into the teaching profession may lead to problems of quality. Studies might become too hard and rejections and drop-outs might increase; such outcomes have occurred in Germany. A dangerous consequence might be that curriculum planners and teacher educators start to pay too much heed to the wishes of students, with a consequent lowering of requirements. A shortage of teachers in schools may now and then lead to exceptional teacher education, but this is mostly temporary. In any case the discussion has been opened on how to attract more males into the teaching profession.

There are, however, circumstances of another kind. In Finland, for example, the largest weekly periodical *Suomen Kuvalehti* has for a long time conducted a nationwide survey every third year concerning the esteem in which certain occupations are held. From the results it is possible to identify certain viewpoints as they develop over the years. Most of the occupations in the top ten are medical occupations. The esteem in which nurses are held is high and has increased over time, although salaries have not risen at the same rate. Also remarkable is

the position of firemen (Table 1). All this reflects policies of safety and security in society; citizens value occupations which apparently guarantee their safety and make their lives secure.

Table 1
The esteem in which some occupations are held in Finnish society

	2004	2007	2010
Surgeon	01/380	01/381	01/380
Fireman	05/380	02/381	04/380
Nurse	09/380	06/381	10/380
Special-needs teacher	23/380	21/381	22/380
Speech teacher	27/380	28/381	37/380
Psychologist	31/380	33/381	26/380
Professor	33/380	41/381	39/380
Kindergarten teacher	34/380	22/381	31/380
Class teacher	46/380	40/381	42/380
Subject teacher	72/380	66/381	62/380
Salesman door-to-door	380/380	381/381	380/380

From: Suomen Kuvalehti, 2004; 2007; 2010.

Some teaching occupations achieve a fairly high position among the 380/381 occupations. The teaching profession is valued relatively highly among young people. As a consequence Finnish universities receive many applications for courses in teacher education. This refers both to primary teachers, who have total responsibility for teaching during the first six years, and to subject teachers who work with the lower-secondary classes. When there are, for example, 1500 applications for 100 places, this creates the problem of how to select the most suitable candidates. It also leads to research on entrance examination, which is not possible if there are not enough applicants for selection. From the viewpoint of the individual it can be very difficult to decide which criteria to use in the selection and to determine how reliable the selection is. From the viewpoint of society this is no problem at all because among so many applicants there will certainly be enough motivated and talented students to ensure that requirements are met. All this means that students of teacher education are exceedingly well qualified among students of other subjects at Finnish universities.

One interesting aspect of problems connected with the esteem in which a teacher's work is held, is a change in language use to better correspond to the academic study of teacher education and, accordingly, new circumstances in the field. Traditional, old-fashioned terms (*teacher training*, *Lehrerausbildung*) remain in use; in the USA, however, *teacher education* has long been used instead of *teacher training*. In Germany this would mean a change from *Lehrerausbildung* to *Lehrerbildung*.

This introductory reflection can be concluded with a first thesis for the teacher education of the future.

First thesis: **Society should do its very best to raise the esteem in a teacher's work is held and maintain its status in order to attract the best possible students to the teaching profession.**

A Theoretical Frame of Reference for Teacher Education

It is self-evident that all kinds of programmes for teacher education aim at educating good teachers. However, if we ask what a good teacher is like, we are likely to get a wide range of different answers. To a certain extent there is general agreement when we specify the qualities we think characterise a good teacher. Quite often these are personality traits which are so general that they express nothing important. A good teacher should be motivated, friendly, just, fond of children, enthusiastic, competent, etc. We might ask ourselves how is it possible to produce such teachers and struggle to think of criteria for the identifying of such traits. We also know that it is difficult, if not impossible, to change a person's personality no matter how long teacher education takes.

A possible solution for the guaranteeing of certain personality traits would be to apply the procedure that Korthagen (2004, pp. 86–87) recommends. He divides the properties which characterise a good teacher into two categories: qualities and competencies. Qualities, core qualities in particular, are inherent and very difficult to change. Character strengths and virtues such as creativity, courage, kindness, and fairness are examples of such core qualities. In distinguishing between qualities and competencies we could say that qualities come from the inside while competencies come from the outside. As examples of competencies Korthagen (2004, p. 86) presents "... the ability to take into account different learning styles or to reflect systematically". All this reminds us of the old discussion about teaching as an art or a science (cf. Skinner, 1954; Gage, 1978). A practical conclusion might be the selection of student teachers according to qualities, because these are difficult to change. Competencies can be developed and function as aims and goals for teacher education. A further encouraging viewpoint is that qualities come close to intrinsic motivation through attributes like mission and calling (Hansen, 1995).

Second thesis: **Student teachers should be selected according to qualities; competencies should be the aims and goals of teacher education.**

It may be said with good reason that all possible types of teacher-education programmes have been experimented with at some time somewhere (e.g., Howey, 1996). It is also interesting that there are different opinions on different kinds of teacher-education programmes. The ideas behind and the content of programmes are also, of course, subject to economic and political considerations. My experiences seem to prove that there are great differences between the ideas of politicians on the one hand and experts on the other concerning this question. It is also true that educational policy in some countries steers the content of teacher education more than it does in others. My firm belief, however, is that teacher education should

be based on research. Above all the problem in this respect is whether we have sufficient research evidence. How about research reports? What do they tell us?

Ideas of what makes a good teacher and good teaching are normative concepts for which there is no clear research evidence. We can, however, examine handbooks and meta-analyses in the field concerning the effectiveness and other consequences of teacher education (Cochran-Smith & Fries, 2001; Darling-Hammond, Chung, & Frelow, 2002; Hemsley-Brown & Sharp, 2003; Cochran-Smith & Zeichner, 2005; Zeichner & Conklin, 2005; Townsend & Bates, 2007; Cochran-Smith, Feiman-Nemser, McIntyre, & Demers, 2008; Hattie, 2009). It should be stated at once that the results are very modest and diffuse. Problems with teacher education are extensive and difficult to examine. This means that the development is slow and evidence for the building of a programme for teacher education is insufficient for the time being. In addition to research, theorising is needed.

There are, however, some encouraging studies concerning the effects of teacher education which may lead the way for our reflections. Wilson, Floden, and Ferrini-Mundy (2001) were able to find slight evidence in support of the programmes of teacher education, although this is not convincing or unambiguous. In a meta-analysis consisting of 57 strictly selected research reports they posed first the question of how much a teacher should have in terms of content studies. Although no clear answer was to be expected, the quantity of content studies was correlated positively with the achievements of students. This is a controversial issue of longstanding that regularly enters the discussion, the given programme of teacher education notwithstanding. It was seen as important, however, that the increasing of these kinds of basic studies did not increase this correlation. There is presumably a certain threshold effect (p. 8), and the exceeding of the threshold increases the correlation minimally. The problem is discovering where the threshold lies. It turned out that studies in the pedagogy of content (pedagogical content knowledge, *Fachdidaktik*) were more promising. The results confirm the old view that content studies are needed and a wide knowledge of content is certainly of use, although how much and of what kind it is not possible to say. Content studies are apparently not enough but studies in the pedagogy of content are necessary and of value. Although the evidence here is not clear or strong, it is of paramount importance that such views are not ignored, even though studies in the pedagogy of subjects are questioned every now and then.

Another point in their study (Wilson, Floden, & Ferrini-Mundy, 2001) dealt with studies in education. This question turned out to be even more difficult than the first. They discovered a small general benefit, which, however, was not clear. To get more satisfactory evidence a highly sophisticated research design would be needed; this seems to be impossible for the time being. Studies in education are also too extensive to be considered as a totality, and thus they should be divided into smaller parts.

The same problem applies to the third question dealing with the practice of teaching or student teaching. It, too, is too extensive and complicated. It is extremely problematic to distinguish from each other content knowledge and how

to teach it, the study of education and the practice of teaching. They build up a totality that cannot be divided into separate parts without losing significance. A quick conclusion is that we do not have enough research evidence for the creation of a sustainable programme for teacher education.

A necessary concluding comment deals with the role of content knowledge. It is highly probable that content knowledge of sufficient depth is fundamental. Our traditional understanding is that the older the students, the deeper the content knowledge needed. Expertise consists of a particular knowledge, but it is essential to bring it together with its pedagogy, with how to teach it. Expertise is, however, a dimension by nature. With older students, content knowledge is more closely related to an academic subject or developed knowledge area (physics, English, history, music, sport, etc.). For small children and younger students content is more general and pedagogical by nature. The balancing of all parts of the instructional process is a fundamental principle throughout the programme; all parts are important.

Third thesis: **A programme for teacher education should be based on research. Research evidence concerning teacher education increases gradually.**

Diversity of Teacher Education: the Basic Level and the Conceptual Level

A well-known conundrum in teacher education is that the idea of what makes a good teacher and good teaching changes over the years. The programme of teacher education should therefore be general so that it will be applicable, too, in the future, when the conception of what makes a good teacher and good teaching has developed away from the conception current at the time the teacher education was carried out. Technology in education and schools is developing at a very rapid tempo and it may bring about great changes in school life, teaching and studies in teacher education. Also, it is impossible to predict how medical technology will develop and influence teaching, studying and learning. What is certain is that we do not know what will happen in the future. What kind of challenges will the future pose for teacher education?

One possible suggestion for the solving of this conundrum is to consider teacher education from two perspectives or strata (Kansanen, 2004). The first deals with everyday practice with all possible standard teaching methods and acting in practice. We can call this the basic level of teacher education. For most people it is useful to go through the basic level of teacher education with all its activities and everyday experiences. It is interesting to consider whether the basic level is necessary for all or it is possible to replace it with other activities. There are plenty of examples of people who have succeeded quite well as schoolteachers without any teacher education at all. In discussion the idea is often presented of a so-called innate teacher, i.e. a person who works with children and youngsters easily. It is

commonly understood that it is possible to learn a teacher's work at school on a course of study; even the role of student can improve readiness for work as a teacher. Teacher education, however, makes learning of competencies systematic and confident.

Teacher education at the basic level may be organised in many different ways and it is also relatively easy to set up. It is also possible to complete these basic competencies in continuing education, too; with concise courses and seminars it is fairly easy to concentrate on compact practical themes without deeper theorising. It is fairly probable that teacher education at the basic level is in principle relatively similar in different parts of the western world. There are, of course, differences as regards the content and it is common to profile a programme with certain special aspects. The programme can emphasise music, sport, media, etc. Common to all programmes at the basic level is their normative nature and the absence of demands for a depth of scientific knowledge. It is also frequent that teacher educators have had no education in research methods and that research is not included in their work. The programme can, however, be called research-based if it is built on research evidence. This means in practice that teaching is based on research literature.

Although teacher education is based in universities it does not guarantee anything other than education at a basic level. Characteristically it is based on everyday practice; from the theoretical viewpoint it is inductive and decisions are based on intuitive thinking and personal experience. It is also typical for teachers to rely on the *doxa* that informed their own studies in teacher education. Without a scientific education of their own, teachers do not have the qualifications for critical thinking, or for the evaluation of the status of the programme and the new pedagogical information that is continually presented.

It can be claimed that programmes of teacher education to a great extent stay at a basic level and go no further. It is characteristic of them that students study numerous practical courses and become acquainted with the general activities of a school. Students learn to teach and life in schools becomes familiar to them. The basic competencies are in focus and, accordingly, so is a basic knowledge of the instructional process. The requirements of content knowledge are so extensive that it is no problem to fill a programme of four or five years with rich content. The potential content is, in fact, so abundant that it must be restricted; it is not possible to find room for all recommendations. There is no end to new claims for content, and new claims appear continuously. It is typical that numerous content courses are presented side by side without there being any connection between them. This produces only horizontal knowledge. The problem is that such courses are mainly separate modules without continuation.

Institutes which concentrate on the basic level have certain things in common. As stated above, teacher educators who work at the basic level usually have no research competence; they have not completed a doctorate. Research is not among the responsibilities of teacher educators in such institutes, so it is understandable that teacher education takes place at the basic level. That is not, however, a

hindrance to high quality; it is important that teacher education at the basic level functions as well as possible. Consequently the basic level forms the foundations for a teacher's work in general and also builds a base for further teacher education. Great demands are made of teacher education throughout the world (e. g. Cochran-Smith, 2008) and it is subject to constant, universal development.

Fourth thesis: **All teacher education is based on the basic level, which is a very important foundation for further teacher education. Teacher education should not stay at the basic level.**

Following the basic level of teacher education, a more conceptual level is to be desired. Compared with the basic level, the conceptual level is probably very difficult to acquire without supervision. The core of the matter is somehow to apply metacognition in thinking when teaching. This means considering one's own work and decisions from the outside. This requires a certain distance to one's own work, which happens usually through self-reflection, discussions with colleagues, and research (Bengtsson, 1993). Such reflection or similar thinking is not uncommon in programmes of teacher education, and some courses include themes such as metacognition, problem-solving, decision-making, and pedagogical thinking (e.g., Howey, 1996). The placing of the conceptual level as a main organising theme (Galluzo & Pankratz, 1990), however, is extremely rare. This is precisely the idea presented here.

For its development, self-reflection needs support; this means the producing of stimuli to reach new insights into thinking. For this reason dialogues and discussions are useful. If the partner in the discussion has not much to contribute, however, stimuli must be searched for in another way. It is probably research that offers the best alternative in this respect. Research in teacher education means getting acquainted with research literature, trends and results and also practising research in one's own work.

To avoid misunderstanding it is important to emphasise that practice on the conceptual level does not mean that teachers should act like professional researchers. It is appropriate instead to call this kind of teacher a 'practitioner researcher' and the activities that teachers perform 'practitioner research'. This reminds us very much of action research, and a teacher's work as a practitioner researcher can for good reason be acknowledged as a type of action research. All this leads to research-based teacher education (Kansanen, 2005, 2006, 2007). As a matter of fact, action research is a widely accepted approach in Finnish teacher education. It emphasises the close connection between research and practice (Estola, Lauriala, Nissilä, & Syrjälä, 2007, p. 195; Niemi, Heikkinen, & Kannas, 2010).

Fifth thesis: **A basic level of teacher education is not enough; a conceptual level is necessary. This requires research-based teacher education.**

Research-Based Teacher Education

A traditional part of teacher education has always been all kinds of practising and student teaching. To learn to teach means practice in the school and in the classroom. Practising is usually closely connected with the basic level; it corresponds with everyday thinking and competence-based behaviour. Students often like to resort to teaching recipes which they can find in many normative textbooks of pedagogy or in the teaching of their teacher educators. It is interesting that if we ask teacher educators whether they use recipes they usually deny it vociferously. But if we ask student teachers whether their teachers give them recipes, they give plenty of examples, claiming that this happens all the time (Kansanen, Tirri, Meri, Krokfors, Husu, & Jyrhämä, 2000). At the basic level it is of primary importance to collect experiences and routines for the future. Gradually student teachers develop into experienced professionals in practical situations.

It is important to note that research-based teacher education and evidence-based teaching mean practice in research. Student teachers practise teaching and research simultaneously. This can be called 'twofold practising' (Krokfors, 2007) and it is intended for integration into one's own teaching. To practise on the basic level means many-sided courses on research methods and study exercises. It is a question of method studies, to begin with, of a kind of absorbing without deep autonomous understanding; at the same time one's own teaching is fact-based with hardly any competencies for critical pedagogical evaluation. The role of research resembles the role of a consumer, where to a certain extent application is routine and superficial (Young, 2001).

As the student teachers move through the conceptual level, the action changes (Figure 1).

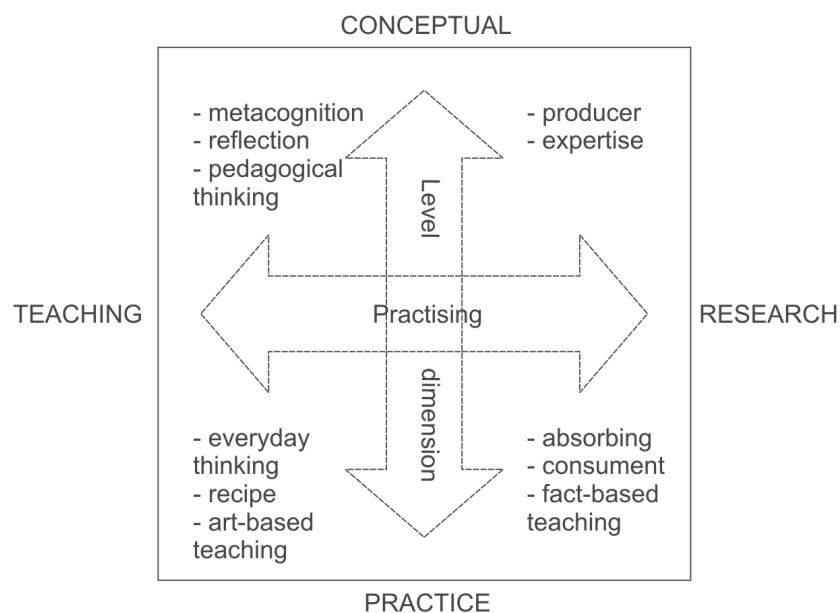


Figure 1. Teacher education as twofold practising with teaching and researching

In Figure 1 it can be seen how the conceptual dimension and twofold practising are blended. In teaching, the metacognitive competencies begin to take up a position. Student teachers learn to justify their decisions through research knowledge and have the means to reflect on their own teaching through the researching of their own work. This is the core in teachers' pedagogical thinking (Kansanen, Tirri, Meri, Krokfors, Husu, & Jyrhämä, 2000). In terms of research it is a question of expertise concerning one's own work. Now it is a question of producing new knowledge, i.e. knowledge that is new to the teachers themselves concerning their own work (Young, 2001). The basic purpose is the development of a personal conception of teaching, i.e. development of a pedagogical theory of one's own (Fitzgibbons, 1981).

It is of paramount importance to understand the idea of the practitioner researcher. The difference between a professional researcher and a practitioner researcher (Richardson, 1994) is an essential one. The professional researcher works in order to participate in scientific discussion and to publish in scientific journals. The practitioner researcher utilises research to grow and become better at the teacher's work; the practitioner researcher examines accordingly his/her own work without any intention of publishing the findings (Cochran-Smith & Lytle, 1990).

In research-based teacher education all teacher educators should have professional knowledge of research. Further, if the department of teacher education is one department among other departments in a university with identical requirements, high demands will be placed on teachers. To be able to supervise master's theses on the conceptual level, high scientific competence is required. This means that the supervisor should have a doctorate. Development in this respect may be slow. Let us take an example from the University of Helsinki. Teacher education was reformed in 1979 with a master's examination for all teachers in the school system. This means an examination at the same academic level for all teachers from grades 1 to 12. Along with the development of teacher education programmes, requirements for teacher educators were also increased. Now there are three categories of university teachers: professors, university lecturers who are doctors, and doctoral students. In addition, in the university practice schools where the student teachers practise, the supervising teachers are themselves holders of a master's degree. All of them are in some way responsible for research. In Table 2 it can be seen how scientific competence has increased over the years (Rantala, Salminen, & Sääntti, 2010).

Table 2

Increase in scientific competence among teacher educators at the University of Helsinki (%)

	1979	1989	1999	2008
PhD	19	18	35	65
MA	39	43	47	28
BA	6	8	6	2
Other	19	12	6	0
N	52	67	71	93

Sixth thesis: **Research-based teacher education guarantees the integration of the basic level with the conceptual level through twofold practising. The end result is a reflective teacher with pedagogical thinking who is capable of development in his/her work as a teacher in line with changing circumstances.**

Conclusion

The purpose of this article is to present the conditions necessary to guarantee a sustainable teacher education. The approach is highly normative and personal and is based as far as possible on research reports and the evidence of research. The key concept is research and how it is possible to base teaching on research. A programme for teacher education is, however, an extensive and complicated totality and the theses I have presented form only a framework for this. Whether or not a better principle than research could be found for use as a basis for teacher education, is a critical question. My answer to this is in the negative with deep conviction. The consequence is the theses which have been developed in the text.

- Society should do its very best to raise the esteem in a teacher's work is held and maintain its status in order to attract the best possible students to the teaching profession.
- Student teachers should be selected according to qualities; competencies should be the aims and goals of teacher education.
- A programme for teacher education should be based on research. Research evidence concerning teacher education increases gradually.
- All teacher education is based on the basic level, which is a very important foundation for further teacher education. Teacher education should not stay at the basic level.
- A basic level of teacher education is not enough; a conceptual level is necessary. This requires research-based teacher education.
- Research-based teacher education guarantees the integration of the basic level with the conceptual level through twofold practising. The end result is a reflective teacher with pedagogical thinking who is capable of development in his/her work as a teacher in line with changing circumstances.

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