

Developing the policy of teaching practice in teacher education at the national level

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ABSTRACT

For some time, researchers have identified the weak connection between theory and practice as one of the basic problems in teacher preparation programmes. Nowadays, the formation of future teachers' professional identity is highlighted as an important aspect in initial teacher education. This means that student teachers should have a chance to gain experience connected to teaching, to develop their ability to learn from challenging situations and to develop the ability to plan, reflect and create meaning in their role as a teacher.

The need to improve the quality of teaching practice in initial teacher education has been raised in the *Estonian Teacher Education Strategy 2009-2013*. The strategy emphasises that teaching practice is an important component in achieving professional tenure and development of professional identity. During teaching practice, theoretical knowledge becomes meaningful in practical situations and the student teachers are able to improve their skills. Therefore, initial teacher education provider, together with the school, should create opportunities for effective learning in the working environment for student teachers.

The aim of this paper is to develop suggestions for institutional and national policy for enhancing the integration of theory and practice in teacher preparation programmes. To achieve this goal, we provide an overview of the practice systems in six Estonian higher education institutions. We analyse the documents, which regulate student teachers' teaching practice at strategic and national level. The goals of pedagogical practice mainly focus on the need for applying knowledge and skills to gather teaching experience; there is less focus on student teachers' personal working theory. Strategic documents highlight the importance of integration of student teachers' practice in the whole school as an organisation but this idea is not supported by the policies. Solutions are suggested for institutional and national policy development.

INTRODUCTION

An institution that prepares teachers for their future profession may be innovative, active and successful in its programme implementation. However, new ways in learning and teaching may not reach schools through the teachers. Researchers (e.g. Flores & Day, 2006;

Korthagen, Loughran & Russell, 2006) have identified the weak integration of theory and practice as a problem in teacher education. Discussions about the contradictions between theory and practice have been longstanding. Researchers propose a shift from a paradigm of “theory to practice” to a paradigm of “integrating theory and practice” (Krull, 2010: 117). Practice in initial teacher education may serve as an important element in which theory and practice are integrated.

The aim of the study is to analyse what Estonian teacher education policy documents state about teaching practice in initial teacher education. Firstly, we describe the role of practice in student teachers’ professional development from a theoretical perspective. Secondly, we describe practice systems in six Estonian higher education institutions and analyse strategic and national teacher education policy documents with a focus on how they address teaching practice. We analyse the documents bearing in mind the theoretical perspectives and seeking to answer the question: to what extent does the current understanding about student teachers’ learning in practice, based on research in the field, translate into policy documents?

PRACTICE IN STUDENT TEACHERS’ LEARNING

Research (Eisenschmidt, Kasesalu, Löfström & Anspal, 2009; Anspal, Eisenschmidt & Löfström, 2012) among Estonian student teachers has demonstrated that pedagogical practice plays an important role in their professional development. It strengthens the student teachers’ understanding of themselves as teachers influencing their sense of teacher identity. The assurance and experience gained in the process lay the foundation for the further development of their professional identity. What are the elements and mechanisms supporting student teachers’ development? To understand the role and potential of practice in initial teacher education, we need to investigate what is currently known about teaching practice in student teachers’ learning. By understanding the learning facilitated through teaching practice we are better positioned to analyse the policy documents.

The practice learning process

We begin with the teacher’s knowledge base. Shulman (1986), and later others (e.g. Beijaard, Verloop & Vermunt, 2000) have identified knowledge bases for teachers’ knowledge that influence the shaping of teacher identities. The primary knowledge base influences the teacher’s focus and emphasis in teaching, the role the teacher adapts and reflects teacher identity. Teacher expertise is based on content, pedagogical content and pedagogical knowledge (Shulman, 1986). The emphasis is on mastering the subject, the didactics of teaching the subject in a way that supports learning, or on supporting the developmental processes of the learners. One of these knowledge aspects may dominate, but all are needed to realise professional potential. In addition to the teacher’s knowledge base, personal beliefs about teaching influence the way the knowledge is adopted and understood in the various knowledge domains. Teaching practice can serve a role in facilitating the student teacher’s exploration of the knowledge dimension and development of their own practical theory or personal working theory. In addition to the three-fold conceptualisation, teachers draw on moral and ethical reasoning and reflection as sources of professional knowledge and understanding.

The development of one's practical theory or personal working theory requires reflection, i.e. the process of purposive thinking about one's own beliefs and behaviour (cf. Schön, 1983). Reflective practice refers to an awareness of the practical or working theory (Ojanen & Lauriala, 2006). Also reflection can be viewed as a source of knowledge, which the professional teacher utilises as a systematic and disciplined way in metacognition, i.e. thinking about thinking, and evaluating one's working theory. Reflection requires that there is something to reflect upon, which means a connection with those aspects of teaching that usually involve own participation or application, e.g. teaching, interaction with pupils, classroom observation, and so on. Through the process of "mental elaboration" (ibid. 83), the student teacher transforms experience into knowledge, which influences the personal working theory. Teaching practice provides opportunities to recognise working theories, to reflect on experiences and transform these into knowledge feeding back to the working theory. This cyclical process of knowledge acquisition, formulation of personal working theory, implementation in practice, and reflection is illustrated in Figure 1.

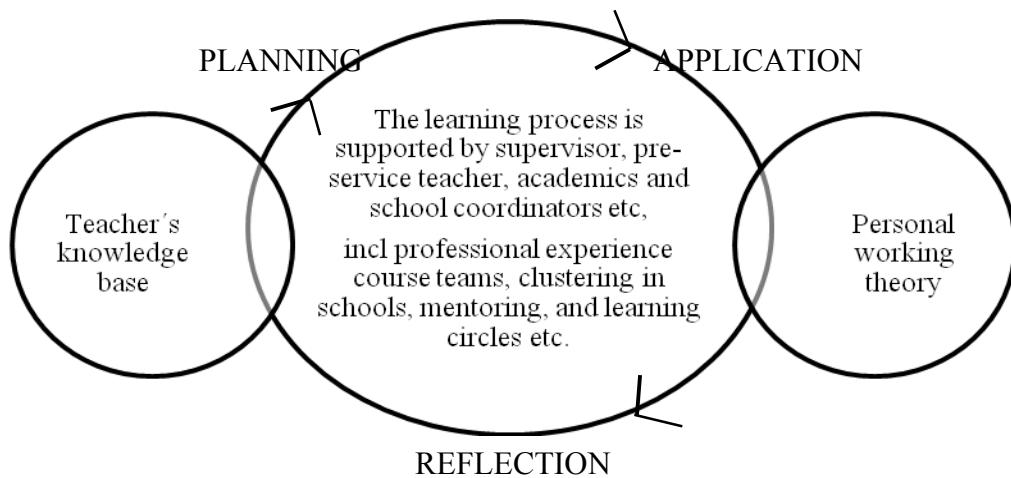


Figure 1: Student teacher's learning process in teaching practice in integrating knowledge and personal working theory

Reflection and mental elaboration tend to be more difficult processes than the absorption of theoretical knowledge, which students generally manage relatively well to the extent that they can pursue discussions on theoretical topics in an informed manner (Jyrhämä, 2006). Practice teaching can contribute to the student teachers' development in the areas of awakening meta-cognitive awareness, activating thought processes and developing conceptual knowledge processing skills (Ojanen & Lauriala, 2006). As a general rule, this development can be facilitated by a supervisor or a mentor – a more experienced colleague who translates the student teachers' experiences into meta-language (Jyrhämä, 2006). This is explicitly done through supervision. Supervision is contextual activity in the sense that it is closely connected to the practice experiences that the student teachers acquire. Despite the contextual nature of supervision, it is desirable to develop less context-dependent and more theory-based supervision. Theory-based supervision allows for more general knowledge and principles to emerge, which help student teachers to transfer what they have learned to new contexts, e.g. own classroom (Ojanen & Lauriala, 2006).

The supervisor's role is particularly crucial at two points in the student teacher's learning process during practice. Firstly, in supporting the student in lesson planning, the supervisor helps the student to articulate his or her personal working theory into a practical application (see Figure 1). Secondly, in supporting the "mental elaboration" and the reflective process the supervisor helps the student transform experience into knowledge, which helps refine the personal working theory. In the words of Tang and Chow (2007):

Instead of relying solely on the propositional knowledge "handed down" by the supervisor, the teacher constructs professional knowledge through actively participating in the supervision process, integrating theoretical forms of knowledge with practical knowledge generated from actual experience and embedded in his/her own practice. (p.1080)

In addition to the supervisor, other stakeholders involved in teaching practice are the pre-service teacher, academics and school coordinators. Ideally, all these parties engage in the practice task as a learning community. Le Cornu (2010) suggests various ways in which a learning community can be encouraged, including professional experience course teams, clustering in schools, mentoring, and learning circles. The central idea is that these forms of collaboration encourage the questioning of taken-for-granted assumptions about the teaching profession, and enhance reciprocity as a response to changing needs in teacher education (ibid.).

Pedagogical parameters of teacher education programmes

Teacher education programmes will vary in the kind of practical experiences they offer student teachers, and how they support teacher's professional identity development. One way of analysing teacher education programmes is through reviewing the kind of reasoning, knowledge justification and application they support. Teacher's knowledge base, i.e. content, pedagogical content and pedagogical knowledge, provides a foundation for the derivation of generalised principles. The reasoning may follow the derivation of general principles from specific instance (induction) or progressing from the general to the specific (deduction). Justifications can be intuitive or rational, meaning that they can be based on own beliefs, experiences and discussions with colleagues, or they can be based on general principles, usually supported through methodical, empirical investigation (Jyrhämä, Kynäslahti, Krokfors, Byman, Maaranen, Toom & Kansanen, 2008; cf. also Kansanen, 2006).

In a *problem- or case-based* teacher education programme, educational phenomena are approached through inductive reasoning and rational justification. In a teacher education programme based on an *experiential and personal method*, educational phenomena are approached through own beliefs and experiences, i.e. in an intuitive way and knowledge is justified through inductive reasoning, as in the problem- or case based teacher education. Similarly, a *school-based* teacher education programme is based on intuitive reasoning, but contrary to the experiential or personal method-based programme, it draws on deductive reasoning, i.e. progressing from the general to the specific. Finally, a *research-based* teacher education programme draws on rational reasoning and deductive knowledge creation (Jyrhämä et al., 2008; cf. also Kansanen, 2006).

These categories are not mutually exclusive. Teacher education programmes may include elements from the different programme characteristics. Research-based teacher education typically contains elements from all programmes, including methodological studies and school experiences, which aim to educate reflective practitioners who are able to make use of educational research as well as their own research (Jyrhämä et al., 2008).

To realise research-based teacher education, the programme should include components of research methodology that will allow student teachers to utilise and to produce professional knowledge, i.e. adopt an investigative approach to teaching. Based on the idea of research-based teacher education, we conclude that methodological knowledge may be viewed as an additional knowledge component besides content, pedagogical and pedagogical content knowledge.

METHOD

The aim of the study was to analyse Estonian strategic and national policy documents, which regulate student teachers' teaching practice in initial teacher education, in order to provide suggestions for institutional and national policy. The main question was to what extent the current understanding about student teachers' learning in practice, based on research in the field, translates into policy documents.

The study utilises written documents. We analyse the documents, which regulate student teachers' teaching practice at strategic and national level. The policy documents relevant for the study are:

- Estonian Teacher Education Strategy 2009-2013;
- Teacher Training Framework Requirements 2011, and
- Higher Education Standard (2011).

The documents were content analysed (cf. Weber, 1985) according to pre-selected themes, which are considered to be important in the realisation of student teachers' practice in teacher education. We realise that the reality of learning from practice is multi-faceted, and the ideas revisited in the theoretical overview by no means provide an exhaustive view of the complex phenomenon. Nevertheless, we felt confident enough to allow this research-based framework to provide a guideline for analysing the representation of practice in Estonian policy documents and analysis of teacher education curricula.

We looked for evidence relating to the following aspects in teacher education:

- Knowledge base
 - What kind of knowledge is taught?
 - Is the knowledge research based?
- Personal working theory
 - What opportunities are there for practicing teaching skills?
 - What is the duration of the practice period for observing, for co-teaching, for teaching independently?
- Structures for supporting learning on pedagogical practice

- What is the role of the supervisor, other academic staff or school staff? Who else is responsible/ involved? Is the staff trained for supporting practice?
- What kind of resources are there to provide support in organising teaching practice?

We organised the contents as much as possible according to how they facilitate the development of the knowledge base of teachers, personal working theory and provision of support structures for learning. The workload and objectives of pedagogical practice, and the presence of different parties in pedagogical practice provided information that allowed the exploration of these questions. The general expectations towards practice development at national level have been analysed through the requirements for the amount and contents of practice, the requirements for practice supervisors, quality evaluation of practice and practice funding.

PEDAGOGICAL PRACTICE IN ESTONIAN TEACHER EDUCATION

Pedagogical practice is shaped by two features: its scope (in ECTS) and its goals in teacher-training curricula. The pedagogical practice is provided in the curricula of six Estonian Teacher Training institutions: University of Tartu (UT), Tallinn University (TU), Tallinn Technical University (TTU), Estonian Art Academy (EAA), Estonian Academy of Music and Theatre (EAMT) and Tallinn Pedagogical College (TPC). We have considered the following full-time curricula applied in 2011: 4 from UT¹, 4 from TU², 1 each from TTU³, EAA⁴, EAMT⁵ and TPC⁶. An overview of the ECTS used in six higher education institutions is provided in Table 1.

Pedagogical practice in the curriculum of early childhood education has the largest scope of pedagogical practice starting from 17 to 18 credits at the bachelor level up to 35 credit credits at the diploma level. Thirty-five credits of pedagogical practice is the widest scope of practice included in a teacher-training curriculum. This curriculum is provided by TPC, which has the only diploma level curriculum, where the scope of practice has to be higher than in other curricula, that is, at least 15% of the curriculum (The Higher Education Standard, 2011). Class teacher education has integrated bachelor and master's programmes; therefore, the scope of practice is greater and varies between 25 and 27 credits. However, when we look at the percentage of pedagogical practice in the curriculum, we can see that it is not greater than the others, which are generally 8 to 9% of the curriculum. Subject teacher education at the master's level has the smallest scope of pedagogical practice, 15 to 18 credits or 5 to 6% of the curriculum. Vocational pedagogy has a similar amount of 15 credits; however, as it is provided at the bachelor level, the total amount of pedagogical practice in the curriculum is still higher than that of the subject teacher and varies around 8% (see Table 1).

Teacher training curriculum	Level of Education	Full curriculum in credit points (Teacher Training Framework Requirements, 2011)	The scope of pedagogical practice in the curriculum in European credit points, ECTS	The percentage of pedagogical practice in the curriculum
Early childhood education	Bachelor or Diploma level	180 (minimum)	17-18 and 35	9% and 19%
Class teacher education	Integrated Bachelor and Master's programmes	300	25-27	8-9%
Subject teacher education	Master's level	300	15-18	5-6%
Vocational school teacher	Bachelor level	180	15	8%

Table 1: The width of pedagogical practice in six Estonian higher education institutions in the teacher training curricula

The amount of pedagogical practice varies from 15 to 35 credit points. All institutions follow the main regulation providing at least 15 credits practice in their curricula for 10 weeks of supervised pedagogical practice (Teacher Training Framework Requirements, 2011). In all the curricula pedagogical practice is a separate subject. The percentage of pedagogical practice in the curriculum varies mostly around 8 to 9% with some exceptions being diploma studies in early childhood education with 19% and subject teacher education at around 5 to 6%. Therefore, in almost all curricula pedagogical practice is less than 10% of the whole curriculum.

To get an overview of the content of the pedagogical practice, we have considered the goals of the pedagogical practice stated in the curricula. As the goals are extensive, we focus only on the similarities and highlight major differences. To make sure the curricula are comparable we looked at five subject teacher curricula in five higher education institutions at Master's level and we also added the TPC example with their early childhood education curriculum at Diploma level.

There is one cross-curricular goal that repeats itself in every institution and that is connected with gathering practical experiences or applying knowledge and skills in real learning processes:

“To acquire practical work experience in a primary school for teachers in the school stage II and III” (Subject teacher curriculum at UT); “to support connecting and applying scientific pedagogical knowledge and skills in school life and relating the knowledge of

didactics to school reality" (Subject teacher curriculum at TU); "to apply knowledge in actual learning processes in educational institutions" (Vocational school teacher at TTU); "to apply acquired theoretical knowledge and practical skills in practical pedagogical work.." (Art teacher curriculum at EAA).

In addition, the topic of self-reflection or reflecting learning environment is found in three examples: "Building teaching skills necessary for self-reflection" (Secondary school multi-subject teacher of humanities curriculum at TU); "to support forming skills for observing and analysing pedagogical situations and learning environment" (Subject teacher curriculum at TU), "forming skills for analysing learning environment" (Art teacher curriculum at EAA). Also the topic of developing as a class teacher is found in two examples: "enables the student to develop as class teachers" (Subject teacher curriculum at TU); "to obtain skills as class teachers" (Secondary school multi-subject teacher of humanities curriculum at TU).

The goals of pedagogical practice for the most part state the need for applying knowledge and skills in teaching experience as well as the need for acquiring reflection skills for self-reflection or analysing pedagogical situations and learning environment and practising class teacher skills. In other topics there is a variety of goals focusing on different age groups and subject specific methods to be practiced.

ANALYSIS OF POLICY DOCUMENTS

Pedagogical practice in strategic documents

The Estonian Teacher Education Strategy for 2009–2013 identifies the main strategic developments and general action plan for achieving these. The Teacher Education Strategy envisions that teachers' professional development should be supported through problem solving and learning from experience (Teacher Education Strategy, 2009: 4). Also, the document states that pedagogical practice is an essential component in achieving professional competence. The Teacher Education Strategy is the only document that clarifies the expectations or recommendations, but not requirements, for developing practice in teacher education.

The importance of practice at the tertiary level is also emphasised in the Estonian Higher Education Strategy 2006–2015, which specifies that each curriculum (including BA curriculum) must ensure an output for the labour market, and therefore, the emphasis of practice should be increased in higher education in general.

In terms of the teacher's *knowledge base*, the Teacher Education Strategy 2009–2013 sets out the following objectives: teacher education programmes and studies should be based on recent research, professional standards for teachers and the objectives of the national curricula. Subject courses should support the objectives set for each subject and meet the general objectives of the national curricula. According to the Strategy, teaching practice enables verification of knowledge, development of skills and formation of attitudes, and is thus viewed as a substantial contributor to the students developing their *personal working*

theory. The Strategy highlights pedagogical practice as an essential component in achieving professional competence.

Professional development is a collegial process that is influenced by other teachers, school management, parents and the teachers' community in a wider sense: "School as a learning organisation should offer teachers an opportunity for efficient learning in a working environment" (ibid: 4). The Higher Education Strategy states that practice needs to correlate studies more clearly with acquired competences and the qualification framework. This generates expectations that practice ought to be associated with the professional standard for teachers.

The Strategy highlights the fact that lecturers of pedagogical *subjects should link theoretical knowledge to practical tasks in the school environment*, developing both the content and format of observation tasks during pedagogical practice (ibid). Teaching practice should be spread over different stages of study and the role of practice supervisors is to encourage student teachers to create links between theory and practice. To serve this purpose, practice should be integrated with theoretical subjects and distributed throughout the study period. Universities are encouraged to apply study forms that are practical and take into consideration the students' prior experiences. It is the role of institutions of higher education to evaluate the professional skills of student teachers in the light of the initial education programmes.

The Estonian Teacher Education Strategy for 2009–2013 outlines that in the initial education and induction year, the emphasis is on the development of cooperation skills so that the teacher can support the individual development of pupils, participate in school development and teach the national curriculum. Teacher education curricula should integrate the subject, pedagogical and psychological subjects, general and subject-based didactics, and pedagogical practice. Subject teachers are encouraged to complete their pedagogical practice in different types of schools and in schools where the language of instruction is not the student's mother tongue, for example with subject teachers in vocational schools, and Estonian students in Russian-language schools. The strategy emphasises the necessity of including practice teaching that is distributed throughout the whole teacher training programme and moving towards school-based teacher training.

In this sense, the Teacher Education Strategy 2009–2013 lays the foundation for integration of practice with the theoretical components of teacher education. In general, the strategy for preparing future teachers emphasises the importance of practical studies that are mainly associated with theoretical subject courses and this makes it possible for teachers to formulate personal working theories.

Teaching practice in national policy documents

Teacher Training Framework Requirements (2011) and The Higher Education Standard (2011) influence the organisation of pedagogical practice. The Teacher Training Framework Requirements (2011) defines the components of teacher education as follows: (1) general studies; (2) subject or professional studies; (3) occupational studies that include educational science and psychology, didactics and practise, and (4) pedagogical thesis or

exam that is appropriate to the level of higher education and that includes research. The Teacher Training Framework Requirements defines practice as one of the compulsory components at Bachelor's, Professional higher education and Master's levels. Therefore, the curriculum of teacher education has to contain at least 10 study weeks of supervised pedagogical practice.

The Higher Education Standard (2011) states that methods used and the programme of study, including independent work and the scope of practice have to support the achievement of the objectives of the curriculum. The described practice in the curriculum has to guide students to acquire and implement effective working methods. This is done by carefully aligning curriculum contents to the professional standards and the framework requirements (The Higher Education Standard, 2011). Both the Higher Education Standard and the Teacher Education Framework requirements emphasise that practice has to be supervised. However, the Teacher Education Framework does not define the competences of practice supervisors. The competencies of lecturers at universities and schoolteachers supervising practice are not clearly defined in these documents.

Pedagogical practice is funded within the scope of the state-commissioned education and practice is not separately specified. There are no other regulations for practice, so higher education institutions are autonomous in deciding how to organise student teachers' practice. The regulations do neither outline the expectations regarding the content for pedagogical practice, nor describe criteria of quality of practice, such as how formulation of the student teachers' personal working theory is supported.

To organise pedagogical practice, higher education institutions are responsible for making contracts with the schools that are ready to co-operate in organising pedagogical practice, including negotiating the salaries of supervisors and training the school staff and also setting the goals for pedagogical practice. In higher education institutions there are usually practice supervisors, who are often teacher educators responsible for subject/area didactics and who are responsible for the quality of the practice. Administrative staff are responsible for administrative assignments, such as making contracts with schools.

Also the representatives from the teacher education institutions have recognised that in many cases there are weak connections between practice assignments and theoretical courses. A lack of cooperation between faculty members and mentors in schools could lead to a lack of support for students in meta-cognitive reflection and the formulation of personal working theories (Overview of teacher education curriculum development issues, 2010). However, the strengths in the organisation of pedagogical practice are the strong relationships with practice schools and the existence of supervisors in schools.

DISCUSSION AND SUGGESTIONS FOR DEVELOPMENT

Overall, we find that the strategic policy documents support the idea of integration of theory and practice. The elements of the knowledge base of teachers, including metacognitive and reflection skills, are supported in the policy documents and support structures are acknowledged as well. In the national regulations for teacher education,

however, these ideas are generally not supported to any great extent. Teacher education has to contain at least 10 study weeks of supervised pedagogical practice, however, neither the competencies of supervisors nor the practice funding are clearly outlined. As a result there are various implementation schemes. Teacher educators recognise the weak connection between theory and practice. The goals for the pedagogical practice state that applying knowledge and skills in teaching experience is important. Yet, the development of personal working theory is not supported sufficiently. Suggestions on how to transfer the vision into implementation need to be developed. This corresponds to the regulation level in the hierarchy of guiding policies.

We do not wish to propose stronger regulation of teacher education in the national context. Instead, we see that there is a room for developing guidelines to support institutions in implementing the national teacher education visions outlined in the policies. Such guidelines would point out possibilities for shared responsibilities and collaboration in the spirit of a “learning community” (see Le Cornu, 2010). The organisation of pedagogical practice influences many different parties. Therefore, it is important to include the various parties involved in practice development. These may include lecturers in teacher education, practice supervisors at institutions of higher education, student representatives, practice organizers, directors of studies at school and practice-supervisors at school. Furthermore, the heads of teacher education, representatives of the state, researchers of teacher education, school heads, teachers, parents and politicians can provide important feedback for the development of practice.

We propose the following recommendations for national policy development:

- To ensure the quality of practice, it is worth considering the introduction of quality requirements for practice in the national regulation in addition to the number of contact hours.
- Practice is best facilitated when carried out in mutual cooperation amongst equal parties, i.e. as partnerships between schools and higher education institutions.
- In order for the practice supervisors at schools and at higher education institutions to be adequately prepared to support the student teachers, it is recommended that they are trained for the supervision together. This will help to form a mutual understanding of the goals of the practice and agreement upon the methods to reach the goals.

To reach the goals, we propose an integrated pedagogical practice model where theoretical courses and practical assignments interchange. For instance, practice and action research can be implemented in Master’s level teacher education curriculum to support development of a personal working theory (Figure 2). This means that the students have their first contact with schools at the beginning of their studies, followed by one brief practice teaching session and then two more extensive blocks of actual teaching in schools.

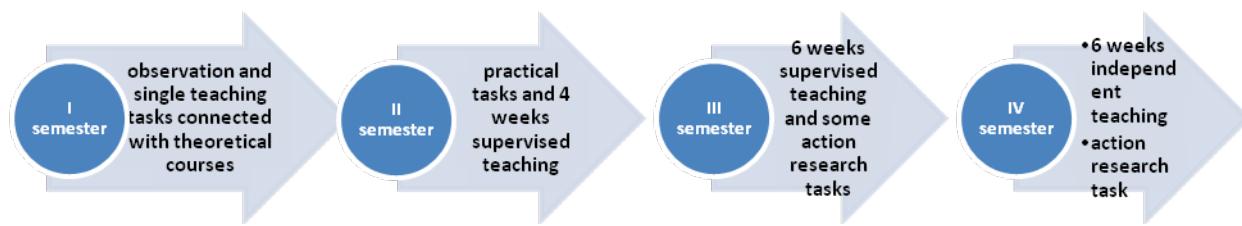


Figure 2: Integrated teaching practice and action research teacher education model

The fundamental goals in the development of pedagogical practice are:

- to find possibilities for transferring a major part of teacher education studies into the school environment,
- to begin integrating theory and practice at an early stage, and
- to distribute practice throughout the studying period.

From the students' perspective, we believe that an early start in practice teaching is beneficial in facilitating the dialogue between theory, methodology and practice. We suggest that the practice starts as early as during the first semester with observation assignments. An early integration of the components would help to support the students' development as reflective practitioners while allowing them to make use of educational research and adopt an investigative approach in their teaching.

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