

The Final Paper as a Tool to Promote Teachers' Competences in Teacher Education - Different Expectations and Conceptions

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Introduction

In this article I discuss the main findings and outcomes of my wider research which I published early this year concerning the final paper assignment in my workplace Vocational and Higher Teacher Education College (VTEC). Working several years as a teacher educator I have facilitated many teacher students in their final paper process. In that work I often asked myself questions like what is the purpose of the final paper in educating teachers to their working life of the future? Who does the final paper benefit? How and what does the teacher student learn through writing the final paper?

In VTEC one of the main aims of the teacher education is to promote teacher students' skills and abilities as a researcher and developer in their own teaching work. The final paper is one of the tools for that. Often the similar assignments in universities and colleges are called theses or dissertations. In VTEC the nature of the final paper is more practical developing than an academic research work.

Vocational teacher education in Jyväskylä Polytechnic

The aims of vocational teacher education

In this chapter I introduce the context of the study by describing some basic ideas of Vocational Teacher Education College of Jyväskylä Polytechnic. The leading ideas of VTEC form the grounds for the implementation of the Final Paper.

In compliance with statute (357/2003) governing vocational teacher education, the aim of vocational teacher education is to provide

1. the knowledge and skills to guide different students' learning,
2. a willingness to develop teaching taking into account professional and working life developments. These aims

are realised in the curriculum by two competence areas, which represent the core competences of a teacher's work:

- facilitating learning
- development of the educational environment

These core competence areas are supplemented by two general competence areas:

- cooperation and interaction
- continuous learning

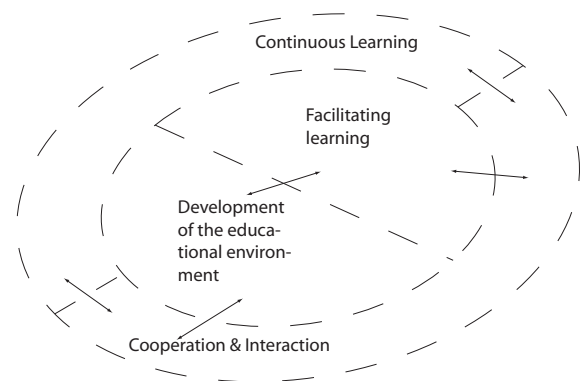


Figure 1. Competence areas in vocational teacher education (Keurulainen 2005)

Facilitating learning and development of the educational environment form the core competence areas for vocational teacher education. These areas are not separate from one another, rather they are closely interconnected. This also applies to the continuous learning and cooperation and interaction areas, which are interlinked, and which stem directly from

the facilitating learning and development of the educational environment areas.

The final paper is a tool for developing student teacher's competence in all of those areas, especially in next skills and abilities are integral:

- **reflective practice**
- **cooperation and interaction**
- **skills and knowledge to develop**

In order to develop one's own teaching and work environment a teacher must have the ability for self-assessment and reflection. Reflection is not only necessary at the individual level, it is also essential at the work community level too. In this way, communication becomes an essential tool, with which a common understanding can be formed about the work and development of a work community. Communication requires collegial cooperation and interaction in many levels, which is one of the key factors for the development of teaching.

Since the ability for continuous learning is an essential part of the core competence areas it can be seen as "metaqualification". The concept of reflection is what joins these areas of competence together, and in this way a teacher develops his/her own work, continuously develops a practical theory, and does not rely on given theory and methods alone (Keurulainen 2005).

The final paper as a part of teachers' pedagogical studies

The vocational teacher training curriculum is by nature connective, which means that teacher education consists of three study modules that support each other to form a 60 study point teacher education line of study. The structure and content of teacher education has been designed with the idea of teacher competence in mind.

The figure 2 explains which kind of study modules are included in the teacher education studies and how they are situated in the current competence areas. In the current curriculum the final paper has been replaced by the development project. Principally, the aims and realisation remain the same, however, the depth and importance have increased. In this piece of research I use the previous concept of final paper as the research material was collected when this was in effect.

Goals for the Final Paper (Development Project) are that the student can specify the relevant goals of his/her own pedagogical work and own institute development work. The student is able to plan, implement and report the development project. S/he is able to apply the acquisition of information appropriate to the source material and can report the development project content competently. The student constructs his/her own practical theory, which unites theory and practice. The student is able to assess his/her pedagogical goals and readiness as a facilitator of learning as well as set appropriate goals to further develop him/herself as a teacher. (www.vte.fi/handbook)

Implementation of study

In this case study my goal was to find out how the final paper assignment serves the aims of the teacher education. I consider the conceptions and expectations of the final paper from three viewpoints: the teacher student, the teacher student's workplace and VTEC. The main questions of my research were:

1. How do the inquiring and developing teachership become evident in the final paper process?
2. How does the final paper process serve learning?
3. What kind of conceptions of writing are connected to the final paper?

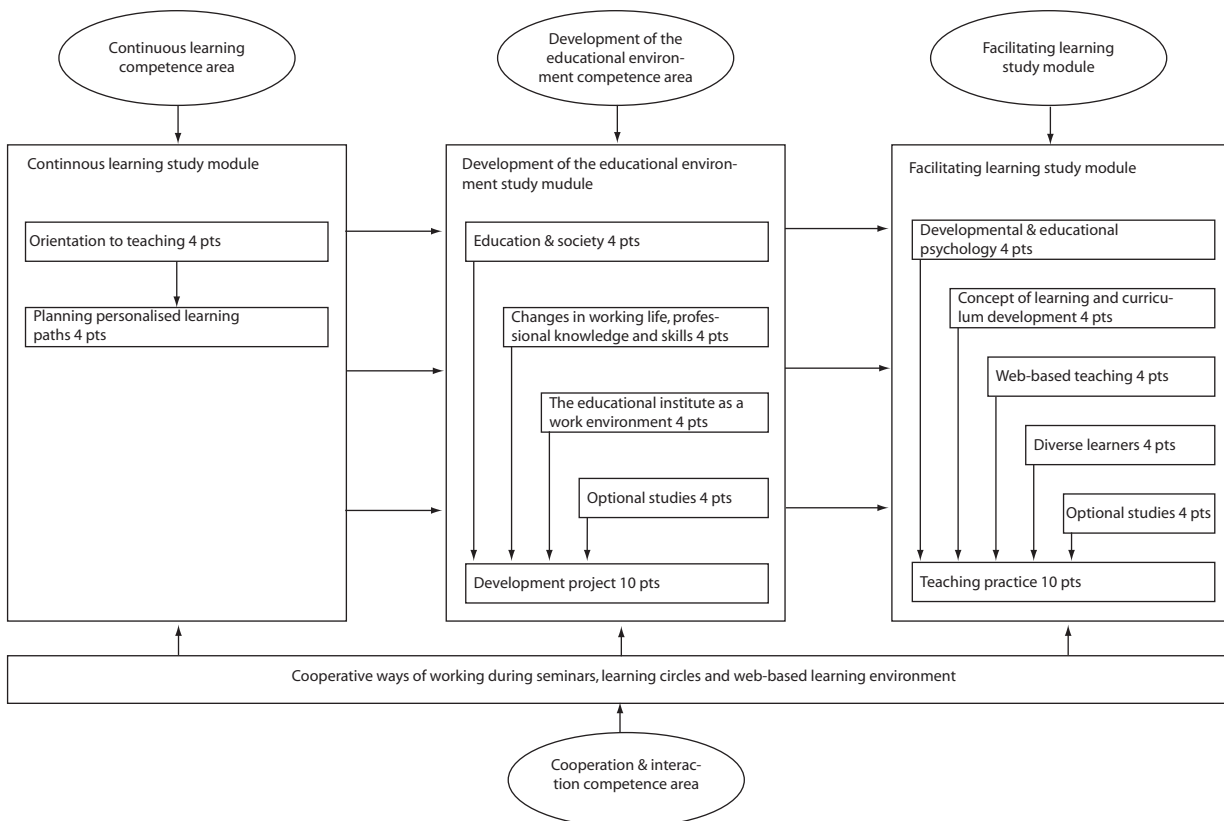


Figure 2. Competence areas & study modules of vocational teacher education

My research was realised here as a qualitative case study. I selected one teacher student and her final paper process. This teacher student studied at VTEC during the academic year 1999 – 2001. At the same time, the teacher student was teaching at the university as well as at a local museum. One of the museum's purposes is teaching and the teacher student was working as a part-time lecturer at the museums' workshops during her teacher education. Previously, in her earlier studies, the teacher student had completed many academic assignments in addition to her masters thesis. She therefore had experience of writing such kind of texts, however, her attitude about writing was not very positive. For this reason she could perhaps be considered as a typical teacher student. The chosen topic for her final paper was museum pedagogy. The name of her final paper became "What did you learn at the museum today? Museum as a learning environment – paths to the world of pedagogy in the museum". Her goal was to construct the basis of the curriculum at the museum.

In order to understand the conceptions of the final paper more comprehensively and deeply, I used a great variety of materials. For instance, I used recorded conversations with this teacher student about her final paper, interviews and different kinds of documents (such as the curriculum, her final paper etc). I transcribed the recorded conversations and interviews. I used content analysis method to analyse the data. In this article I focus on the differences between the participants' opinions and conceptions. Those participants in this case are the teacher student herself, the teacher educator at VTEC and the supporting teacher at the museum. Beside these viewpoints, I consider the goals of the final paper which are expressed in the curriculum of VTEC.

Theoretical study or practical development work?

"How does this final paper benefit the practice of your workplace Museum?"

One of the main questions in my research concerned whether the final paper promotes a teacher student as a researcher and developer. In my research material an essential question in this area was about the nature of the final paper: is it more like a theoretical study or is it a more practical development project? In the present curriculum of VTEC the Development Project is part of the development of the educational environment competence area but it has a tight connection to the area of continuous learning. In the 1999–2000 handbook the Final Paper's purpose was to

- * facilitate students to find points to develop in their work
- * facilitate students to unite vocational pedagogy theory and practise
- * facilitate students to take responsibility for community development. (Handbook 1999–2000, 30.)

And furthermore:

The goal of teacher education is to create self-reflective teachers, who have the courage to be in creative cooperation with their environment, and are committed to the life-long development of their teaching. Student teachers develop a conscious understanding of their own thoughts and perspectives. This understanding allows assessment and development of the environment by "reading" and being in interaction with it...The final paper offers students to be researcher and developer of their own teaching work. (Handbook 1999–2000, 17, 31.)

Christopher Day describes the nature of teachers' reflection in the same way. He says that essentially, reflection involves a critique of practice; the values that are implicit in that practice; the personal, social, institutional and broad policy contexts in which practice takes place; and the implications of these for improvement of that practice. Reflection is about the past, the present and the future; it is about "problem posing" as well as "problem solving". (Day 2004, 111.)

In my case study the teacher educator and the supporting teacher at the workplace of the teacher student highlighted the practical benefit of the final paper. In a conversation with the teacher student, the teacher educator asks "How does your final paper benefit the practice of your workplace at the museum?" The reasoning behind this question is to make the teacher student think about how the final paper could be more useful for practice of teaching at the museum and how she could better unit theory and practice in text too.

Unlike the others, the teacher student felt that her final paper was predominately a theoretical study. "The final paper process gave me theoretical, scientific support to my museum-pedagogical thinking and argumentation", she says. As a result of her earlier academic experiences she perceived the final paper to be more of an academic dissertation rather than a practical piece of work useful for her workplace. During the final paper process she cooperated with the staff of the museum and she discussed with them about teaching in practice. The student teacher wrote about these kinds of experiences in her final paper, detailing how, in her experience, theory and practice combine in pedagogical work at the museum. However, she concluded that the formal academic features of the final paper were still more important.

Final paper as a tool for learning

What kind of knowledge does man learn through writing a final paper?

"When I read and wrote I learnt all that I know now about learning theories"

"One of the main goals of the Final Paper in VTEC is to guide students to realize how to unit pedagogical theory and practice... By its very nature this final paper process is an exercise in problem solving. During the process students will make use of experiences, observations, discussions, reading and writing...The Final Paper offers the student a chance to be the researcher and developer of their own teaching work" (Handbook 1999-2000, 30–31.)

The goals require that a student can integrate in her/his final paper process three main components of knowledge: 1. formal knowledge 2. practical knowledge and 3. self-regulative knowledge. Formal knowledge belongs to the category of what cognitive psychologists have called declarative knowledge. Such explicit and factual knowledge has played a major role in education and learning, and as such it constitutes the core of professional competence. This kind of knowledge you can call "knowing-that". The second constituent of expertise, practical knowledge, often called procedural knowledge, manifests itself as skills or "knowing-how". While formal knowledge may be described as universal and explicit, practical knowledge is, rather, personal and tacit, being thus intuition-like and difficult to express explicitly. The third component, self-regulative knowledge, consists of meta-cognitive and reflective skills that individuals use to monitor and evaluate their own actions. (Bereiter and Scardamalia 1987, Tynjälä 1999, 4, (www.infed.org/biblio/b-learn.htm).

In my study the teacher educator and the supporting

teacher facilitated the teacher student to unite those learning theories and teaching practice: they asked her to write down examples of how the theories can be implemented in teaching at the museum in practice. Some research argues that the true integration of the two kinds of knowledge (theoretical and practical) is best fostered when students transform abstract theories and formal knowledge for use in practical situations and, accordingly, employ their practical knowledge to construct principles and conceptual models. Thus, theorising practice and particularising theory are suggested as keys to the development of expert knowledge. (Leinhardt et al. 1995; Tynjälä 1999, 7–8.)

The teacher student considered that the most important thing she learnt during the final paper process was placed in the formal knowledge area: she explained that she learnt by reading and writing all she knows at present about learning theories. Therefore, for her learning is something which you can call “knowing-that”. In her final paper the teacher student shows that she has understood what those learning theories mean in practice anyway.

On the other hand she said that after she wrote the final paper she realized what she had already learnt and what she still has to learn more about: “*Now I see what I have learnt and what I still got to study more.*” This kind of knowledge is placed in the area of self-regulative knowledge. At the same time her opinion tells something about her conception of learning and knowledge.

One of the outcomes of my research is that writing the final paper is a tool for learning and for combining all of those three main components of knowledge. The final paper is just one of these kinds of tools in teacher education, for example, portfolio or personal learning logs and self-assessment promote this same goal (see more Tynjälä 2004.)

Different conceptions of learning

“Only then I felt I learnt when I read all by myself.”

The pedagogical functions of the Vocational Teacher Education College are based on the following conceptions of skills and knowledge:

- * learning is seen as a process of societal construction of knowledge, in which individual construction of knowledge and the social dynamics of learning intertwine. Learning is defined as giving meaning to new things. The giving of meaning is a social event: meaning is formed during social interaction, in which an individual participates with other members of society. *Learning always happens in the mind of an individual and as a social process.* The design of vocational teacher education highlights the societal construction of knowledge and skills in various interactive networks.
- * individual learning is based on actions and experience. Learning however is not based on just any experience, nor is experience in itself equivalent to learning. In vocational teacher education experiential learning is based on learner reflection. Reflective action is seen as the basis for forming *individual and societal knowledge*. The education program emphasises the development of problem solving and meta-cognitive skills.
- * learning is bound to the environment and *context*. Professional growth and learning are seen as *a process of socialisation* to various societies and a process of growth to become a member of them. *Taking part in the development of a society's work culture* is also important. Vocational teacher education learning environments and

the education programme are developed so that learning takes place in an environment, which is diverse and *authentic to the work of a teacher* (www.vte.fi/handbook).

These conceptions of learning highlight the meaning of community and context instead of individual, cognitive learning. Behind these kinds of conceptions of learning and knowledge are thoughts which are often combined by social constructivism and situated learning. Constructivism is not a unified theory but rather a conglomeration of different positions with varying emphases. Common to these diverse views is that the acquisition of knowledge is metaphorically described as a building process in which knowledge is actively constructed by social communities. Learning is seen as a social, collaborative and interactional activity. (Tynjälä 1999, 13 – 14; Cohen et al 2004, 167 – 168.) Situated learning is a general theory of knowledge acquisition. Its main principles are that knowledge needs to be presented in an authentic context and that learning requires social interaction and collaboration. (Lave and Wenger 1991, Wenger 1998, <http://tip.psychology.org/lave.htm>, 16.9.2005).

In my research material the teacher student says that she has always thought that the best way to learn things is to discuss them with others. However, after the Final Paper process she now explains that she realized that the best learning experience during the process was when she read and wrote alone: “*Only then I felt I learnt when I read all by myself.*” In other words, learning for her was an individual cognitive process.

On the other hand she says that all of the conversations with her colleagues were very important during the process. These conversations in the museum environment and teaching practice in the same context made it possible that the learning process was not only an individual, cognitive process. The teacher student's experience of learning during the final paper corresponds with VTEC's conception that “*learning always happens in the mind of an individual and as a social process*” (Handbook 2005).

However, some differences exist between the various participants' viewpoints when we look at the conceptions of learning: the goals of VTEC and the colleagues at the museum highlighted more the meaning of community and social interaction in the learning process but for the teacher student the learning process was more individual and cognitive. The issue is the perspective we are taken to analyze learning: is it an individual, psychological perspective, an interactionist, microcultural level or sociocultural perspective (see Cobb & Yackel 1996.)

Different conceptions of writing

“I don't trust any text without references.”

Like the conceptions of learning there are also the same kinds of conceptions of writing: how we consider what the nature of writing is, influences how we write or how we facilitate our students to write.

Tabel 1 The similarities in approaches to writing and learning:

| Writing approach | Similarities | Learning approach |
|--|--|---|
| Text linguistics | A product | Behaviourism |
| Models of a writing process: writing as a cognitive process | Cognitive processes Individual perspective | Cognitive orientation to learning Cognitive constructivism |
| Writing as an interaction | Meaning of interaction is essential | Social constructivism |
| Writing as a discourse in context (situated literacy, critical language awareness) | Context, Community Identity Sociocultural approach | Situated learning Critical awareness |

In my research material I found three kinds of conceptions of writing: 1. writing as a cognitive process, 2. writing as an interaction and 3. writing as a discourse in context.

The student teacher mainly described her writing of the final paper as an individual cognitive process. Her writing strategy reminds the model which is named *knowledge transforming*, instead the strategy of *knowledge telling*. The knowledge transforming model is more typical of expert writers than of novices. While the knowledge telling model primarily requires writing down already existing knowledge and thoughts, the knowledge transforming model can be depicted as problem-solving where the writer's thoughts are still developing during the process of writing. (Bereiter and Scardamalia 1987, Biggs 1996, Tynjälä 1999, 26.) "*My thoughts transform the text but also the text transforms my thoughts*" describes the teacher student of her process of writing.

The teacher student highlighted another approach of writing too: she emphasized the meaning of references in her text: "*I don't trust any text without references.*" This viewpoint has a connection with the interaction approach: writing a text is interaction with other written texts. This interaction approach highlights that the meanings of texts are assignments and accomplishments by human beings, writers and readers. Understanding always involves putting discourse into context, and this holds true for written texts as well. Readers select relevant features of existing contexts and activate or create relevant background contexts as a support for interpreting the text. However, the text does not "contain" these interpretations. (Luukka 1995, 54, 148, Linell 1998, 268.)

The interaction approach of writing appeared in many discussions between the teacher student, the supporting teacher and the teacher educator. Both the teacher educator and the supporting teacher highlighted the meaning of the reader: "*Who are you writing your final paper for?*" they asked. For them the essential purpose of writing was to be in dialogue with the readers.

The supporting teacher at the museum paid attention to the discourse in the museum field. She said that it is important to know the rules of the discourse, otherwise the readers do not trust the writer. When you are an equal member of a community you have a common language with it. The language has a deep connection with professional growth and professional identity. (See more Barton et al. 2000, Fairclough 1992.)

The final paper is a public product and the outcome of the student's learning process. In my research every participant highlighted the meaning of publicity. For the teacher student it had a positive impact. Publicity motivated the teacher student, although at the same time it produced more stress for her: "*It makes me more nervous because I don't write the text only for myself*", she said. In this case the final paper got a lot of publicity because the teacher student had a lecture at a conference concerning the final paper topic of museum pedagogy.

Conclusion

In this article I selected some of the main outcomes from a wider piece of research, in which I researched conceptions and expectations of the final paper at VTEC. Ideally the final paper process should incorporate all four competence areas.

The main outcome of my research was that there were differences between the conceptions and beliefs of the participants: the teacher student, supporting teacher at the students' workplace and VTEC. Therefore, we need to discuss about our interpretations of the final paper. We have to indicate more clearly and explicitly what our conceptions of the nature of final paper is, what we are thinking about learning through writing final paper and what is our approach to writing.

However, it requires that all participants conceive the final paper to be oriented more as a practical development project rather than a conventional academic dissertation. At VTEC we have already made some changes to our curriculum since 2000 concerning the final paper study module. It has now been replaced by developing project. The new name better describes the practical developing nature of that assessment. Nevertheless, it requires uniting formal, practical and self-regulative knowledge.

Final papers are public outcomes. The teacher students therefore learn to participate in pedagogical conversation. The teacher student learns to bring out his/her own beliefs and experiences to the audience. This always requires, though, that we understand the nature of writing as an interaction and as participating in pedagogical discourse. Accordingly, writing the final paper promotes the cooperation and interaction competence area. This does not mean that we can forget the cognitive process approach of writing or text itself when we are facilitating our students to write. We need to be aware of all of those four approaches. It is not necessary that every teacher is an expert writer but it is necessary that every teacher has some of an expert's literacy skills: a teacher has to be able to take part in public pedagogical conversations. Therefore, s/he has to get a challenge to practise these kinds of skills in teacher education.

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