

A cross-sectional study on the University of Tartu's pre-service teachers' perceptions of curriculum coherence between 2014 and 2018

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Summary

Introduction

Coherence is an important characteristic of a high quality teacher educational programme which, if organised purposefully, means that the courses are structured and aimed at a certain outcome (Hammerness, 2013). Coherence can be seen from two perspectives: coherence of the courses and coherence of theory and practice. Hammerness (2006; see also Muller, 2009) has emphasised that within the coherence of courses we should look at both approaches, structural and conceptual coherence. The former is important for organising university courses in a logical order, so that each course would increase the students' knowledge. The latter approach looks at the content of those courses, more specifically, at a successive common vision about teaching.

The conceptual coherence becomes especially important when students do their fieldwork. If the university educators have shared a common vision about teaching, students will experience their fieldwork more meaningfully and are able to make better connections (Hammerness, 2006; Tatto, 1996). Consequently, the ideas gained from theoretical courses should be strongly in line with fieldwork experiences (Darling-Hammond, 1999; Grossman, Hammerness, McDonald, & Ronfeldt, 2008). A good fieldwork school should support students in terms of what they have studied at the university (Hammerness, 2013).

In order to strengthen the coherence of teacher education programmes, Grossman and McDonald (2008) have developed a concept of core practices, the most important activities that teachers carry out in their everyday work. These activities should determine the framework of the teacher education programme in order to support students' professional knowledge, skills and identity. According to Grossman, Hammerness and McDonald (2009b) core

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practices are activities that: 1) appear often in teaching; 2) provide the possibility to develop; and 3) are based on empirical research.

After defining these activities, a coherent teacher education programme should provide opportunities for students to practice them. It has been found that teachers who had more opportunities to try out different teaching activities during their studies were also more effective during their first year of teaching (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2006).

Since 2013 the teacher education programmes at the University of Tartu (Estonia) have gone through several extensive changes. The first change took place in 2013 when the base module and fieldwork module of teacher education were completely renewed. Achieving a better connection between theoretical studies and fieldwork was addressed by 1) organising courses that are taught by larger teams of teacher educators in order to enable more cooperation; and 2) to increase opportunities and the amount of fieldwork. The second significant change came in 2017 when one of the fieldwork courses was fully renewed and the concept of core practices was applied. The fieldwork course was now in coherence with the base module through common activities and topics that would support students to try out and analyse more teaching activities.

The aim of this article is to investigate the opinions of student teachers at the University of Tartu regarding the coherence of their teacher education programmes. Two research questions were addressed:

- 1) In the opinion of the student teachers, how coherent were the teacher education programmes in 2014, 2016 and 2018 at the University of Tartu?
- 2) What opportunities did the student teachers have to practice teaching activities during the university courses between 2014 and 2018?

Methodology

Sample. Data were collected in 2014 (n=106), 2015 (n=102), 2016 (n=63), 2017 (n=136) and 2018 (n=165) from teacher education students who were finishing their base module and fieldwork module studies. Students were studying at Bachelor's level (e.g. special education, vocational teacher) or Master's level (e.g. foreign language teachers, art teachers, science teachers). In the latter case the students took up teacher education studies at Master's level after completing the subject at Bachelor's level. Participation in the data collection was voluntary.

Instrument. A CATE (*Coherence and Assignment Practices in Teacher Education*; (Hammerness, Klette & Bergem, 2014) questionnaire was used in order to collect data about 1) opportunities to enact practices; 2) perceived

coherence between courses; 3) opportunities to connect different parts of the programme; and 4) perceived coherence between university courses and fieldwork. In these four constructs the CATE questionnaire included 29 items. The respondents had to indicate their opinions on a four-point scale. Reliability was measured using Cronbach, where α was between 0.78–0.88 for the second and third constructs which was considered good. The reliability of the fourth construct was 0.56–0.63 which was moderate. The first construct was analysed on the item level.

Data analysis. Data analysis was carried out using SPSS, and descriptive statistics were used, in addition to t-test and ANOVA, for comparing different years.

Results and discussions

The results of the first research question showed that there was a significant increase in the students' ratings between years 2014 and 2016. While the ratings for opportunities to connect different parts of the programme and the perceived coherence between university courses and fieldwork kept increasing until 2018, the perceived coherence between courses showed a small decline. By 2018 the ratings for the opportunities to connect parts of the programme were the highest among all constructs (mean=3.02; SD=0.62) which shows a good structural coherence. The same result was found by Canrinus, Bergem, Klette and Hammerness (2017) in teacher education institutes in Oslo (Norway), Stanford (USA) and Santiago (Chile).

Despite that, the students perceived the coherence between courses as the lowest of all constructs (in 2014 mean=2.41 and SD=0.45; in 2018 m=2.82 and SD=0.53). The analysis on the item level showed that students agree the least that "our teacher educators were knowledgeable about what I was required to do in my field teaching experience". Based on Hammerness (2006), the conceptual coherence of the programme could be improved by sharing a common vision throughout all courses, including fieldwork. Similar result was also found in Oslo (Canrinus et al., 2017) and the researchers explained that this was the result of constant and ongoing changes in their teacher education programmes. Also, at the University of Tartu several changes have taken place during the data collection. Rapid changes can cause misunderstandings in the courses' organisation and getting used to new programmes takes time. However, the results show that the coherence of different courses should get more attention.

The coherence of theoretical courses and fieldwork can be considered as satisfactory (in 2018 mean=2.95; SD=0.49) when compared to international results measured with the same instrument. The students in Stanford, Santiago and Helsinki rated this construct as the lowest (Canrinus et al., 2017). As these institutions had increased the amount of fieldwork, the researchers argued that this does not automatically lead to coherence in theory and practice.

One option to enhance the connection between theory and practice is to include more practical tasks to university coursework. Our results of the second research question showed that in the students' opinion their studies lack opportunities to analyse pupils' work and have classroom discussions (recordings and videos). This result agrees with the findings of Canrinus, Klette, Hammerness and Bergem (2019) in Oslo, Stanford, Helsinki, Santiago and Varona (Cuba). These activities are most directly connected to classroom teaching, while activities not related to classwork, were found to get more attention during the university courses at the University of Tartu as well as in the Canrinus et al. (2019) study (e.g. analysing curricula, plan for teaching). It has been argued that teaching that is based on the learners' needs is more efficient in terms of the pupils' development (Hammerness & Klette, 2015), however, teacher education courses at the university focus more on questions of classroom management than learning and development (Grossman et al., 2009a).

In brief, the results of the current study indicate several possibilities for improving the coherence of teacher education at the University of Tartu. In addition to this, the results confirm previous empirical studies which argue that teacher education should focus more on pupils' learning in order to prepare teachers for efficient teaching.

Keywords: teacher education, teacher education courses and practice, curriculum coherence