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Prospective primary school teachers' confidence in teaching disciplinary history

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HIGHLIGHTS

- The practical implementation of disciplinary history teaching requires its adoption during initial teacher education.
- The majority of primary student teachers accepted a disciplinary approach during a two-month course.
- Almost half of the prospective teachers felt uncertainty about their preparedness to teach disciplinary history.
- The article introduces four approaches that draw on the students' attitudes towards disciplinary history instruction.

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ABSTRACT

This study explores how confident prospective teachers felt themselves to teach disciplinary history after a course which focused particularly on teaching historical thinking. The data consist of a survey and two essays by 121 respondents, in-depth interviews with 20 students, and follow-up interviews with eight students. The majority of the participants accepted a disciplinary approach as the basis of their future work. However, almost half of the participants felt uncertainty about their preparedness to teach disciplinary history. The article introduces four approaches that draw on the students' attitudes towards disciplinary history instruction.

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1. Introduction

Historical thinking has become one of the core concepts in history education across the world (e.g., Erdmann & Hassberg, 2011; Lévesque & Clark, 2018; Seixas & Peck, 2004). To think historically one needs to become familiar with ways in which historical knowledge is generated. Historical thinking consists of using two types of knowledge: substantive knowledge and procedural knowledge. The distinction between substantive and procedural knowledge is theoretical but it can help students understand the form of historical knowledge.

The term substantive knowledge is used because the pioneers of history education developed a useful distinction between substantive knowledge (“know-that”) and procedural knowledge

(“know-how”) when defining historical knowledge and historical thinking (see Dickinson & Lee, 1978; Lee & Ashby, 2000). This distinction is still valid today and many scholars use these inter-related forms of historical knowledge (e.g., Gibson & Peck, 2018; Kitson, 2021; Lévesque, 2009; Lévesque & Clark, 2018). Kitson (2021), for example, describes substantive knowledge as the “product” of a discipline. Substantive knowledge is integrated with an understanding of the methodology and epistemology of history. Although substantive knowledge could in some cases be replaced with the terms declarative knowledge or propositional knowledge (Hirst, 1974), we use substantive knowledge for the sake of consistency.

Substantive knowledge is concerned with the subject matter of history knowledge which is sometimes referred to as historical content, in other words “what history is about”. To think historically means going beyond this content knowledge. Students need procedural knowledge, that is knowledge about the processes involved in interpreting history in order to generate historical

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narratives (e.g., Lee, 2005). This includes the mastery of second-order or historical thinking concepts, such as significance, evidence, continuity and change, cause and consequence, and historical empathy, which are broad-based approaches to understanding history (Dickinson & Lee, 1978; Seixas, 1996; Seixas & Morton, 2013; Shemilt, 1980).

Although historical thinking has been taken as the basis for constructing curricula in many countries, some teachers base their teaching on a teacher-driven distribution of factual knowledge of what happened in the past rather than on the processing of historical knowledge. According to Sears (2014), many history teachers take too narrow an approach to their subject. He argues that teachers do not identify themselves as active agents of history but rather as passive recipients. Teachers regard history mainly as a collection of facts and see their own role as transmitters of knowledge. As a result, students may fail to learn to actively process knowledge. Sears' research focused on Canadian history teachers, but similar observations have been made by scholars elsewhere (e.g., Rantala, 2012; Rantala & Ouakrim-Soivio, 2019; Rantala & Ouakrim-Soivio, 2020; Rantala et al., 2020; Cuban, 2016; Dickinson et al., 2001; Fragnoli, 2005; Hartzler-Miller, 2001; Veijola & Mikkonen, 2016).

As already mentioned, to think historically students need to familiarise themselves with different forms of historical knowledge. In other words, students should distinguish the nature of the discipline from the content of history. "Disciplinary history" means focusing on the nature of historical knowledge and the way it has been constructed (see Chapman, 2021; Counsell, 2011; Harris, 2021). "Disciplinary history provides students with standards for inquiry, investigation, and debate," as Seixas (2000) has noted. Lee (2005) uses disciplinary knowledge as a synonym for second-order knowledge – it is used to refer to ideas about "doing history".

Due to time pressures, teachers might, however, fail to discuss second-order concepts, which are essential components of a disciplinary approach to history that cultivates students' historical understanding. Continuing education has proven challenging as a method of enacting permanent changes in teaching practices (see Ragland & Woestman, 2009; van Hover & Hicks, 2018). It seems that the practical implementation of disciplinary teaching requires its adoption during initial teacher education. This particularly applies to Finland where in-service teacher education is fragmentary and nonsystematic (see Heikkinen et al., 2015) and where history teachers have few opportunities to attend subject-specific professional development.

The current study focuses on primary student teachers' confidence in teaching disciplinary history. Primary teachers are specialists in education but rarely complete history studies as part of their degree. According to some scholars, teachers who have less experience in the discipline of history often teach history as a static mass of knowledge (see Yilmaz, 2020; also; Nichol & Guyver, 2004; Westhoff, 2009; Westhoff & Polman, 2007; Wilson & Wineburg, 1988). On the other hand, other scholars argue that even primary teachers who have not completed the disciplinary studies included in the subject teachers' curriculum, can adopt the principles of disciplinary teaching during teacher education (e.g., Martin, 2012). An example of this is a course implemented by Gibson and Peck, whose purpose was to strengthen teacher students' disciplinary competence. Many teacher students who were previously unfamiliar with the concept of historical thinking learned a great deal about the methods of teaching it during the course. Gibson and Peck (2020, p. 215) point out that "regularly engaging preservice students in well-scaffolded learning activities and 'deep transformative experiences' that invite historical thinking in a community of practice can strengthen preservice students' understanding of the discipline of history and teaching history."

2. The research question

The study seeks to answer the following question: How confident do prospective teachers feel themselves to teach disciplinary history after a course which focused particularly on teaching historical thinking? We sought to investigate this question through a study of primary student teachers who participated in a two-month course in history didactics. Although the goal of the course was to provide them with the competence to implement disciplinary history teaching we did not measure the change in their competence as such but we focused our study on student teachers' confidence in teaching disciplinary history.

3. Methods

In the following, we describe the research setting and the participants, outline the methods of data collection and analysis employed in the present study, and discuss the limitations of the study.

3.1. Setting

History is a mandatory subject in Finnish primary education. Primary education in Finland refers to the first six years of basic, universal education in a nine-year comprehensive school system, which is meant for children aged between seven and 16 years. In primary education, history is taught by primary teachers who have obtained a Master's degree in education but who have usually only completed one course in history didactics as part of their teacher education.

In the Finnish National Core Curriculum (hereafter NCC), the emphasis is on historical thinking. The objective of history instruction is to familiarise the pupils with the nature of historical knowledge, knowledge acquisition, and second-order concepts. The NCC for primary history explicitly describes the following second-order concepts as the objectives for history teaching: evidence and interpretations, cause and consequence, continuity and change, and historical empathy. Historical thinking skills are seen as broad-based approaches to understanding history. Substantive knowledge is defined loosely so that teachers can apply an in-depth approach to the topics they choose. The assessment criteria—which have a significant role in the NCC—focus on working with second-order concepts. The assessment pays particular attention to the application of knowledge and the development of historical thinking (Rantala & Ouakrim-Soivio, 2019; National Board of Education, 2014). Because the learning outcomes stated in NCC require a disciplinary approach to teaching history, Finnish teacher education promotes disciplinary history in its history didactics courses (see Rantala & Ouakrim-Soivio, 2018).

The overall purpose of the course discussed in this article was to deepen students' understanding on historical thinking and its teaching at school. We used second-order concepts presented in the NCC to design the course. During the course, we taught students how historical knowledge has been constructed and how to transform this knowledge into appropriate forms for teaching. During the course, students acquainted themselves with the second-order concepts.

The course was organised into six topics that each focused on a different aspect of historical thinking: evidence and interpretations (4 h of lectures and 2 h of small group sessions); cause and consequence (2 h of lectures and 2 h of small group sessions); continuity and change (2 h of lectures); historical empathy (2 h of lectures and 2 h of small group sessions); assessing historical thinking (2 h of lectures and 2 h of small group sessions); how to teach historical thinking (One-day practicum and 4 h of small group

sessions). The NCC guides teachers to choose less content so that the historical content can be explored in more depth. Because teachers have much leeway in choosing topics, it is crucial that they can justify their decisions. Hence the concept of historical significance was also discussed frequently during the classes.

Each lecture discussed the second-order concept in question theoretically. Theoretical processing was blended with practical document-based historical enquiry within small group sessions. Each topic had a particular case that was used to teach the second-order concept in question (e.g., the case of the plague village of Eyam for teaching historical empathy). The purpose of practical activity was to improve students' conceptual understanding and show which kind of exercises can be used when teaching historical thinking with primary pupils.

The course allocates 60 h for independent work, which includes, among other things, reading a work on history didactics. The coordinating teacher for the course that was the focus of this study, was one of the authors, Jukka Rantala. The other author, Amna Khawaja, facilitated a tutorial for a small group session.

3.2. Participants

Primary teacher education has long been one of the most popular study programmes in Finnish universities (Heikkinen et al., 2020). History as a subject is not particularly popular among future primary teachers, suggested by the fact that the majority of them do not study history for the matriculation examination (Vipunen, Education Statistics Finland, 2020). This, in turn may indicate that they regard history as a challenging discipline.

The present study focuses on a total of 121 first- and second-year students of primary education who participated in the history didactics course in the University of Helsinki. We evaluated their understanding of disciplinary history teaching through a pre-course survey and through essays they wrote during the course. At the end of the course, we interviewed 20 of the course participants.

In order to find out whether the interviewed student teachers differed from the rest of the participants, we compared their background data and their success in the course exam. According to the background data, the interviewed students differed only slightly from the other course participants. They included slightly fewer women on average (75 % vs. 79 %) and received slightly higher grades on the five-point scale at the end of the course (3.8 vs. 3.6). In terms of age, the interviewed students included more of the youngest (18–22 years old) and the oldest (31–40 years old) students. Correspondingly, the most common age group (23–30-year-olds) was slightly less represented among the interviewed students compared to the total average.

The study was implemented following the instructions of the national guidelines on the ethical principles of research in the humanities and social and behavioural science in Finland (TENK, 2019). Participation in the study was voluntary. Full consent was obtained from the participants prior to the study. We ensured the protection of the privacy of research participants by coding students' essays and using pseudonyms when reporting interviews. Participants' names were removed before the analysis.

3.3. Data collection and analysis

The research data are multimodal by nature, containing both written and interview data. In the pre-course survey, student teachers answered the following question: "Why should history be taught at school?" During the course, the participants wrote an essay on the history teaching they had received at primary, secondary and upper secondary levels of education. They also wrote an essay about the knowledge and skills they think primary teachers

should have in order to teach history. Aside from a short briefing, the students were not given other instructions for their essays. The briefing for the first essay read as follows: "Discuss the history teaching you received during your primary, secondary and upper secondary education. You can use the following questions to get started: What kind of history teaching did you receive? What did you learn in history lessons?" The briefing for the second essay read as follows: "In your opinion, what knowledge and abilities are required for teaching history successfully in primary school?"

The interview data consist of in-depth interviews with 20 students, and follow-up interviews with eight students. The interviews were recorded and transcribed. Khawaja, who conducted the interviews, did not reveal the identity of the interviewed students to the head teacher of the course, Rantala, who analysed the research data and was responsible for grading the course exam. Khawaja also anonymised the students' answers and essays to ensure the complete anonymity of the participants. From the interviewed students we collected personal data and the extent of their substitute teaching experience.

With the help of the interviews, we sought to investigate the students' views on how the different components of the course (lectures, group sessions, practicum and course literature) influenced their thinking. We asked, for instance, how they felt about the practicum that was included in the course and what areas they felt they needed to improve in order to teach with a disciplinary approach. We also enquired about their opinions on the usefulness of disciplinary history teaching that they had learned about in the course and the skills they felt they had developed for teaching disciplinary history. The interviewed students reflected on their answers of the pre-course survey and evaluated how the course had changed their thinking. We also asked them to reflect on possible reservations they had regarding disciplinary history teaching.

The data were analysed using an inductive coding strategy associated with grounded theoretic approaches to data analysis in order to create history teaching profiles of the interviewees (see Strauss & Corbin, 1998). The profiles emerged through a process which began with a close reading of the material. All data were analysed simultaneously. Rantala read through the material several times concentrating on the occurrence of the participants' talk about second-order concepts and substantive knowledge. In addition, the analysis focused on how the participants viewed their own competence and confidence regarding history teaching. Attention was paid both to participants' positive and negative views on aspects of disciplinary history.

Table 1 describes the data upon which the construction of profiles was based. Participants' answers to questions 1 and 2 revealed the level of familiarity with teachers' everyday work and possible hindrances they might encounter when teaching disciplinary history. Answers to questions 3 and 4 revealed how acquainted they were with the second-order concepts before the course. Questions 5 and 6 generated data on how participants absorbed the main goals of the course and how competent they felt about following them. Questions 7 and 8 dealt with how confident participants felt in teaching disciplinary history.

Seven codes were developed as a result of the process. Table 2 names and exemplifies these codes.

By using these codes, Rantala assessed participants' likelihood of adopting the disciplinary approach to their teaching with a Likert-type scale from one (low confidence), to five (high confidence). Those students whose data reflect a total absence of the second-order concepts and who expressed uncertainty about teaching historical thinking were placed at level 1. Correspondingly, students placed at level 5 demonstrated a high level of competence in disciplinary history and expressed certainty about teaching

Table 1
The construction of history teaching profiles of the student teachers based on the data.

Question	Dataset examined
1. Does the student have teaching experience?	Interview 1
2. Does the student have experience of teaching history at the primary level?	Interview 1
3. Do the student's pre-course survey answers express disciplinary thinking?	Survey and Interview 1
4. Do the student's personal school experiences indicate exposure to disciplinary history teaching?	Essay 1 and Interview 1
5. Has the student adopted the basis of the course, disciplinary history teaching, into his/her own thinking?	Essay 2 and Interviews 1
6. What, if anything, inspires the student about disciplinary history teaching?	Interviews 1
7. What, if any, reservations does the student have towards disciplinary history teaching?	Interviews 1
8. How likely does the student see him-/herself teaching history with a disciplinary approach in the future?	Interviews 1

Table 2
Codes developed to analyse interviewees' preparedness to implement disciplinary history teaching.

Code	Illustration
Expression of confidence and readiness to carry out disciplinary history teaching.	(+) "[History] is no longer one of the subjects I'm afraid of." (-) "I'm not necessarily proficient in the methods yet of how to encourage that kind of thinking."
Expression of an opinion on the competence to carry out disciplinary teaching.	(+) "I think that I have really good abilities for teaching history." (-) "I need to brush up on a lot of the basics before I become a teacher."
Expression of possible contributor or hindrance in order to carry out disciplinary history teaching.	(+) "Using document-based tasks are a good way to teach thinking skills. Not only saying that historical thinking is important but showing with these tasks that it is possible." (-) "I think that focusing on procedural knowledge means that substantive knowledge remains deficient."
Expression of familiarity of disciplinary history teaching.	(+) "At school we often studied documents and we made interpretations." (-) "I'm not sure if I adopt this approach because in the back of my mind, my own experiences of history teaching are still affecting my thinking."
Expression of mastering second-order conceptual thinking.	(+) "I have been thinking about focusing more on historical thinking, discussing causality and so on. But this [course] really clarified it for me – and I have made huge progress." (-) "I didn't really understand the content of the course before reading Jukka's book [...] maybe I still haven't fully understood it."
Expression of ability to carry out disciplinary teaching in the practicum.	(+) "My fingers itch to get historical thinking exercises into my teaching." (-) "It's easy to think theoretically about what I would do, but it won't necessarily work in the classroom."
Expression of being inspired by the goals of the course.	(+) "This has introduced me to a completely new perspective." (-) "I wished to have more factual knowledge from the course."

historical thinking. Some participants were inspired by the contents of the course but felt unready to follow its lines of it in their future work. On the other hand, other participants expressed their readiness to teach historical thinking, but the research data questioned their competence to accomplish their aim successfully. Those participants were assessed to be at levels 2 to 4 according to their estimated likelihood of adopting a disciplinary approach to teaching. The profiles describe the extent to which the student teachers had understood the goals of the course and how the students felt about their competence to carry out disciplinary history teaching. The more positive references the participants had within coding (Table 2), the higher their confidence.

After this first analysis in which the profiles of the participants were created, Rantala grouped the interviewees into four categories according to the student teacher's confidence in teaching disciplinary history.

Seven months after the course ended, Khawaja invited the interviewed students for a second interview. Of the 20 students who participated in the first round of interviews, eight participated in the second interview. Due to the coronavirus pandemic, Khawaja conducted the interviews via the video call service Zoom. One of the purposes of the second interview was to examine whether students' views on the course had changed over time.

With the help of a second round of interviews, we also evaluated the accuracy of the history teaching profiles. Each student participating in the second interview was asked to read their profile and to evaluate whether the profiles corresponded with their own views.

In the second interview, the students also reflected on their likelihood of implementing a disciplinary approach to history teaching in their future work. Their answers were compared to Rantala's predictions, which were based on the data from the first

interview and the other research data. Thus, the second round of interviews was also a way to measure the reliability of Rantala's analysis. Both interview structures are presented in Appendices B and C.

3.4. Limitations

To address our research question, we collected data from the students in various different ways. However, we interviewed only one sixth of the research participants. We classified the interviewees into groups based on their subjective competence in disciplinary teaching and their likelihood of teaching history with a disciplinary approach in the future. While only 20 student teachers participated in the interviews, we regard our categorisation as representative of the entire population. It is likely that the interviewed students were more interested in the message and the content of the course. As we described above, with regard to grades, the interviewees did not significantly differ from the rest of the research participants. There are, however, differences in terms of their substitute teacher experience, which we will discuss later. The responses and essays of the interviewed students differ somewhat from those of the other students, which is why we present the data for the interviewed students and the rest of the research participants separately (see Table 3). In this way the reader can judge the extent to which the interviewed students and their categories represent the entire research population.

Since the course under study was a two-month course, it is difficult to evaluate the permanence of the changes in the student teachers' didactic thinking. In addition, our assessments regarding their likelihood of adopting a disciplinary approach to history teaching do not necessarily reveal much about the way the students will teach history in the future.

Table 3
Factors that contribute to successful history teaching according to the student teachers.

	Research participants (N = 88) ^a	Research participants, excluding interviewed student teachers (N = 71) ^a	Interviewed student teachers (N = 17) ^a	The difference between the descriptions of the interviewed student teachers and the rest of the participants
Proficiency in substantive knowledge	75 %	75 %	76 %	+1 %
Historical thinking skills	68 %	65 %	82 %	+17 %
Knowledge of the curriculum	34 %	32 %	41 %	+9 %
Proficiency in versatile teaching methods	27 %	32 %	6 %	-26 %
Knowledge of pupils' educational backgrounds	20 %	24 %	6 %	-18 %
Knowledge of historical culture outside of school	11 %	13 %	6 %	-7%
Competence in activity-based history teaching	10 %	11 %	6 %	-5%
Proficiency in evaluation methods	9 %	10 %	6 %	-4%
Awareness of one's own beliefs and ideas regarding history teaching	8 %	7 %	12 %	+5 %
Knowledge of subject integration methods	3 %	3 %	6 %	+3 %

^a Some students did not consent to their answers being used in the study or forgot to indicate their consent or lack thereof, which explains the discrepancy. Furthermore, the course permitted one absence and the essays were written during the last group session, which some students used as their "allotted absence".

4. Results

4.1. Pre-course survey

Substantive knowledge holds a high significance among Finnish student teachers. They see the purpose of teaching history as a way of making sense of the present and of fostering cultural understanding and providing general knowledge (Tallavaara & Rautiainen, 2020; see also; Virta, 2001). General knowledge is largely related to proficiency in substantive knowledge. Historical thinking skills, on the other hand, are mentioned less by the student teachers.

Eleven categories were formed as a result of an analysis of students' answers to a pre-course survey. 87 % of the respondents (N = 121) said the purpose of teaching history was to increase understanding about the past and thus to understand the present, while 51 % of the respondents said the purpose of history teaching is to gain general knowledge. Only 17 % of the answers mentioned second-order concepts. The answers imply that upon entering the course, the majority of the student teachers had an orientation towards teaching substantive knowledge, mainly historical topics and key events or features.

The answers of the interviewed students and the rest of the course participants did not differ significantly.

4.2. Essay on personal school experiences and impressions

The orientation towards substantive knowledge is also evident in the students' essays, in which they describe the history instruction they received at primary, secondary and upper secondary levels. We categorised descriptions from the students' essays regarding the history teaching they received at school.

Based on the essays, the course participants had received teacher-centred history teaching at school and the instruction had focused on covering historical content. The interviewed student teachers were more likely than the rest of the course participants to describe experiences with activity-based history learning as well as instruction that discussed the interpretive nature of historical knowledge. Regardless of this, one can infer that the students

themselves had mostly experienced history lessons which focused on substantive knowledge. This is apparent, for example, in John's¹ (#97) essay: "We concentrated on studying the facts and how to repeat them in the test. We didn't interpret sources or learned about source criticism."

One fifth of the research participants mentioned history as their favourite subject at school. Nearly as many reported it to be one of their least favourite school subjects. The interviewed group had a higher percentage of those who reported history as their favourite subject, but also of those who disliked it.

4.3. Essay on the knowledge and skills required from a teacher of history

In the last group session of the course, the students wrote about their views regarding the knowledge and skills that a primary teacher should have in order to teach history. During the course, the students learned that the national history curriculum is based on the disciplinary approach which means that instruction should be focused on second-order conceptual knowledge. Teachers are given enormous freedom to choose the substantive knowledge they teach, since the curriculum only highlights six key content areas that primary teachers should take into account in their instruction. It was emphasised during course lectures and group sessions that focusing on fewer historical topics and key events in primary education is a prerequisite for meeting the learning outcomes related to historical thinking that are outlined in the curriculum. Despite this, both the interviewed students and the rest of the course participants highlighted the significance of substantive knowledge in their essays. We will return later to what they mean by substantive knowledge.

The answers of the interviewed students and the rest of the participants differed most significantly in terms of how they perceived the importance of proficiency in teaching methods as can be seen in Table 3. The other course participants placed more emphasis on versatile teaching methods compared to the interviewed students. What is also of note is the interviewed students' stronger focus on historical thinking skills, which are an essential component of disciplinary history teaching.

¹ All the names are pseudonyms.

4.4. Post-course interviews

The interviewed student teachers had learned substantive knowledge at school, but procedural concepts of the discipline were rarely discussed in class. They mentioned only cause and consequence in relation to second-order concepts when describing the history instruction they had received at school. Our way of discussing procedural concepts in the course was new to most of them. The interviewed student teachers seemed to find it easiest to work with the second-order concept of cause and consequence because many of them were familiar with the concept from their history classes at school. Some interviewees recognised second-order concepts from their previous studies like Anne (#12), who described: "The concepts of cause and consequence, and continuity and change appeared in the upper secondary history lessons." Although the concepts of evidence and interpretation were not so familiar from school, many interviewees saw their importance as a part of teaching critical information processing skills.

The most difficult concepts for participants were significance and historical empathy. It seems that the interviewees had studied the topics and key events of Finnish and world history at school without wondering why they were included in the curricula. Based on their own school experiences the student teachers had formed views about the content to be taught in history lessons. They were unable to ponder over the criteria defining content selection. Although we discussed during the course the different ways of deciding what is important to learn about the past, many interviewees wanted to have a list of significant events, people and developments. Mary (#47), for example, explained that the worst scenario for her would be that she would not know all the important facts that one should learn at school. When she was asked how we decide what is important to learn she was unable to respond. With teaching historical empathy student teachers felt uncertainty about mastering the historical context.

The interviews revealed that even those students who had adopted the core message of the course regarding the necessity of disciplinary history teaching were uncertain about reducing the role of substantive knowledge. The students who were the most confident in their ability to limit the number of topics and key events were also those who felt they had a good command of substantive knowledge. Based on the interviews, however, it seems that many of them also prioritised substantive knowledge in their teaching plans in the practicum. Many students who were insecure about teaching history said that while they felt positively about the course's focus on a disciplinary orientation, they would still base their teaching on substantive knowledge instead of combining it with procedural knowledge. Even though they had been convinced by the document-based cases we had presented during the course, they felt incapable of implementing similar cases in their own work.

Some interviewees feared that focusing too much on procedural knowledge would mean that the factual knowledge pupils have to learn would suffer. Similar to Mary (#47), some interviewees reflected on the precedence of substantive knowledge over procedural knowledge: "The question is whether you need to have some substantive knowledge before you can implement those skills and disciplinary teaching." Some interviewees, like Rose (#74) considered disciplinary history too challenging for teachers:

In disciplinary history, students must face the uncertainty related to the interpretive nature of historical knowledge, which makes teaching and learning more challenging than the static accumulation of historical information. This is why many teachers take the easy way out and focus on factual knowledge that is easier to master.

Among the interviewees there was, however, also the other kind of attitude towards teaching historical thinking as can be seen from the quotation from Jane (#51):

In this course, I have learnt that I have to connect substantive knowledge and procedural knowledge together. I should somehow blend them together. When I start to work as a teacher, I will have to remind myself of this.

4.5. History teaching profiles and categories of students

With the help of the interview data and other research data, Rantala created history teaching profiles of each interviewed student. In the following, we will present one example of these history teaching profiles.

"I need to brush up on a lot of the basics before I become a teacher." (Interview excerpt, Lisa #48)

Lisa was unable to disengage from the collective memory approach of history teaching (see Seixas, 2000), possibly due to her own educational orientation: her expectations for the course concerned improving general teaching skills and command over substantive knowledge. Lisa dislikes history, which stems from her time in school. At school, she was used to superficial learning while still getting good grades. Thus, she initially had a negative bias towards the history didactics course. For her, the view that was presented in the course was a liberating one as students were exempted from the obligation to cover a vast number of historical topics and key events or features. Despite this, she did not seem to have internalised the idea of an in-depth focus on fewer topics. She was concerned about the course's lack of teaching 'the best story' as the way it happened and feared that disciplinary history teaching would lead to the erosion of general knowledge. Her view was reinforced during a student exchange in the United Kingdom where, according to her, she met students with poor general knowledge. She was partly disappointed in the course because she "wished to have more factual knowledge from the course [...] that kind of knowledge that every teacher should master." Lisa was unable to offer arguments concerning the effectiveness of the collective memory approach although the interviewer used the student's own school experiences to demonstrate the problems of this approach. She described the need to cover the content thoroughly in order to get pupils to learn some of the historical canon: "If we don't teach all that, pupils will not find out about it later. Although it is obvious that we have too much content in our teaching and we have too little time to cover that, I think that pupils can still learn something about it." Lisa finds it difficult to assess pupils' historical thinking, but her uncertainty is above all related to her own lack of substantive knowledge. This was something she was faced with as a substitute teacher: the pupils asked her questions she could not answer. Lisa feels teachers should be able to answer all of the pupils' questions. She listed the inability to remember dates as her own weakness.

With the help of the profiles, we classified the interviewed students into the following four groups based on their likelihood of adopting a disciplinary approach to their history teaching in the future. Students whose profile was level 5 comprised Group 1, profile levels 4 and 3 Group 2, level 2 Group 4, and level 1 Group 4 (a more detailed classification can be found in Appendix A). The student described above belongs to group 4.

4.5.1. Group 1: student teachers who are confident that they will adopt a disciplinary approach to history teaching (4 students)

The students in this group have a relatively wide experience of substitute teaching or are older than the average student. While the students might not have become familiar with disciplinary history teaching during their own school years, they have prior to joining the course adopted the view that the purpose of history teaching is to develop students' historical thinking or critical information processing skills. The students may have doubts regarding their ability to strike a balance between substantive and procedural knowledge in their teaching. Nevertheless, they are confident that they will build their instruction on a disciplinary foundation.

4.5.2. Group 2: student teachers who are enthusiastic about teaching disciplinary history but who lack experience (8 students)

The course alerted the students in this group to the importance of historical thinking. During the lectures and group sessions, they learned about exercises that can be used to teach historical thinking to pupils. The document-based cases that were presented in the course have inspired them, and they are confident that they will apply the history teaching methods they have learned in the course. They are among the youngest of the students and have little substitute teaching experience. The group also includes two students who have taught history with an approach that emphasises substantive knowledge and who are inspired about the new perspective on history teaching.

4.5.3. Group 3: student teachers who agree with the core message of the course but who are hesitant about disciplinary history (4 students)

Before the course, the students in this group had a negative attitude towards history as a discipline or regarded history as a difficult subject. While they report learning about historical thinking during their school years, they are uncertain about its practical implementation in teaching. Most of the students have little substitute teaching experience. They have doubts about the availability of appropriate study materials for disciplinary history teaching but otherwise they are unable to identify the potential challenges of a disciplinary approach.

4.5.4. Group 4: student teachers who were inspired by document-based cases but who are sceptical towards disciplinary history (4 students)

Students in this group criticised the history teaching they had received at school but plan to build their teaching around textbooks and substantive knowledge. While they felt positively about the document-based cases that were discussed in the course, they consider the implementation of such approaches personally too difficult and see them rather as complementary methods to diversify their teaching. They are unable to elaborate on the philosophy behind their history teaching orientation. The students see themselves as mediators of substantive knowledge. Their goal is to complete the theoretical studies in primary education as quickly as possible without a need for deeper learning. Therefore they do not put much effort into understanding the key ideas of the course. The students have little substitute teaching experience apart from one 50-year-old former Finnish teacher, who struggled to disengage from the disciplinary thinking of her original subject and adopt the goals of history teaching.

4.6. Interviews seven months after the course

In the second round of interviews, the student teachers assessed their likelihood of implementing disciplinary teaching in their future work. After the assessment, Khawaja shifted the

conversation to the topic of disciplinary history teaching in the students' future work. At the end of the interview, the students also got a chance to assess the correspondence of the profile created by Rantala to their own view.

Four students placed their likelihood of implementing disciplinary history teaching in their future work higher compared to Rantala's assessment, whereas three students placed the likelihood lower. In general, however, the students' assessments corresponded quite well with Rantala's profiles, as shown in Table 4. The students also reflected on Rantala's assessment regarding their likelihood of adopting a disciplinary approach to history teaching in the future. All students considered the assessments realistic.

5. Discussion

One argument for the primary teacher model is the fact that as they teach nearly all subjects, teachers learn to know their pupils. It has also been regarded as beneficial for children at the beginning of their school journeys to be taught by an expert in education who is familiar with pedagogy and pedagogical research. The negative aspect of the model has to do with teachers' limited disciplinary knowledge. School subjects risk becoming mere containers of information if primary teachers fail to understand discipline-specific interpretive principles and approaches (see Gardner & Boix Mansilla, 1994; Grossman et al., 2000). This danger does not seem imminent among the student teachers that participated in this study, however. While many of them emphasise the importance of substantive knowledge, they do not question the significance of disciplinary history teaching. Their essays show that two out of three course participants highlighted the importance of having historical thinking skills, even more so for the students who were interviewed.

The implementation level of a disciplinary approach in the participants' future teaching ultimately depends on their attitude towards substantive knowledge. Teaching both substantive and procedural knowledge is essential in history teaching (Downey & Long, 2017). What matters in terms of course outcomes, however, is the student teachers' understanding of the substantive knowledge. According to the predominant view, in-depth learning only takes place at the information processing stage. In fact, focusing on fewer historical topics and key events or features is a prerequisite for the development of a deep understanding, as Gardner (1991) suggests. Our study indicates, however, that substantive knowledge does not always translate into an understanding of the historical big picture (see Lee, 2005) or function as a tool to increase one's understanding of historical phenomena. Instead of promoting such understandings, many students say their aim is to cover as many historical topics as possible. This also reflects on the way they understand the essence of substantive knowledge, which was manifested during their practicum as teaching trivial historical facts which were unrelated to learning outcomes.

One reason offered as to why disciplinary history teaching has failed to take root is the weight of tradition, teachers often finding it easier to continue as usual than to adopt a new approach in their practice. This also concerns student teachers whose history instruction was based on covering the content. It seemed to be difficult to disengage from that approach.

The National Core Curriculum, which regulates the work of teachers in Finland, recommends focusing on historical thinking. Even though our goal in the course was to impart this idea on our students, this effort was only moderately successful. The results of our study correspond partially to those of McDiarmid (1994) and his investigation into what American undergraduate history students think about the learning of history. According to McDiarmid's study, while education changed students' understanding of the

Table 4
Assessments on the student teachers' likelihood of implementing disciplinary history teaching and their reflections on the accuracy of their profiles in the second interview.

Student teacher	Likelihood of adopting a disciplinary approach to teaching in the future; 5 = extremely likely, 1 = not at all likely		A summary of the student teachers' assessment regarding their profile's correspondence to their own views; Likert scale: 4 = very well, 3 = relatively well, 2 = to some extent, 1 = not at all	Interview duration (min.)
	Rantala's assessment after the course	Student teachers' assessment seven months after the course		
#47	5	4	Interviewer: "... so it reflects your views in an accurate way?" Student: "Yeah." (Likert value 4)	11
#97	4	3	"It's frighteningly accurate." (Likert value 4)	12
#102	4	3	Interviewer: "So you agree with this profile?" Student: "Yes, I do." (Likert value 4)	17
#43	3	4	"Yeah I would say I agree with it apart from [...] I think I'm more confident in terms of [disciplinary teaching]." (Likert value 3)	12
#51	3	4	"I would still agree with a lot of it." (Likert value 4)	19
#33	3	3	"Yeah I guess I would agree with it." (Likert value 4)	16
#105	2	4	"Yes, it does." (Likert value 4)	15
#112	2	3	"Yes, it corresponds pretty well." (Likert value 3)	17

nature of historical knowledge, their ideas regarding the teaching and learning of history did not change. Their views on teaching and learning reflected the experiences they had as high school students. Similarly, some students in our study took the view that historical events must be taught before introducing the elements of historical thinking. In their opinion, historical events cannot be learned while simultaneously learning historical thinking. The students who argued for the primacy of substantive knowledge reported a fear that disciplinary teaching will lead to the random selection of factual knowledge, which means students fail to form a comprehensive picture of the past.

A course designed by Gibson and Peck (2020) for Canadian students of primary education succeeded in strengthening the students' skills in teaching history with a disciplinary approach. Our results, however, were not as successful. One reason for this may be the discrepancy between the students' education levels. While Gibson and Peck's course was targeted at fourth-year students, our students were in their first and second year of studies. Research has shown that students' information processing skills improve during their university studies (e.g., Marton et al., 1980). Furthermore, our course was mandatory and shorter in duration and the number of hours was lower in comparison with Gibson & Peck's optional course (see Gibson & Peck, 2020).

It is not uncommon that the implementation of learning outcomes in primary education courses is only partial. Even in many longer-term courses, teaching does not seem to have the desired outcome in terms of capturing students' imaginations because of their strong biases regarding the topic under discussion. James (2008), for instance, studied the effectiveness of a three-term course in terms of changing student teachers' views regarding the potential of disciplinary history teaching in primary education. She discovered the same paradox as we did in our study: "students seemed to agree that investigating history was more interesting and educational than the memorization-and-recall methods they had encountered as students themselves, and yet students were disinclined to adopt such methods as teachers in their own classrooms" (James, 2008, p. 172; see also; Virta, 2002).

The students who participated in James's study questioned primary pupils' capacity for historical thinking. A similar attitude has been observed among many experienced teachers (e.g., Barton, 2008). The students who participated in our study did not report scepticism towards the pupils' capacity for historical thinking. Instead, their decision to focus on substantive knowledge over procedural knowledge in the practicum was grounded in a scepticism towards their own skills in disciplinary teaching. As regards the question why Finnish students of primary education believe in

the potential of teaching historical thinking to pupils, our study does not provide direct answers. The explanation may have something to do with the fact that in our history didactics course, we discussed several studies (e.g., Nokes, 2014; VanSledright, 2002) that point to the pupils' capacity for historical thinking. Furthermore, participants' interviews of the primary pupils that were conducted in the context of the practicum introduced them tangibly to the pupils' historical thinking.

Research in history teacher education suggests that prospective teachers have often absorbed the basis for disciplinary teaching but they cannot embody that into their teaching (see Gibson & Peck, 2020). Martell (2013) has discussed the need to provide novice teachers with practical tools to complement their conceptual tools. According to Martell, these practical tools must be acquired during teacher education, which is why our course paid special attention to this. In each lecture and group session, both conceptual and practical tools were discussed. The document-based cases were especially helpful for student teachers when they were building their own practical toolkits for history teaching. Some students adopted the principles for building their own conceptual and practical toolkits, which reinforces our belief that they will also adopt a disciplinary approach to teaching. Others, on the other hand, seemed incapable of combining the conceptual and practical tools together. Hence it seems unlikely that they will adopt a disciplinary approach to their teaching.

These student teachers who were incapable of combining the conceptual and practical tools together were those who lacked experience of working as a substitute teacher. During the course, they focused their attention on questions of general didactics more than history didactics, and this was seen particularly evident in the practicum. The timing of the course thus matters. The history didactics course would benefit from a preceding practicum of general pedagogy so that student teachers would have more confidence of working as teachers before the course and could then concentrate on history education.

6. Conclusions

Studies conducted in North America have found that prospective history teachers are more influenced by the teaching they have received than by their teacher education (e.g., Gibson, 2014). Our study also shows that at first, student teachers held on to the model of history teaching they had been exposed to at school, which focused on developing their substantive knowledge of the past. Towards the end of the course, however, their attitudes changed, which was reflected in their essays and in the interviews. Many

students were inspired by disciplinary history teaching especially through the document-based cases, which focused on second-order concepts and processes. They wanted to gain an understanding of how we learn about the past and the forms and limits of historical knowledge. Despite this, they may have thought that a sufficient proficiency in substantive knowledge is a prerequisite for teaching historical thinking. Thus, what students consider sufficient substantive knowledge in our view determines their likelihood of implementing disciplinary history teaching. Students who seek to comprehensively cover historical topics and key events are less likely to adopt a disciplinary approach than students who are willing to limit the number of such topics and events and emphasise procedural knowledge in their teaching.

Our result, in other words, the classification of course participants into the four categories described above, conveys our views regarding the likelihood of implementing disciplinary teaching not only among the interviewed students but also among the rest of the course participants. An estimated 20% of our students (Group 1) will focus their teaching on second-order historical thinking concepts, in other words they use a discipline-heavy approach, whereas 40% of the students (Group 2) will teach some second-order concepts but have a strong emphasis on substantive knowledge, in other words they use a discipline-lite approach (about heavy and lite versions see Harris, 2021). The remaining 40% of the students (Groups 3 and 4), however, feel uncertain about their competence or see the discussion of substantive knowledge as their main job and thus are not likely to base their teaching on a disciplinary approach.

Our study shows that a history didactics course which was offered as part of initial teacher education changed the attitudes of the students towards the teaching of history. The majority of the

participants in our study accepted a disciplinary approach as the basis of their future work. These results differ considerably from the observation study by Yilmaz (2020), where American history teachers tended to neglect disciplinary history because they perceived themselves to be teachers dealing with the practical rather than the theoretical world. However, research has also highlighted that while student teachers may have a sophisticated understanding of the epistemology of the discipline of history, they may not have the skills to implement it in their own teaching (Gibson & Peck, 2020). The obvious risk is, therefore, that the future work of our research participants will lead them towards similar thinking as the teachers that participated in Yilmaz's study. This may happen especially if they receive no support from other teachers in disciplinary teaching. Thus, changing teachers' cognitive frames about history teaching and learning requires, in the words of Sears (2014, p. 20), "the long view of teacher education". In practice, this means not only the actual teacher education programme but also paying attention to teachers' learning experiences prior to entering teacher education, and ongoing in-service teaching and professional development.

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APPENDIX A. Interviewed students and their history teaching profiles

student (interview number)	length of interview	gender	age	course grade	likelihood of adopting a disciplinary approach to teaching ^a ; 5 = extremely likely, 1 = not at all likely	Teaching experience	Quotation from the student that reflects their history didactic thinking
Group 1. Student teachers who are confident that they will adopt a disciplinary approach to history teaching							
#91	19 min.	m	23	4	5	about a year	"I have been thinking about focusing more on historical thinking, discussing causality and so on. But this [course] really clarified it for me – and I have made huge progress."
#92	22 min.	f	31	4	5	several years	"I have thought that history teaching should focus more on historical thinking. But it's really difficult to maintain that idea clear in your mind when you're in the school world."
#74	26 min.	f	31	3	5	none	"The course provided a more solid foundation for my thinking."
#47	21 min.	f	23	4	5	some days	"The question is whether you need to have some substantive knowledge before you can implement those skills and disciplinary teaching."
Group 2. Student teachers who are enthusiastic about teaching disciplinary history but who lack experience (in disciplinary history)							
#49	18 min.	m	18	3	4	some days	"After completing this course, I think it's also important to teach the students to think."
#12	22 min.	f	18	2	4	none	"[The lectures] did not only talk about the importance of teaching historical thinking but also showed that it's possible."
#97	17 min.	m	31	4	4	some days	"We were shown how one textbook says one thing on a topic and another textbook says another thing, and historical research has actually said something completely different. It's quite eye-opening and you understand that source criticism applies to everything."
#102	17 min.	f	31	4	4	several years	"[History] is no longer one of the subjects I'm afraid of I guess."
#43	18 min.	m	23	4	3	none	"Eventually I was completely sold on these ideas."
#51	20 min.	f	23	3	3	some days	"I'm not sure if I'll adopt this approach, because in the back of my mind, my own experiences of history teaching are still affecting my thinking."
#68	19 min.	f		3	3	some days	"With all of the cases, you learned to see what was behind them."

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(continued)

student (interview number)	length of interview	gender	age	course grade	likelihood of adopting a disciplinary approach to teaching ^a ; 5 = extremely likely, 1 = not at all likely	Teaching experience	Quotation from the student that reflects their history didactic thinking
#33	23 min.	f	18–22 41 –50	5	3	several years	"I'm not necessarily proficient in the methods yet of how to encourage that kind of thinking."
Group 3. Student teachers who agree with the core message of the course but who are hesitant about disciplinary history							
#105	20 min.	f	18–22 4	4	2	one day	"The importance of historical thinking skills. I have understood ... that it should really be [taught] at the primary level already, which wasn't the case during my time at school."
#52	19 min.	f	23–30 3	3	2	some days	"This is fantastic."
#78	18 min.	f	31–40 5	5	2	some days	"This has introduced me to a completely new perspective."
#112	15 min.	f	31–40 4	4	2	several years	"History has never been my thing, so this was a really interesting approach to history."
Group 4. Student teachers who were inspired by document-based cases but who are sceptical towards disciplinary history							
#39	16 min.	f	23–30 5	5	1	some days	"It's easy to think theoretically about what I would do, but it won't necessarily work in the classroom."
#48	20 min.	f	31–40 5	5	1	one day	"I need to brush up on a lot of the basics before I become a teacher."
#81	19 min.	m	23–30 4	4	1	none	"I didn't really understand the content of the course before reading Jukka's book [...] maybe I still haven't fully understood it."
#88	28 min.	f	51–	3	1	several years	"I will implement a case like this at least twice a year."

^a Likelihood refers to Rantala's subjective assessment based on the research data regarding the likelihood that a student will implement disciplinary teaching in their work.

APPENDIX B. Questions concerning the semi-structured interview conducted at the end of the course

- 1) To what extent did the following influence your views about yourself as a future primary school teacher who will teach history? (Four-point Likert scale, in which 1 = not at all and 4 = a lot)
 - a. Lectures
 - b. Small group sessions
 - c. Practicum
 - d. Textbook
- 2) Did you regard the things discussed in the course as useful?
- 3) What did you especially like about them?
- 4) How could the course be improved in your opinion?
- 5) What aspect of the history didactics course had the strongest influence on your growth as a primary school teacher who will teach history?
- 6) The course discussed disciplinary history teaching. What are your views regarding it?
- 7) What reservations or doubts do you have regarding the implementation of disciplinary history teaching at the primary level?
- 8) Before the course started, you stated that the goal of your history teaching was (read student's responses from a separate file). Did the course change your views in any way and if so, how?
- 9) How competent do you currently feel as a history teacher at the primary level?
- 10) What aspects do you feel you need to improve on?

APPENDIX C. The questions of the semi-structured interview conducted seven months after the end of the course

1. What was your impression of the history didactics course? Discuss freely what comes to mind.

2. The course emphasised the teaching of historical thinking skills. In your view, what is the role of substantive knowledge in the teaching of historical thinking skills?
3. Evaluate the focus of your future teaching practice with the help of this picture.² Where would you position yourself? Why did you select that specific position?
4. I have anonymised your previous interview. I also anonymised the essays you wrote during the course and the pre-course assignment Rantala gave you. Based on those anonymised data, Rantala created student profiles. Here is your profile. Please evaluate on the Likert scale (1 = not at all, 2 = to some extent, 3 = relatively well, 4 = very well) the extent to which you think it corresponds to your views and attitudes towards history teaching.

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² The picture depicts a line that has been divided into five segments. The opposite ends of the line are "covering extensive historical topics and key events" (1) and "disciplinary approach" (5).

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