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Special Issue: Epistemic Cognition in History Education

GUEST EDITORS

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Overview

Epistemic Cognition and Measurement Issues

Epistemic Cognition of School Students

Epistemic Cognition of University Students

Epistemic Cognition of Historians and History Teachers

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Editorial: Epistemic Cognition in History Education

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BACKGROUND

This special issue arose out of the symposium "Epistemic Cognition in History—insights into structure and practice" that was held at the 2018 Annual Meeting of the American Educational Research Association (AERA) in New York, organized by the first and third guest editors. In addition, it was inspired by the work of the second guest editor, an associate editor of *Historical Encounters,* who recently published a handbook chapter about epistemic cognition and historical thinking (Mathis & Parkes, 2020). Adapting Hofer's (2016) domain-general understanding, we use the phrase "epistemic cognition in history" to refer broadly to individuals' beliefs, concepts, thinking, and reasoning about knowledge and knowing in the field of history.

Our special issue contributes to the growing body of over 20 studies about epistemic cognition in the field of history education that have been conducted in the last decade, since Maggioni and colleagues published their seminal works involving history teachers, historians, and school students (Maggioni, 2010; Maggioni et al., 2004, 2009; VanSledright & Maggioni, 2016). It seems somewhat surprising that history educators around the globe are engaged in studying the construct in such density at the current moment, given that epistemology is one of the oldest fields of philosophy. In fact, theorists of history such as Ricœur (1984) have linked reflections on historical and epistemic cognition to considerations made by Aristotle in antiquity. Since the

beginning of the nineteenth century, driven by discussions in the natural sciences (see Lorenz, 2011), historians and theorists of history discussed, for example, whether it is possible to (re)present the past as history in the form of narratives, or whether these forms of historical knowledge are objective or uncertain (e.g. Rüsen, 2020; White, 1973). In fact, answers to these questions still seem to be controversial (e.g. Lyon Macfie, 2010; Munslow, 2017). One reason could be that skepticism toward final truths and openness to new insights are considered essential characteristics of democratic epistemologies. This epistemological ambiguity—which is at work not only in history but elsewhere—might in fact be one cause of the current success of populism, as it stands at the heart of whether one assumes that (historical) knowledge is a matter of opinion, or can be justified with evidence and arguments (e.g. Moore et al., 2020). A search for educational ways to address the challenges of populism and fake news may also explain why history educators are currently interested in epistemic cognition.

An additional reason for the interest in epistemic cognition in history is much older. It had been pointed out by Shemilt (1983) that the focus on epistemology ("forms of knowledge") as opposed to the teaching of facts offered the hope that students would be enabled to "make appropriate sense of the past to the extent that they understand the logic, methods, and perspectives peculiar to the discipline" (p. 3). In line with this British approach, most Western history educators of the past four decades stressed that learning to think historically was more important than learning particular historical facts (e.g. Körber & Meyer-Hamme, 2015; van Boxtel & van Drie, 2018). Based on this assumption, they identified essential metahistorical concepts, for example "accounts" or "historical significance" (e.g. Lee & Ashby, 2000; Seixas, 2017), and historical thinking activities, such as "asking historical questions" or "contextualization" (e.g. VanSledright, 2011; Wineburg, 1991a). In this sense, history educators for a long time have sought to conceptualize historical thinking in epistemological terms, and to support it both inside and beyond schools.

Despite this long-term trend, research about the relations between the epistemic and historical cognition of school students and (prospective) history teachers, as well as about the role of epistemic cognition in history teaching, had not been conducted systematically until the beginning of the 21st century. The first insights into the epistemological development of children were found in the longitudinal studies of grade 2 to 8 students of the British CHATA project (1980s-1990s). They indicated that the development of school students' metahistorical concepts regarding "evidence" and "accounts" could be described as epistemic shifts from an objectivist stance (e.g. historical accounts are the same as the past; evidence as pictures of the past) to a contextualist one (e.g. accounts as (re)constructed past in accordance with criteria; evidence yielded from sources in a historical context). This research also stressed that school students' metahistorical concepts do not develop in a regular age-dependent sequence (Lee & Ashby, 2000; Lee & Shemilt, 2003).

A series of cognition-in-action studies found that primary and secondary school students used past texts (Afflerbach & VanSledright, 2001; Wineburg, 1991b), photographs or pictures (Foster et al., 1999; Lange, 2011), and historical accounts or textbooks (Martens, 2015; Paxton, 1999) as if they would provide neutral or objective information about the past. Historians, on the other hand, constructed evidence based on sources and accounts both in terms of their research questions and their function (e.g. the creators' intentions) for specific historical contexts. This seems to be one reason why students have difficulties in dealing with conflicting sources. Some work with student teachers of history has indicated that their struggle with historical reading and writing might also be explained by their naïve, objectivist epistemic views (Seixas, 1998; Yeager & Davisz, 1996). Practice-oriented studies that aimed to investigate ways to support historical thinking activities in class also indicated that epistemological problems of school students prevented them from learning how to construct plausible interpretations (e.g. VanSledright, 2002). While these studies stressed that epistemic aspects are of importance for the historical thinking of school students, historians, and history teachers, they didn't inform us how the epistemic aspects could be conceptualized, how they could be developed, and what roles they play in history teaching.

Inspired by work in educational psychology, Maggioni and colleagues addressed these questions. Based on the above-mentioned epistemic distinctions established in the CHATA project and the domain-general concepts of Kuhn, Weinstock and Cheney (2000), they constructed a framework of epistemic development from the copier (e.g. history as a copy of the past) to the borrower (e.g. people choose their preferred facts), to the criterialist stance (e.g. history as a process of inquiry). In a series of studies with history teachers, historians, and school students from the USA, they developed the "Beliefs about History Questionnaire" (BHQ). Applying statistical methods, they found that the instrument was able to differentiate two of the three intended stances (copier/borrower, criterialist) but showed rather low reliability (e.g. Maggioni, 2010; Maggioni et al., 2004). In a 2009 study with primary history teachers who participated in a professional development program, Maggioni et al. (2009) observed inconsistencies ("epistemic wobbling") in participants' epistemic shifts over the course of the program. This phenomenon was also observed in a sample of US college students who took part in an intervention study designed to address epistemic development (VanSledright & Reddy, 2014).

The study of Gottlieb and Wineburg (2012) indicated an explanation for the phenomenon of "epistemic wobbling". The authors asked, for example, religious and non-religious US historians to interpret religious sources. They found that religious historians switched between academic (e.g. plausibility) and religious beliefs (e.g. personal engagement) while non-religious historians did not. The authors interpreted this "epistemic switching" as a coordination between academic and religious criteria, in order to justify religious or historical interpretation (p. 111). This indicated that epistemic cognition in history is situated in context. Maggioni also used this line of reasoning to explain why she found no significant changes in the epistemic beliefs of US high school students who were taught by history teachers during a history course of one semester. Based on in-depth interviews with students and teachers, she concluded that while elaborated epistemic beliefs should be supported through history teaching, whenever historical thinking "activities are not situated within a learning experience in which disciplinary criteria are explicitly taught and discussed, individuals tend to rely on everyday criteria" (Maggioni, 2010, p. 299). These findings illustrated the challenges of investigating and supporting epistemic cognition in history.

Following Maggioni et al., some studies have adapted the BHQ to different national contexts, or have developed comparable instruments (e.g. Mierwald et al., 2017; Miguel-Revilla et al., 2017; Nitsche, 2017; Nokes, 2014). These studies similarly revealed ambiguous impacts of teacher training on (prospective) history teachers' epistemological beliefs (Namamba & Rao, 2016; Nitsche, 2019), difficulties in statistically proving epistemic stages or clear teaching effects, even when teaching strategies focused on epistemic development during quasi-experimental studies (e.g. Stoel, van Drie, et al., 2017). On this basis, Stoel and colleagues conducted a study with Dutch school students at the upper secondary level, and historians. Inspired by Hofer and Pintrich's (1997) dimensional distinction of epistemic beliefs ('nature of knowing', 'source of knowledge') and based on exploratory survey analyses, the authors suggested that epistemic beliefs in history could be differentiated between naïve and nuanced assumptions about knowing and knowledge. However, again the reliability of the measurement was rather low (Stoel, Logtenberg, et al., 2017).

In 2019, and against this background, we published the call for papers for this special issue. From our perspective, many central questions about epistemic cognition in history remained open. Theoretically, it was an open question whether the construct of epistemic cognition in history can be understood in developmental terms, should be described in terms of dimensions, or must be researched under the condition of its situatedness (Hofer, 2016). Methodologically, it was unclear whether quantitative survey analyzes can provide valid and reliable results for different age groups, or whether qualitative methods are more appropriate (Mason, 2016). Empirically, there was also a lack of sufficient information on how epistemic cognition can be developed in students in history classes, and during teacher education programs for prospective history teachers. The role of epistemic cognition in historical thinking and teaching also remained ill-defined (VanSledright & Maggioni, 2016).

The present issue

Although we are aware that this special issue does not resolve all of the above-mentioned research gaps, we believe that the present articles usefully address the questions in varying degrees. One paper gives an overview of the territory and discusses all the issues in greater depth. Two articles mainly concern methodological issues. Two papers involving school students touch on the connection between epistemic belief and metahistorical concepts. Two articles present analyses of the connection between epistemic beliefs and historical thinking aspects among university students. Finally, three articles provide insights into the epistemic cognition of history teachers and historians.

Gerhard Stoel, Albert Logtenberg, and Martin Nitsche present an overview of studies on epistemic beliefs conducted between 2015 and 2020. The authors indicate that researchers have conceptualized epistemic beliefs in history based on either developmental or dimensional frameworks, though most studies integrated developmental and dimensional approaches. Their review supports the assumption that sophisticated epistemic beliefs are related to aspects of historical thinking, while the relationship between naïve or subjectivist beliefs and historical thinking seems unclear. The authors also describe supportive principles and barriers for fostering nuanced epistemic beliefs in history education based on the studies reviewed. Discussing methodological advantages and disadvantages of prior studies, Stoel et al. conclude that future investigations should apply mixed-methods or triangulation designs.

Marcel Mierwald and Maximilian Junius address some methodological issues in the field. The authors give insights into challenges of epistemic measurement based on survey methodology. They analyze the cognitive validity of an adapted and German-speaking version of the "Beliefs about History Questionnaire". The authors present results of cognitive interviews with German school students at the upper secondary level who were asked to talk about their understanding of questionnaire items while answering the survey. Their findings indicated, for example, that misunderstandings of items were related to the complexity of applied terms, or confusing references to the school context. The study provides important information on how questionnaire items should be designed in the future to assess epistemic beliefs.

D. Kevin O'Neill, Sheryl Guloy, Fiona MacKellar, and Dale Martelli describe the theoretical underpinnings, design, and validation of the "Historical Account Differences Questionnaire" (HAD). They argue that beliefs about historical accounts are of importance because school students in multicultural societies should learn to handle the multiple perspectives presented in differing historical accounts. The authors aim to provide an instrument that helps history teachers assess their students' beliefs about historical accounts in order to inform lesson planning. Based on questionnaire data from 899 Canadian students from 8th grade through postsecondary studies, the authors argue for the construct validity of their survey based on differences in the beliefs of students at various levels of education and involvement with history as a discipline. O'Neill et al. offer a powerful tool for classroom assessment, but also make it clear that more research on the development of beliefs about historical accounts is needed.

Caitríona Ní Cassaithe, Fionnuala Waldron, and Therese Dooley illustrate reasons for the difficulties in developing epistemic beliefs based on a qualitative study with elementary school students. Their thematic analyses of interview data from Irish school students at the third and fourth grade levels indicate "bottlenecks" which hinder the development of primary students' epistemic beliefs in history. Children's assumptions about the term "history", their ideas about historical truth, or their understanding of historical accounts as fixed knowledge seem to be important factors that influence their epistemic shifts. However, the authors also provide evidence on how primary school students' epistemic development could be supported. Ní Cassaithe's et al. study provides important insights into the epistemic preconditions for elementary school students' history learning.

Diego Miguel-Revilla focuses on the epistemic beliefs and metahistorical concepts of 107 Spanish secondary school students. Analyzing qualitative data based on a task about the Spanish transition to democracy (1975-1982), the author indicates that only a few participants held

coherent epistemic beliefs, and most could be categorized as subjectivists. The author suggests that diverse conceptions regarding evidence and the aims of history as an academic discipline might explain this inconsistency. This study expands our knowledge regarding epistemic incoherence, by pointing to the role of metahistorical concepts.

Martin Nitsche and Monika Waldis present results of a study that investigated how prospective German Swiss history teachers' epistemological beliefs impact their narrative competence (i.e., analysis of sources and accounts; (re)construction of narratives). Applying a historical writing task, survey methodology (e.g. epistemological beliefs, situational interest), and statistical methods, the study indicated small effects of participants' epistemological beliefs on their narrative competence, while situational interest was found to be more influential. The study provides the first statistical evidence of the connection between prospective history teachers' epistemological beliefs and aspects of their historical thinking, while it also suggests that situational aspects (e.g. situational interest, writing topic) are of importance. The authors interpret their results in line with situational approaches to epistemic cognition. They conclude that future studies should investigate epistemological beliefs in relation to specific tasks and historical content.

Kristin Sendur, Carla van Boxtel, and Jannet van Drie address the relationship between epistemic beliefs, second-order concepts, and historical reasoning based on a sample of Turkish undergraduate students who were asked to answer a questionnaire on epistemic beliefs and complete a historical reasoning task. In addition, some participants took part in in-depth interviews to make their tacit beliefs more visible. The authors show that participants' performance in source-based argumentative writing and their epistemic beliefs regarding historical methodology are correlated significantly. They also demonstrate relationships between students' interview answers and their historical reasoning, though this relationship is less strong. This study shows that university students' epistemic beliefs and historical reasoning seem to be related, and that a mixed-method approach could be fruitful to investigate this relationship.

Mikko Kainulainen, Marjaana Puurtinen, and Clark A. Chinn present an interview-based study about the aims that Finnish academic historians address in their research projects and beyond. According to the AIR model, which conceptualizes epistemic aims and values, ideals, and reliable processes for producing epistemic products, the authors show that historians mention several aims, which vary considerably according to the different kinds of investigations the historians are involved in. Moreover, historians' aims seem to extend beyond knowing and understanding past(s) to publishing and disseminating findings. Their aims are also connected to the system or community level to promote historical research. The authors of this study stress that the epistemic practices of historians are strongly related to broader contexts and specific situations, which are made visible in their epistemic aims. The study suggests that it is fruitful to investigate the epistemic aims that individuals pursue in different contexts.

Henrik Åström Elmersjö and Paul Zanazanian present a study with Canadian and Swedish upper secondary school history teachers. They examine participants' beliefs about the relationship between the past and history, and explore their reflexiveness regarding epistemic issues and their relation to history teaching. The authors used a mixed-methods approach, and present analyzes from teachers' survey data and interviews. A cross-cultural comparison indicates that participants from each country hold different assumptions about historical knowledge, its construction, and implications for their practice. While participants from both countries seem to demonstrate epistemic wobbling between objectivist and critical views about history, Swedish teachers tend to make a clearer distinction between the past and history than their Canadian counterparts. The authors suggest that differences regarding the political nature of history teaching between the two countries might explain the results (e.g. nation-building in Canada vs. method-orientation in Sweden). This study illustrates how epistemic cognition in history is embedded in socio-cultural contexts. Thus, more cross-cultural research in this area may bear fruit in the future.

In the last article of this issue, Marjolein Wilke, Fien Depaepe and Karel Van Nieuwenhuyse elaborate the relationship between the epistemological beliefs, the understanding of historical

thinking and the instructional practice of Belgian history teachers from Flanders. Based on data from closed- and open-ended online questionnaire items regarding epistemology and historical thinking, as well as interviews about teaching material, the authors show that most teachers acknowledge the interpretive nature of history, while they do not include this view in their concepts of historical thinking. Moreover, additional beliefs about students or contextual school factors seem to be more important for teachers' reflexion about teaching material. Once again, this research indicates that we need more in-action-research to detect the relations between teachers' epistemic cognition, their concepts about historical thinking or teaching, and contextual aspects in history classes.

In summary, this special issue demonstrates a combination of theoretical and empirical approaches, showing some common ground and shared conclusions. For the refinement of theory, it seems fruitful for future research to combine existing approaches (e.g. developmental and situational). For example, it seems that not only is the development and promotion of students' and teachers' epistemic beliefs dependent on contextual situatedness, but so too are the epistemic practices of historians in setting goals, or those of teachers in reflecting on teaching materials. Presumably our research efforts are also contextually different. Methodologically, it became clear that it is challenging to develop valid questionnaires to assess epistemological beliefs, and it seems fruitful to apply a wider variety of methods here as well. Moreover, additional effort is needed to provide accessible tools for classroom assessment, such as the HAD questionnaire. Empirically, the present studies illustrate that epistemic cognition, metahistorical concepts, and historical thinking are connected. What remains open is whether and how the connections can be demonstrated for learners of all ages, how the constructs can be fostered in different institutional as well as sociocultural contexts, and what stages or qualities of epistemic beliefs and cognition can realistically be achieved in learners at different educational levels. We hope that this special issue represents not an end point to research on epistemic cognition in the field of history education, but rather that it provides stimuli to further explore the open questions.

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Researching Epistemic Beliefs in History Education: A Review

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ABSTRACT

Departing from the pioneering work of VanSledright and Maggioni (2016), this article revisits questions about epistemic beliefs and the role these beliefs play in the teaching and learning of history. Eighteen recent studies on epistemic beliefs of history teachers (*n*=7) and students (*n*=11) are reviewed, guided by questions regarding conceptualization, relationships with other constructs (e.g., historical reasoning and teaching beliefs), expression of beliefs in teachers and students, differences in age and educational level, suggestions for pedagogical principles, and contextual factors that inhibit or support history teachers in "putting their beliefs into practice". Results reveal that epistemic beliefs are conceptualized based on developmental and dimensional frameworks, although most recent studies integrated developmental and dimensional approaches. Important findings regarding students and teachers are highlighted, resulting in implications for research and practice.

KEYWORDS

Epistemic beliefs, historical reasoning, history education, pedagogical principles, literature review

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Introduction

In 2019, biologists published a study on the relationship between the infamous "Habsburg jaw" and inbreeding. In the study, the researchers analyzed publicly available online portraits of members of the Habsburg dynasty and correlated facial deformities with the degree of relatedness (Vilas et al., 2019). Commenting on the research on Dutch radio, a historian observed that the biologists had treated the painted portraits as representative "photographs". However, she argued that paintings from the Habsburg royal family were not always truthful. In fact, Habsburg rulers were known to use their trademark jaw as propaganda or to serve as proof of their legitimacy. The historian also pointed out that the paintings can only be investigated within their historical context and that claims in (art-)history are always interpretative, although the discipline does provide researchers with specific investigative methods. In short, she concluded that works of art cannot simply be used as sources to draw "objective" evidence from, but must instead be studied according to domain-specific criteria, methods, and understandings.

This case exemplifies the ways in which epistemic activities differ across domains and how these differences impact the claims researchers make and the investigative processes they undertake. It has often been suggested that these activities and epistemic processes are guided by certain underlying epistemic ideas about a specific discipline.[1] For this reason, over the past twenty years educational research into history education has sought to conceptualize and assess these beliefs. However, because of the philosophical and often implicit nature of these beliefs, this has been a challenging task. A review study conducted by VanSledright and Maggioni (2016) showed that studies that measured epistemic beliefs in history education were still scarce and had yielded mostly tentative results. Moreover, their review raised questions regarding conceptualization and the predictive value of epistemic beliefs. Since their review, many new studies have been conducted on history students' and teachers' beliefs, based on different theoretical frameworks. In light of this upsurge in related research, in this article, we follow up on the review study of VanSledright and Maggioni (2016). Our aim is to provide an overview of the current state of research on epistemic beliefs in history education and to explore how different studies conceptualized these beliefs. In the discussion, we will reflect on the theorical and methodological questions that the review raised and suggest possible avenues for future research.

Background of the study

In 2016, VanSledright and Maggioni provided an overview of studies on epistemic beliefs in history education. In the first part of their review, authors showed that, prior to 2016, studies in history education had primarily focused on qualitative explorations of how students approached epistemic tasks in history, such as reasoning with discrepant accounts or interpretating contradictory sources (e.g., Lee & Shemilt, 2003; Tabak et al., 2010). In line with studies in other domains, this performance was often referred to as "epistemic cognition". In their review, VanSledright and Maggioni showed that this research had provided important insights into students' reasoning, and, from this, researchers had theorized about underlying (naïve and nuanced) epistemic beliefs. In the second part of the review, the authors discussed how historians and educational psychologists conceptualized epistemic beliefs (e.g., King & Kitchener, 2002; Kuhn & Weinstock, 2002; Lee & Shemilt, 2003) and focused specifically on the domain-specific framework of epistemic beliefs developed by Maggioni and colleagues, which combined and elaborated earlier frameworks. This framework is still of particular importance to the current review because it influenced many of the recent studies. Therefore, we will describe it here.

Maggioni's framework (Maggioni, 2010; Maggioni et al., 2004; Maggioni, et al., 2009) categorized epistemic beliefs according to three levels or "stances": (a) a copier stance, (b) a borrower stance, and (c) a criterialist stance. Each stance brought together a coherent set of

[1] In this review, we use the terms epistemic beliefs and epistemic ideas to refer to beliefs about (historical) knowledge. Several studies also use the term 'epistemological beliefs'.

beliefs about the certainty of historical knowledge, the role of the knower, and the sources of historical knowledge. For instance, a student or teacher with a copier stance would overemphasize objectivity and believe that the aim of history is to provide an objective "copy" of the past. In this stance, students or teachers would regard historical knowledge as fixed, historical sources as objective carriers of information (unless they are biased and useless), and historical methods as procedures for establishing "the truth" and writing the one "true story". In contrast, students or teachers with a borrower stance would regard history as "opinion". They understand the subjective nature of historical knowledge and historical sources. However, they would not (yet) understand the disciplinary criteria on which the validity of these claims could be based. As a consequence, these students tend to "borrow" from sources whatever fitted their argument. Finally, in the criterialist stance, a student or teacher would be able to "coordinate the objective and subjective dimensions of knowledge and knowing" (Kuhn & Weinstock, 2002, p. 310). They appreciate that historical knowledge is interpretative and temporary (questions are posed within a temporal and geographical context), and understand that historical sources are not subjective or objective as such, but can yield reliable evidence depending on the questions we ask. Disciplinary criteria (such as sourcing, corroboration, and contextualization) allow one to differentiate between valid and invalid interpretations.

In the third part of the review, VanSledright and Maggioni discussed outcomes of studies conducted with a questionnaire that was based on this framework: the "Beliefs about History Questionnaire" (BHQ) (Maggioni, 2010). Studies that had used the BHQ with (prospective) history teachers and students, had found that it was difficult to classify students or teachers within a specific epistemic stance (e.g., Maggioni, 2010; Maggioni et al., 2010; VanSledright & Reddy, 2014). Participants in the studies often reported agreement (or disagreement) with contradictory epistemic ideas. Several studies had focused on developing teachers' and students' understanding of the interpretative nature of history through professional development or inquiry tasks. These studies found that these learning environments indeed stimulated changes in beliefs, although these changes were often idiosyncratic: a phenomenon that the authors called "epistemic wobbling". Qualitative interviews showed that this "wobbling" was caused by difficulties in coordinating subjective and objective aspects of history (VanSledright & Maggioni, 2016, p. 140). This raised the question of whether these ideas about the nature of historical knowledge and knowing might be too abstract, tentative, and implicit, especially with younger students, to be assessed through quantitative methods. Furthermore, Van Sledright and Maggioni pointed to the fact that studies had not yet explored the relationships between epistemic beliefs on the one side, and epistemic performance and historical reasoning on the other (2016, p. 143). Thus, the question remained, as Mierwald et al. (2016) asked in the title of a conference paper: "Do they affect it at all?"

Research goal and research questions

As discussed above, VanSledright and Maggioni found that most studies prior to 2016 had focused on epistemic cognition from which underlying beliefs were inferred. The studies of Maggioni and colleagues were the first to define and quantitatively assess epistemic beliefs in history, and explore how these ideas impacted learning and understanding in history. However, questions remained about the feasibility of evaluating abstract epistemic beliefs and about the relationships between these beliefs and task performance. Furthermore, more knowledge was needed about effective pedagogies to foster nuanced epistemic beliefs. Since 2016, many new studies have been conducted that shed light on these conceptual, methodological, and theoretical questions. In the current article we discuss research on epistemic beliefs in history since 2016 and investigate the following four questions:

1. How have different studies conceptualized and operationalized epistemic beliefs among students and (prospective) history teachers, and what are the differences and similarities between these approaches?

2. What relationships do studies find between epistemic beliefs in history of students and teachers and other constructs (e.g., other domains and topics, historical reasoning ability, beliefs about teaching and learning)?
3. Which epistemic beliefs of participants were reported in the studies and how are they related to participants' age or educational background?
4. Which pedagogical principles do studies identify as fostering nuanced epistemic beliefs on history?

Method

Reviewed studies were selected using four criteria. First, because the study departed from the review conducted by VanSledright and Maggioni (2016), we limited our search to studies published between 2015 and (the end of) 2020. Second, we focused on studies that *conceptualized* and *measured* epistemic beliefs in *history* among students or teachers. Third, we included studies written in English, as well as in German. Finally, the search was limited to peer-reviewed publications; if an author had not published an English article, we referred to the accepted (peer-reviewed) PhD thesis.

Within these limitations, a search was conducted through two methods: a non-systematic (*snowballing* and *citation search*) review and a systematic search [ERIC and PsycInfo-database; March 8, 2021]. The search was divided into four categories: epistemic beliefs, history (education), research methodology, and educational context. Examples of keywords were *epistemology/ or historiography/ or historical interpretation/ or epistemolog*.ti,ab.* and *history/ or history instruction/ or (history or historical or historian*).ti,ab*. Our resulting sample consisted of 22 studies. In consultation between the three authors, four studies were rejected that (a) did not conceptualize epistemic ideas, or (b) used a completely different paradigm (e.g., equating epistemic beliefs of teachers with beliefs on learning and teaching). In our final sample, 18 studies were included: 11 studies focused on students' (primary education to university) epistemic beliefs and 7 studies focused on history teachers' epistemic beliefs.

Based on the formulated questions, the first author summarized the studies and constructed a table (Table 1), providing an overview of the analysis. Differences in classification were discussed between the three authors in regular meetings until consensus was reached. The analysis focused on: (a) conceptualization, (b) operationalization and assessment, (c) participants, (d) main findings, and (e) implications for practice.

Results

Conceptualizing epistemic beliefs in history

The reviewed studies conceptualized epistemic beliefs in different ways, although two main frameworks could be discerned: (a) a "developmental" framework—of which the aforementioned framework of Maggioni and colleagues is a prominent example—and (b) a "dimensional" framework, in which researchers define "types" of ideas (or dimensions) that underlie epistemic thinking in history (e.g., ideas about "certainty of knowledge", "justification of knowledge", or "source integration"). Table 2 shows the different dimensions that studies defined. However, as will be shown, these frameworks did not function as two separate paradigms, and in practice many studies combined developmental and dimensional aspects in their conceptualization, as well as in their analysis. In this section, we compare and contrast how studies conceptualized epistemic beliefs

TABLE 1. Overview of studies investigating epistemic beliefs since 2015

Studies	**Participants**				**Approaches**		**Method**		**Instrument**
	Students		Teachers		*Dev.*	*Dim.*	*Qual.*	*Quant.*	
	Ed. level	*N*	*Ed. Level*	*N*					
Namamba & Rao (2016)			Sec/E	132	✓			✓	BHQ
Voet & de Wever (2016)			Sec/E	22	✓		✓		Inferred
Wansink, Akkerman, & Wubbels (2016)			Sec/P	13		(✓)	✓		Inferred
Wansink, Akkerman, Vermunt, Haenen, & Wubbels (2017)			Sec/P	48		(✓)	✓		Inferred
Nitsche (2019)			Sec/P	177	✓	✓	✓	✓	Other
Sakki & Pirttilä-Backman (2019)			Sec/E	633		(✓)		✓	Other
Miguel-Revilla, Carril-Merino, & Sánchez-Agustí (2020)			Pri/P & Sec/P	430	✓			✓	BHQ
Barzilai & Weinstock (2015)	Uni	481			✓	✓		✓	ETA
Stoel, Logtenberg, Wansink, Huijgen, Van Drie, & Van Boxtel (2017)	11th PU/HG	95				✓		✓	Other
Stoel, Van Drie, & Van Boxtel (2017)	11th PU	922			✓			✓	BHQ
Thomm, Barzilai, & Bromme (2017)	Uni	184			✓	✓		✓	ETA
Iordanou, Muis, & Kendeou (2019)	6th–8th	47			✓			✓	Livian
	Uni	24							
Mierwald (2020)	11th–12th PU	161	Sec/P	224	✓			✓	BHQ
Barzilai, Thomm, & Shlomi-Elooz (2020)	Uni	104 & 113			✓	✓		✓	ETA
Iordanou, Kendeou, & Zembylas (2020)	Uni	39			✓			✓	Livian
Wiley, Griffin, Steffens, & Britt (2020)	Uni	553 & 151				✓		✓	Other
	6th–8th	345							
	10th–11th	130							
Ioannou & Iordanou (2020))	7th	79			✓		✓	✓	Livian
Barzilai, Mor-Hagani, Zohar, Shlomi-Elooz, & Ben-Yishai (2020)	9th	88						✓	Other

Notes:

✓ = main operationalization
(✓)= operationalization implicit
✓ = developmental framework with underlying dimensions defined (Table 2)

Students: Uni = university, PU = pre-university, HG = higher general education.
Teachers: Pri = primary, Sec = secondary teachers; E = experienced, P = prospective.

Grades are counted from 1 to 12 following the US-system: grade 1 students are 6-7 years old, …, grade 12 students are 17-18 years old.
Students with university students range between M_{age}=22 years old and M_{age}=28 years old.

Instruments: *BHQ* = Beliefs about History Questionnaire (Maggioni, 2010); *ETA* = Epistemic Thinking Assessment (Barzilai and Weinstock, 2015);
Livian = original assessment based on Livian War (Kuhn et al., 2008)

TABLE 2: Dimensions of Epistemic Beliefs

Dimensions	**Barzilai and Weinstock (2015)**	**Nitsche (2019)**	**Stoel, Logtenberg et al. (2017)**	**Wiley et al. (2020)**
Nature of knowledge - *truth is attainable* - *knowledge is certain / uncertain* - *one right account / multiple accounts or perspectives*	- right answer - certainty of knowledge - attainability of truth	- structure of knowledge - certainty of knowledge - application of knowledge	- nature of knowledge–objective	- simplicity / certainty
Sources of knowledge - *in/outside the self* - *right or wrong facts / interpretation (theory - data coordination)*	- source of knowledge - reliable explanation - nature of knowledge	- concept of history - origin of knowledge - justification for knowing	- nature of knowing–naïve (objective)	- integration
Methods (critical thinking) - *focus on criteria for evaluating accounts (e.g., sourcing)*	- evaluate explanations - judge accounts		- nature of knowing–nuanced (criteria)	

Note: the studies of Barzilai and Weinstock (2015) and Nitsche (2019) develop items connected to the objectivist, subjectivist and criterialist perspective for each dimension they define. The results are primarily analyzed on the level of perspectives. The studies of Stoel, Logtenberg et al. (2017) and Wiley et al. (2020) operationalize three or two scales. Results are primarily analyzed on the level of dimensions.

As Table 1 shows, most recent studies in history education departed from a developmental framework, building on the domain-general models of King and Kitchener (2002) and Kuhn et al. (2000). Several studies in this review adopted the "stances" framework of Maggioni and colleagues, and differentiated between a "copier", a "borrower" and a "criterialist" stance (Mierwald, 2020; Miguel-Revilla et al., 2020; Namamba & Rao, 2016; Stoel, Van Drie, & Van Boxtel, 2017; Voet & De Wever, 2016). Other studies were based on a model of Barzilai and Weinstock (2015) that differentiates between an "absolutist", a "multiplist" and an "evaluativist" perspective (Barzilai, Thomm, & Shlomi-Elooz, 2020; Thomm et al., 2017). Based on this model, Barzilai and Weinstock designed the "Epistemic Thinking Assessment" (ETA). A differentiation between "absolutist", "multiplist", and "evaluativist" perspectives also underpinned the conceptualization of Iordanou and colleagues (Ioannou & Iordanou, 2020; Iordanou et al., 2019; Iordanou et al., 2020). Although these models use different words to describe coherent "sets" of epistemic ideas, the three "levels" defined are comparable.[2]

Table 1 also shows two studies that departed from a dimensional framework (Stoel, Logtenberg et al., 2017; Wiley et al., 2020). This framework can be traced back to the domain-general work of Schommer (1990). Instead of conceptualizing coherent levels, these studies defined underlying dimensions of epistemic thinking. A dimensional framework provides flexibility in the amount and type of dimensions distinguished (see Table 2 below). For instance, Stoel, Logtenberg et al. (2017) defined two dimensions connected to the objective nature of historical knowledge and the sources of knowledge, and one dimension connected to disciplinary criteria and inquiry. Wiley et al. (2020) defined one scale connected to the certainty and simplicity of causal explanations in history and one scale connected to the importance of integrating information from multiple sources. While developmental research assumes that epistemic development occurs in stages and aims to determine which perspective a learner predominantly holds, dimensional studies emphasize that these beliefs develop at different speeds on different dimensions, and that learners might increase their understanding in one dimension, while—temporarily—relapsing on another.

Although the studies in this review departed from various frameworks, many of them integrated dimensional and developmental approaches. For instance, Barzilai and Weinstock (2015) conceptualized epistemic perspectives (e.g., "absolutist", "multiplist", or "evaluativist") based on multiple underlying dimensions of epistemic thinking (see Table 2 below). In the ETA, multiple statements for each dimension were constructed that could be connected to the absolutist, multiplist, or evaluativist perspective. Nitsche (2019) used a similar combination of a developmental and a dimensional approach. His study conceptualized underlying dimensions in relation to Maggioni's stances. In their conclusion, Stoel, Logtenberg et al. (2017) interpreted students' scores on the three epistemic dimensions against a developmental background. They argued that agreement with the scales on objectivity might reflect an objectivist perspective, whereas a strong rejection of these scales might indicate more subjectivist ideas. In addition, a strong agreement with disciplinary criteria for inquiry in combination with a moderate rejection of objectivity might represent a criterialist perspective.

Barzilai and colleagues (2015, 2017, 2020) and Iordanou and colleagues (2019, 2020) contributed to the approaches for measuring epistemic beliefs by departing from the premise that epistemic ideas are often implicit and tentative in nature. Consequently, they stressed the importance of using a concrete (historical) context to elicit epistemic reflection, or what Barzilai and Weinstock call "theory-in-action" (2015, p. 142). These studies utilized a small task in which two conflicting accounts of a fictional war were presented to students ("the Livia problem") (Kuhn & Weinstock, 2002). Barzilai and colleagues used this task as a point of reflection before collecting responses on the ETA. Using a similar framework, Iordanou and colleagues asked participants two Yes/No-questions in response to the conflicting accounts: (1) "Can one historian be more right

[2] Note on terminology for studies based on a developmental framework: this review uses the terms "objectivist", "subjectivist", and "criterialist" when discussing epistemic perspectives (or stances) in general. When specific studies are discussed, the terms of those studies are used: (a) copier / absolutist (objectivist), (b) borrower / multiplist (subjectivist), (c) criterialist / evaluativist (criterialist).

than the other?" and (2) "Could anyone ever be certain about what happened in the Fifth Livia War?" Based on their answers and subsequent elaborations, students were classified as absolutist (a "Yes" on both questions); multiplist (a "No" on both questions); or evaluativist (a "Yes" on the first question and a "No" on the second question).

An interesting finding of this review is that almost all quantitative studies that used a developmental framework did not classify students or teachers within a specific epistemic perspective. Instead, these studies analyzed results in a more relative manner, presenting mean scores on the three epistemic positions and exploring differences between groups or between pre- and post-tests (e.g., Barzilai & Weinstock, 2015; Barzilai, Thomm, & Shlomi-Elooz, 2020; Thomm et al., 2017; Miguel-Revilla et al., 2021; Mierwald, 2020; Namamba & Rao, 2016; Nitsche, 2019; Stoel, Van Drie, & Van Boxtel, 2017). Only the study of Voet and De Wever (2016) and the studies of Iordanou and colleagues categorized teachers and students within one epistemic stance. However, in Voet and De Wever's (2016) study this classification was based on the analysis of qualitative data (interviews), meaning that beliefs were inferred from teachers' statements, while in Iordanou and colleagues' research the classification was partly based on the qualitative arguments students provided for their choices.

The role of epistemic beliefs in teaching and learning history: Empirical findings with students

In this section, we discuss results from eleven studies conducted with history students (see Table 1). In line with our research questions. We explore findings related to the domain-specificity of epistemic beliefs, relationships found with historical reasoning, expression of epistemic beliefs, development over time and educational level, and pedagogical approaches that might foster epistemic ideas.

Epistemic beliefs, domain-general, domain-specific, or topic-specific?

Research on epistemic cognition has indicated that students' epistemic performance differs across disciplines and even across topics within a discipline (Muis et al., 2006). However, it is unclear to what extent this also applies to students' underlying epistemic beliefs. Two studies conducted by Barzilai and colleagues provided empirical support for the idea that epistemic beliefs may have domain-general aspects, but that they "emerge in multidimensional forms when people engage in specific knowledge claims and information sources" (Barzilai & Weinstock, 2015, p. 142). Researchers presented 573 students (M_{age}=28 years) from multiple Israeli universities with two conflicting-account tasks (in biology and in history) and administered the ETA. Factor analysis showed that not only the values attributed to the three perspectives, but also the underlying structure of the questionnaire, differed between the two disciplines. In history, students endorsed multiplism significantly more and absolutism significantly less compared to biology. Furthermore, in the history scenario multiplist items that focused on the "sources of knowledge" were separated from items that focused on the "certainty of knowledge", whereas in biology these dimensions constituted one factor. In another study, Thomm et al. (2017) found that students (M_{age}=27 years) tended to explain account differences in history by focusing on "researcher's personal motivations" (e.g., worldviews and political interests), whereas in biology the focus was more on differences in research procedures and researchers' specializations. From these studies, it was concluded that students perceived historical knowledge as more subjective and open to interpretation than biological knowledge. In line with these findings, a study of Iordanou et al. (2019) concluded that students were also more inclined to make statements related to the credibility of evidence in history than they were in science. In a study with 61 young adults divided over two age groups (M_{age}=12-14 years, n=47 and M_{age}=22 years, n=24) researchers found that students engaged in more high-level epistemic processing when reasoning about conflicting accounts in history.

The above findings support the conclusion that students' agreement with specific epistemic ideas differs across domains. A subsequent question might be how topic-sensitive these beliefs

are within domains? The impact of topic knowledge has been studied specifically in relation to "sensitive topics", in which students might favor one account over another. For instance, a study with 104 university students in Israel (M_{age}=25 years) (Barzilai, Thomm, & Shlomi-Elooz, 2020) found that students evaluated the reliability of claims and the trustworthiness of sources in a fictitious history scenario with two conflicting accounts (Livian War) differently to how they evaluated the "real" historical scenario it was based on (Yom Kippur). In the Yom Kippur scenario, students judged the so-called "my-side account" (written from a perspective that agrees with students' prior knowledge) to be significantly more reliable and trustworthy, whereas in the Livian War scenario no differences in judgment of both accounts were found. However, topic familiarity did not influence students' underlying epistemic perspectives.

In conclusion, the above-described studies suggest that although the expression of epistemic beliefs differs between disciplines (e.g., history and biology), these beliefs are not directly influenced by topic knowledge.

Relationship between epistemic beliefs and historical reasoning

Several studies theorized about the relationship between epistemic beliefs and metacognition—they suggested that these beliefs influence the quality of students' historical reasoning and the strategies they deploy (e.g., Barzilai & Weinstock, 2015). An important hypothesis in several reviewed studies was that more nuanced epistemic beliefs lead to more thorough epistemic processing of reasoning tasks. In a think-aloud study with 39 Greek-Cypriot young adults (M_{age}=24 years), Iordanou, Kendeou, and Zembylas (2020) found that epistemic perspectives affected the way students processed a "my-side" and an "other-side" account of the war between Greek- and Turkish-Cypriot (1974). Evaluativist students (n=9) engaged in more epistemic processing than other students, but only when reading the "other-side" account. However, this processing was of limited quality and no criteria were formulated ("I disagree with this"). In line with Barzilai, Thomm, and Shlomi-Elooz (2020) prior knowledge appeared to mediate this processing; that is, accounts that were consistent with prior knowledge and beliefs were processed more superficially. Iordanou et al. (2020) also found that students with an evaluativist perspective more often included both accounts in their summaries, whereas absolutist and multiplist students only included the my-side account. These findings were corroborated by another study (Iordanou et al., 2019), in which it was shown that students with an evaluativist perspective produced more epistemic judgments about the credibility of evidence. However, in this study it was also found that the quality and quantity of these judgments were low, and students were predominantly categorized as absolutists. Meanwhile, a study with primary students (M_{age}=12 years) by Ioannou and Iordanou (2020) found that an evaluativist perspective was positively related to self-efficacy, self-regulation, and use of cognitive strategies in the MSLQ-questionnaire (Pintrich & De Groot, 1990). Furthermore, this study found that students with an evaluativist perspective engaged in more deep-level learning strategies when reading two conflicting accounts and scored higher on text comprehension. To conclude, these studies all indicated that epistemic beliefs (more specifically an evaluativist perspective) influenced the epistemic processes and learning outcomes of students.

In addition, the dimensional study of Wiley et al. (2020) focused on the relationship between epistemic beliefs and learning outcomes. In their study with 151 Advanced Placement (AP) and non-AP college students (M_{age}=18-20 years), students wrote an explanatory essay based on multiple sources, and were administered an epistemic questionnaire. The questionnaire was tailored towards causal reasoning and assessed (a) beliefs about simplicity/certainty of causal explanations and (b) beliefs about the value of integrating information across sources. Researchers theorized that epistemic beliefs would influence students' task- and activity-model, and therewith the quality of students' essays. After correcting the outcomes for general ability scores, the authors concluded that both epistemic belief-scales uniquely predicted the number of causes and contextual factors used in the essays. The integration scale also predicted explicit comparison between sources. Researchers concluded that epistemic beliefs indeed impacted cognition and learning outcomes through the task- and activity-model that students built.

Furthermore, the study provided support for the idea that epistemic beliefs can be fostered by education (i.e., AP-students had more experience with inquiry in history and scored higher on epistemic beliefs even after correcting for general ability). Finally, the study suggested that defining epistemic beliefs in line with specific aspects of historical reasoning (such as causality) might be a fruitful development, because it aligns epistemic beliefs with the reasoning goals embedded in the task.

Relationship between epistemic beliefs and students' interest in history

Four studies related epistemic beliefs to students' interest in history. The studies of Stoel, Van Drie, and Van Boxtel (2017) and Mierwald (2020), both carried out with pre-university students (M_{age}=17 years in both studies), found a positive correlation between the agreement with items belonging to the *criterialist* stance and individual interest in history (Pearson's r=.39 and .31 respectively). Stoel, Logtenberg et al. (2017), in their study with 922 11th and 12th grade exam students (M_{age}=17 and 18 years), reported a similar positive relationship between the value attributed to *methodological criteria* and interest. Furthermore, in Stoel, Van Drie, and Van Boxtel's (2017) study, the correlation between interest and criterialist ideas even increased (Pearson's r=.66) after a lesson unit that focused (among other things) on epistemic reflection. This finding suggested that addressing epistemic questions in the classroom might foster interest. Finally, Ioannou and Iordanou (2020) found a positive relationship between an evaluativist perspective and the value attributed to the "intrinsic value"-scale in the *MSLQ* (Pintrich & De Groot, 1990). In line with the previous section, correlations between interest and beliefs are only found with the more nuanced (evaluativist / criterialist) epistemic beliefs.

Epistemic beliefs: what ideas do students hold and how do these ideas develop?

In order to compare the results of different studies, we standardized the outcomes of each study (Table 3 below). To do so, we categorized the scales according to the three epistemic perspectives (objectivist, subjectivist, and criterialist). For the sake of comparison, the two objective dimensions of Stoel, Logtenberg et al. (2017) and the simplicity/certainty dimension of Wiley et al. (2020) were categorized under the objectivist perspective. This was done in line with theoretical underpinnings of these dimensions that include statements regarding historical knowledge as fixed, and historical sources as objective copies of the past. The dimensions of "methodological criteria" (Stoel, Logtenberg et al., 2017) and "integration" (Wiley et al., 2020) were categorized under the criterialist perspective, again in line with theoretical underpinnings of these dimensions that focus on the value attributed to disciplinary inquiry and integrating information from multiple sources. Subsequently, we converted the outcomes of different studies into proportions by dividing the means and standard deviations with the length of the scales they were measured with (ranging from 4 to 10).

As Table 3 shows, all studies found that students valued criterialist ideas, with scores ranging between 0.61 and 0.82. The ETA yielded a somewhat lower score on this perspective than the BHQ and the "dimensional" studies. Furthermore, studies found that students moderately agreed with ideas about objectivity (e.g., Mierwald, 2020; Stoel, Logtenberg et al., 2017), with scores ranging between 0.57 and 0.70 in the studies conducted with the BHQ and the ETA, as well as in the study of Stoel, Logtenberg et al. (2017). Finally, all studies that included a subjectivist perspective found that this perspective yielded the lowest scores (ranging between 0.38 and 0.53).

Meanwhile, studies that used the Livian War scenario consistently concluded that the absolutist perspective was valued higher than the evaluativist perspective (Barzilai & Weinstock, 2015; Barzilai, Thomm, & Shlomi-Elooz, 2020, Thomm et al., 2017; Ioannou & Iordanou, 2016; Iordanou et al., 2019, 2020). Consequently, the studies of Iordanou and colleagues that classified students within one perspective found a large proportion of absolutists (ranging from 56% to 69%). In contrast, studies conducted with the BHQ found the highest mean scores on the criterialist stance.

Theory suggests that epistemic beliefs develop over time and differ between educational levels. However, only a few studies with students have compared different age groups, or students from different educational levels. What is more, studies with the ETA were only conducted with university students, whereas studies with the BHQ were conducted with 11th grade pre-university students (in the Netherlands and Germany). Consequently, no clear conclusions can be drawn on this question and therefore more research is needed. The study of Stoel, Logtenberg et al. (2017) found that 11th grade pre-university students were significantly more critical towards objectivism and valued methodological criteria significantly higher than 10th grade students enrolled in higher general education, although the differences were small and may also be related to general ability or extended courses in history. The study of Iordanou et al. (2019) showed that age was related to making high-level epistemic statements about the relationship between claims and evidence. However, this study failed to identify a relationship between age and epistemic perspectives. Wiley et al. (2020) found a significant age-related difference between middle school students and high school students on both epistemic belief scales (simplicity/certainty and integration); but no clear differences were found between high school students and university students. In a sub-study with 345 middle school students (11 to 14 years) and 130 AP and Non-AP high school students (15 to 17 years) the researchers found that epistemic beliefs only predicted results on the document-based question for high school students and not for middle school students. Wiley et al. (2020) suggested that assessing epistemic beliefs with the youngest age groups may be problematic, because these ideas might not have been formed and might be considered pre-epistemic. Therefore, it may be difficult to draw a comparison between (pre-epistemic) beliefs of middle school students and more pronounced (naïve or nuanced) ideas of high-school students.

Fostering epistemic beliefs: pedagogical principles

Several studies indicated the importance of explicitly addressing epistemic questions in the history classroom. For instance, Wiley et al. (2020) highlighted the predictive value of epistemic beliefs except among young students, which suggested a learning trajectory from pre-epistemic towards more explicit levels of epistemic ideas (naïve or nuanced). The difference found between AP and Non-AP students, even when correcting for general ability (ACT-scores), supported the idea that epistemic ideas are fostered by education. Indeed, in AP-programs, students engage more frequently in historical inquiry and more often work with multiple sources. In another study, Stoel, Van Drie, and Van Boxtel (2017) found that explicit attention to epistemic ideas in the context of a causal historical inquiry task, led to higher scores on both the subjectivist and criterialist items of the BHQ. Results on the subjectivist items were not in line with theoretical expectations. However, authors suggested that the development towards subjectivism, combined with a stronger agreement of criterialist items, might also indicate a development towards regarding history more as interpretation. Furthermore, a quarter of the students in this study also reported a learning gain related to epistemic ideas.

In their study on prior knowledge and epistemic judgment, Barzilai, Thomm, and Shlomi-Elooz (2020) found that providing students with a "disagreement explanation"—a scaffold listing reasons for conflicting accounts in history—resulted in significantly higher agreement with items related to evaluativism. In another study, Barzilai, Mor-Hagani et al. (2020) concluded that learning with epistemic scaffolds (i.e., highlighting, collecting claims in boxes, visualizing, and linking claims together) led to significant gains in students' evaluation and integration performance in comparison with the control group. Moreover, students in the experimental group also reported higher knowledge of epistemic criteria (e.g., justification, trustworthiness) and strategies (e.g., sourcing, corroborating). Finally, in a quasi-experimental study with 161 11th- and 12th-grade German history students, Mierwald and colleagues (Mierwald, 2020; Mierwald, et al., 2022) explored how working with different types of sources (primary vs. audiotaped vs. textbook) influenced students' epistemic beliefs and historical argumentation. This study identified significant changes on the criterialist scales for students working with multiple primary or audiotaped sources, but not for students in the textbook condition.

The role of epistemic beliefs in teaching and learning history: Empirical findings with teachers

In this section, we discuss seven studies that focused on the epistemic beliefs of history teachers. A growing body of research in recent years has underscored the importance of teacher beliefs as a source of pedagogical decision-making. Teacher beliefs have multiple dimensions, but epistemic ideas about knowledge and knowing are often theorized as one of these dimensions (e.g., Buehl & Beck, 2015). We therefore, now turn our attention to the relationships studies found between epistemic beliefs on the one hand, and instructional preferences and learning goals of history teachers on the other. Subsequently, we explore what studies found regarding the expression of epistemic ideas in history teachers, and the relationships between epistemic beliefs and teachers' educational or cultural background. Finally, we focus on contextual factors that influence the ability of history teachers to translate their beliefs into effective classroom approaches.

Epistemic beliefs and beliefs about teaching and learning history

The relationship between epistemic beliefs of history teachers on the one hand, and their educational goals and pedagogical preferences on the other hand, was a central issue in several studies (e.g., Namamba & Rao, 2016; Nitsche, 2019; Sakki & Pirttilä-Backman, 2019; Voet & De Wever, 2016; Wansink et al., 2017). The learning goals and learning environments designed by history teachers are important because they are expected to influence students' epistemic beliefs (e.g., VanSledright, 2014). History teaching can support goals connected to critical reasoning, as well as goals connected to the formation of (national-) identities (e.g., Carretero, 2011; Wansink et al., 2016). A student-centered and constructivist approach is often expected to be conducive towards "critical reasoning" goals, whereas "national identity" goals are often connected to a more transmissive and reproductive approach to learning and teaching.

In a study with 132 secondary history teachers in Tanzania, Namamba and Rao (2016) used the *BHQ* to assess epistemic beliefs and explored relationships with self-reported teaching approaches. Their study found that criterialist beliefs positively predicted student-centered approaches, whereas teacher-centered approaches were predicted by copier and subjectivist beliefs. In contrast, in his questionnaire study with 177 prospective Swiss history teachers, Nitsche (2019) found no clear relationships between epistemic beliefs and teacher- or student-centered beliefs about learning and teaching. Nitsche suggested that the focus on pre-service teachers might explain this finding. However, in a qualitative case study in which two experienced history teachers reflected on video-taped observations regarding their classroom practices, he also concluded that contextual aspects and non-epistemic teacher beliefs (e.g., regarding students) played a prominent role in actual teaching practices and might have mediated or prevented the transfer of epistemic beliefs into practice. In addition, in a study that focused on the epistemic beliefs of 22 experienced history teachers and their ideas about inquiry-based teaching practices, Voet and De Wever (2016) found a relationship between epistemic beliefs and their reported teaching practice. In this study, 17 teachers were categorized as criterialist. Within this group, four teachers defined inquiry as "investigation" (i.e., asking questions, analyzing information, constructing arguments). However, most teachers defined inquiry in a more limited way, i.e., as an approach that focused on evaluating sources and "determining which information is correct" or as an approach to cover content (Voet & De Wever, 2016, p. 62). Thus, Voet and De Wever concluded that criterialist beliefs were conducive towards teaching history as inquiry, but not sufficient. In line with Nitsche, other teacher beliefs and contextual factors appeared to mediate this "relationship".

TABLE 3. Outcomes of Different Studies

				Original score			Standardized score		
	Participants (mean age)	***N***	**Instr.**	**Obj.**	**Subj.**	**Cri.**	**Obj.**	**Subj.**	**Cri.**
Voet & de Wever (2016)	Teachers history (43 years)	22	Inferred	3 teachers	2 teachers	17 teachers	14%	9%	77%
Nitsche (2019)	Teachers-students history (27 years)	177	Other	1.89 (.54)	2.38 (.59)	3.50 (.39)	0.47 (.14)	0.60 (.15)	0.88 (.10)
	Teachers history (40 years)	12		1.85 (.69)	2.13 (.54)	3.63 (.36)	0.46 (.17)	0.53 (.14)	0.91 (.09)
Miguel-Revilla et al. (2020)	Teacher-students primary (2nd year)	143	BHQ	3.13 (.68)	2.69 (.77)	4.49 (.49)	0.52 (.11)	0.45 (.13)	0.75 (.08)
	Teacher-students primary (3rd year)	163		3.05 (.69)	3.06 (.76)	4.57 (.43)	0.51 (.12)	0.51 (.13)	0.76 (.07)
	Teacher-students history (master secondary)	124		2.40 (.69)	2.48 (.73)	4.86 (.56)	0.40 (.12)	0.41 (.12)	0.81 (.09)
Namamba & Rao (2016)	Teachers history (bachelor)	96	BHQ	3.30 (.62)	2.94 (.86)	4.00 (.48)	0.66 (.12)	0.59 (.17)	0.80 (.10)
	Teachers history (diploma)	34		3.29 (.66)	3.29 (.70)	3.93 (.47)	0.66 (.13)	0.66 (.14)	0.79 (.09)
Stoel, Van Drie, & Van Boxtel (2017)[3]	Students, pre-university (17 years)	95	BHQ		3.17 (.62)	4.40 (.49)		0.53 (.10)	0.73 (.08)
Mierwald (2020)[4]	Students, pre-university (17 years)	161	BHQ	3.47 (.71)	2.81 (.73)	4.58 (.53)	0.58 (.12)	0.47 (.12)	0.76 (.09)
Stoel, Logtenberg et al. (2017)[5]	Students, higher general education (17 years)	556	Other	3.62 (.75)		4.52 (.68)	0.60 (.12)		0.75 (.11)
	Students, pre-university (18 years)	366		3.39 (.69)		4.71 (.63)	0.56 (.12)		0.79 (.11)
	Researchers (historians)	7		2.22 (.73)		5.17 (.43)	0.37 (.12)		0.86 (.07)
Wiley et al. (2020)[6]	Students, university (19 years) – AP in history	56	Other	2.8		4.9	0.47		0.82
	Students, university (19 years) - Non-AP history	95		3.0		4.6	0.50		0.77
	Students, high school (16 years) – AP in history	48		2.2		4.9	0.37		0.82
	Students, high school (16 years) - Non-AP in history	82		2.9		4.5	0.48		0.75
	Students, middle school (12 years)	345		3.7		4.2	0.62		0.70
Barzilai & Weinstock (2015)	Students, university (28 years)	481	ETA	6.58 (1.43)	4.19 (1.37)	6.16 (1.39)	0.66 (.14)	0.42 (.14)	0.62 (.14)
Barzilai, Thomm, & Shlomi-Elooz (2020)[7]	Students, university (25 years)	104	ETA	6.81 (1.65)	3.88 (1.44)	6.13 (1.55)	0.68 (.17)	0.39 (.14)	0.61 (.16)
Thomm, Barzilai, & Bromme (2017)	Students, university (27 years)	184	ETA	6.46 (1.63)	4.20 (1.60)	6.24 (1.39)	0.65 (.16)	0.42 (.16)	0.62 (.14)
Iordanou, Kendeou, & Zembylas (2020)[8]	Students, university (24 years)	39	Livian	27 students	3 students	9 students	69%	8%	23%
Iordanou, Muis, & Kendeou (2019)	Students (12 years)	35	Livian	20 students	5 students	10 students	57%	14%	29%
	Students, university (22 years)	23		15 students	1 student	7 students	65%	4%	31%
Ioannou & Iordanou (2020))	Students, primary (12 years)	79	Livian	44 students	13 students	22 students	56%	16%	28%

Note: 'Standardized score' columns present proportional mean-scores by dividing outcomes by the maximum score on each perspective (ranging from 4-points to 10-points Likert-scales). When available, proportional standard deviations are presented within brackets. Studies that classify participants within one epistemic perspective, are recalculated into percentages.

[3] Pre-test scores are used. An average mean score is calculated for the experimental and control condition (taking differences in sample size into account).

[4] An average mean score is calculated for the three conditions (taking differences in sample size into account).

[5] An average mean score is calculated for both dimensions related to objectivity (knowledge and knowing).

[6] Mean scores were inferred from figures (bar graphs). Exact mean scores and standard deviations were not included in the article. For university students, we report the outcomes of study 2 (because this study included the number of participants with AP-status and non-AP-status).

[7] Mean scores and standard deviations are presented from the ETA in combination with the unfamiliar topic (Livia case). This makes the results more comparable to other studies with the ETA and the Livian war scenario. The study found no significant differences between epistemic perspectives with familiar and unfamiliar topic. The article describes two studies. Results are reported from study 1. For this overview, study 2 didn't add any extra information.

[8] Two students that exhibited a mix of absolutist and multiplist beliefs were divided over the two perspectives.

Wansink et al. (2017) added to studies on history teachers' instructional preferences by focusing on the learning goals of prospective history teachers (*n*=48). Their study differentiated between two epistemic perspectives and classified learning goals as *factual* or *interpretative*, finding that all student-teachers reported learning goals that focused on history as interpretation (critical, constructive, perspective-taking), but that 30 student-teachers combined these goals with goals related to moral reasoning or identity. In another study, by Wansink et al. (2016), prospective teachers reported that their teaching of history was more factual and less interpretational, in spite of their preference. Wansink's study corroborated the finding of Voet and De Wever (2016) that contextual factors influenced the (perceived) ability of history teachers to design epistemically rich teaching practices and goals for history education.

Finally, Sakki and Pirttilä-Backman (2019) similarly explored the relationship between epistemic perspectives and goals for history teaching among 633 history teachers from ten European countries. All teachers rated the importance of 12 learning goals and four statements that focused on epistemology. In general, all teachers rated critical thinking, argumentation, and working with sources as the most important goals of history teaching, and goals related to nation building, patriotism, and moral virtues as least important. Statements related to nuanced epistemic beliefs were also rated higher than statements related to naïve beliefs. However, results showed that epistemic beliefs did predict goal orientation: teachers who valued objectivism relatively highly also rated goals related to *moral virtues and patriotism* higher, whereas teachers who reported a relatively high agreement with both nuanced epistemic statements also reported a higher agreement with goals related to critical thinking and "learning from the past".

Epistemic beliefs: what ideas do teachers hold and how is this related to expertise in history

Almost all studies with teachers evaluated epistemic beliefs using the model of Maggioni (see Table 1). Only the studies of Wansink and colleagues (2016, 2017) and Sakki and Pirttilä-Backman (2019) adopted a different approach. As can be seen in Table 3, all studies found that teachers strongly valued nuanced epistemic (criterialist) beliefs (Miguel-Revilla et al., 2021; Namamba & Rao, 2016; Nitsche 2019). Voet and De Wever (2016) classified the majority of history teachers (77%) as criterialist. The study of Miguel-Revilla et al. (2021), which looked at 430 pre-service teachers in Spain (*n*=143, second year primary; *n*=163, third year primary; *n*=124, master secondary education), found that teacher-students in secondary education who held a bachelor's degree in history or art-history scored significantly higher on criterialist beliefs than students enrolled in a second- or third-year bachelor's degree in primary education. However, the study of Namamba and Rao (2016) did not find a significant difference in criterialist beliefs between teachers with a bachelor's degree in history and teachers with a diploma in history teaching.

With regards to objectivism, studies by Nitsche (2019) and Miguel-Revilla et al. (2021) found that teachers predominantly held a "neutral" position. Interestingly, in Namamba and Rao's study, teachers valued copier items relatively highly (M=.66, SD=.12). In line with expectations, Miguel-Revilla et al. (2021) found a difference with a large effect-size between teacher-students with a bachelor's degree in history and students enrolled in a bachelor's program for primary education. However, Namamba and Rao found no differences between teachers with different educational levels on this perspective.

Regarding subjectivist beliefs, studies found that teachers hold a neutral position (scores ranged between 0.41 and 0.6). However, no clear trend could be discerned. For instance, in Miguel-Revilla et al.'s study, the value attributed to subjectivist items was higher among third-year primary students than among second-year students, whereas master students in secondary education rejected the items more strongly than did the second-year students. This U-turn (or N-turn) suggests that subjectivism is difficult to calibrate, and that development based on group differences is difficult to interpret. In contrast, Namamba and Rao (2016) found that teachers with a bachelor's degree in history rejected subjectivist beliefs significantly more than teachers with a diploma in education.

In general, teachers scores on different epistemic perspectives were in line with expectations, although results were not unambiguous. Most studies supported the idea that educational level was related to agreement with criterialist and rejection of objectivist ideas, but across and within studies, scores on subjectivism were more difficult to interpret. The findings of Namamba and Rao differed from other studies, both in the mean scores attributed to the different perspectives, as in the differences found between educational levels of history teachers.

Contextual factors that constrain teaching epistemic beliefs

Several studies with teachers explored contextual factors that might influence a teacher's ability to translate their epistemic ideas into goals and learning environments that could foster the development of nuanced beliefs among students. Wansink et al. (2016) defined several factors that a (prospective) teacher needed to be certain of before they could teach the "uncertainty" of interpretational history. Authors called this the "certainty paradox". Teachers needed to be confident of their ability to manage a classroom and create a secure learning environment. Furthermore, they needed sufficient pedagogical knowledge to select materials and organize learning activities. And, finally, a firm grasp of subject matter was needed to discuss multiple perspectives. Besides these intrinsic factors, the work and learning environment (school culture, beliefs about students' cognitive abilities, interactions with students, textbooks or tests, and teacher training) were defined as important extrinsic factors that limited or increased the possibility of transferring epistemic beliefs into constructivist goals for history teaching. In their interview study, Voet and de Wever (2016) found that teachers often reflected on the time allotted for history lessons, on their own beliefs about students' capabilities for engaging in inquiry tasks (especially in lower levels and tracks) and on their own pedagogical knowledge (selecting suitable materials and organizing inquiry-based activities) as important constraints.

The importance of secure subject matter knowledge as a prerequisite for a teaching approach that fosters epistemic reflection, corroborated findings that showed the relatedness between teachers' educational level and epistemic perspective (Miguel-Revilla et al., 2021; Voet & De Wever, 2016). The number of history courses, in particular, appeared to be supportive of more criterialist epistemic beliefs (e.g., Nitsche, 2019). A question remained, though, about the extent to which teacher training supported teaching history as interpretation. Nitsche concluded that courses in history didactics did not influence prospective history teachers' epistemic ideas. However, Mierwald et al. (2016) compared beginning and advanced prospective history teachers and found a large difference in the rejection of objectivism and a small difference in criterialism. Wansink et al. (2016) concluded that the discrepancy reported by prospective teachers between teaching history as more factual and less interpretational than they would prefer, decreased during teacher training.

Finally, the study by Sakki and Pirttilä-Backman showed that socio-cultural contexts influenced teachers' epistemic beliefs. In this study, cluster analysis identified a systematic difference between countries. Researchers defined three clusters: (a) *critical thinking* (Austria, Netherlands, Germany), (b) *moral virtues and patriotism* (Belarus, Estonia, Serbia), (c) *historical consciousness* (France, Italy, Finland).

Discussion

In this review we focused on four questions. First, we explored how studies conceptualized and approached epistemic beliefs in history education. Second, we discussed the relationships studies found between epistemic beliefs in history and other constructs (e.g., domains and topics, historical reasoning, and beliefs about teaching and learning). Third, we described and compared the epistemic beliefs found among history students and teachers, and explored the relatedness with differences in age and educational backgrounds. Finally, studies were analyzed for promising pedagogical principles, as well as for factors that might influence a teacher's ability to design "epistemically rich" learning environments. In this discussion, we will summarize the results,

reflect on several questions regarding conceptualization and operationalization, and draw connections between studies with students and teachers.

Conceptualizing and operationalizing epistemic beliefs in history

In line with studies prior to 2016, most studies in this review conceptualized epistemic beliefs based on a developmental framework. These studies defined epistemic development as a progression through three coherent stances or perspectives. Only two studies departed from a purely dimensional framework and defined underlying dimensions of epistemic beliefs without referring to developmental stadia. An interesting development in recent studies was that most studies integrated aspects of both developmental and dimensional frameworks. For instance, several studies operationalized items for three epistemic perspectives, based on multiple underlying dimensions (e.g., Barzilai & Weinstock, 2015; Nitsche, 2019). Furthermore, most studies analyzed developmental scores in a somewhat dimensional manner, by presenting mean scores on different perspectives.

Relationships between epistemic beliefs and other constructs

The studies in this review contributed to our understanding of the domain-specific nature of epistemic beliefs in history. For instance, the studies of Barzilai and colleagues (Barzilai & Weinstock, 2015; Thomm et al., 2017) showed that epistemic beliefs, as well as epistemic judgments, differed between history and biology—indicating that, in history, knowledge is regarded as more uncertain and subjective, which leads to a relatively higher score on multiplism. In addition, Barzilai, Thomm, and Shlomi-Elooz (2020) found that epistemic beliefs, in contrast to epistemic performance, are less influenced by specific topics.

Multiple studies in this review demonstrated the relationship between epistemic beliefs and metacognitive processing, and contributed to our understanding of how (nuanced) epistemic beliefs support students' performance and teachers' pedagogical decision-making. Iordanou and colleagues showed that students with an evaluativist epistemic perspective engaged somewhat more in (low-level) epistemic processing, use of learning strategies, and integration of multiple accounts in a summary (2019; 2020). Interestingly, in these studies, as well as in the study of Barzilai, Thomm, and Shlomi-Elooz (2020), epistemic processing only took place when accounts contradicted students' own prior knowledge. Furthermore, students with more nuanced beliefs integrated more (structural) causes in their essays and corroborated sources more explicitly (Wiley et al., 2020). This study also separated epistemic thinking from students' general ability and showed that epistemic ideas uniquely predicted performance. Finally, across multiple studies a correlation was found between (criterialist) epistemic belief and students' interest in history. An interesting finding of Stoel, Van Drie, and Van Boxtel (2017) was that this correlation increased after a lesson unit that included explicit classroom reflection on epistemic questions.

Our review also showed that nuanced (criterialist) beliefs supported teachers' inclination towards more student-centered approaches and teaching history as inquiry (Voet & de Wever, 2016; Namamba & Rao, 2016). Moreover, Namamba and Rao found that objectivist, as well as subjectivist beliefs correlated with teacher-centered approaches. However, the study of Nitsche (2019) did not corroborate these relationships. Several studies found a relationship between epistemic beliefs and teachers' goal-setting in history education. For instance, Wansink and colleagues (2016, 2017) showed that prospective history teachers in the Netherlands formulated goals related to two different epistemic "standards". Sakki and Pirttilä-Backman (2019) found that goals related to *moral virtues and patriotism* were rated higher by teachers who valued objectivist ideas (relatively) more, whereas goals related to critical thinking were related to the value that teachers attribute to criterialist ideas. This study, across ten different countries, also supported the idea that epistemic beliefs were related to socio-cultural contexts.

Overall, a recurring finding among studies (both with teachers and students) that used a developmental framework was that relationships between beliefs and task performance were

mainly found with the more nuanced perspectives (criterialist or evaluativist), although correlations were often weak to moderate. Criterialist items focused on students' appreciation of history as disciplinary inquiry, the interpretative nature of historical knowledge, and methods for evaluating multiple (contradicting) sources. Stoel, Logtenberg et al. also identified correlations only for the dimension that focused on methodological criteria. Most studies found no or idiosyncratic relationships between reasoning, and objectivist or subjectivist perspectives. For these perspectives, the question asked by Mierwald et al. (2016) is still relevant: "Do they affect it at all?"

Outcomes on epistemic beliefs and age- and educational differences

We analyzed and compared the epistemic belief scores of different studies in this review. All studies found a positive value of ideas connected to criterialist beliefs with students and teachers, although studies with the *ETA* estimated these scores relatively lower than studies with the *BHQ* and other instruments. When we compared results of studies that used the *BHQ* with teachers and students, we found that teachers scored (marginally) higher on criterialist items (Miguel-Revilla et al., 2021; Namamba & Rao, 2016) than pre-university students (Mierwald, 2020; Stoel, Van Drie & Van Boxtel, 2017). Furthermore, several studies found differences between groups of teachers or students related to differences in educational backgrounds in line with expectations (Miguel-Revilla et al., 2021; Stoel, Logtenberg et al., 2017).

When we explored outcomes on the objectivist perspective, a consistent trend was discerned from a strong rejection by academic historians (Stoel, Logtenberg et al., 2017) to a moderate agreement by 11th-grade pre-university and university students found by Mierwald (2020) with the *BHQ*, and Barzilai and colleagues (2015, 2017, 2020) with the *ETA*. *ETA*- scores appeared to estimate objectivism slightly higher than studies with the *BHQ*. Other studies also showed an age- (and education-) related development regarding objectivism in line with expectations (Miguel-Revilla et al., 2021; Stoel, Logtenberg et al., 2017; Wiley et al., 2020). Only Namamba and Rao's (2016) study failed to reproduce these findings. Their study found that Tanzanian history teachers in general reported a positive attitude towards objectivism, while finding no differences between teachers with a bachelor's degree and teachers with a diploma in education. It was striking that this study found divergent outcomes on multiple perspectives. In connection to Sakki and Pirttilä-Backman (2019), these outcomes might be related to the socio-cultural context in which the study was conducted.

When we explored subjectivism, we found that all scores fluctuated around the middle of the scale and no clear trend could be discerned between students, teachers, and expert historians. For instance, Miguel-Revilla et al. (2021) found that students in third-year primary education attributed a higher value to subjectivist items than both students in second-year primary education, as well as history master students in secondary education. This corroborated the finding of Stoel, Logtenberg et al. (2017) that experts valued items related to subjectivity in largely varying ways depending on their research paradigm. Thus, Stoel and colleagues concluded that a coherent perspective (or "stance") on subjectivity could not be defined.

Wiley et al.'s (2020) research problematized the assessment of epistemic beliefs among young students with their empirical finding that these beliefs had not yet formed, indicating that among the youngest age groups these beliefs might be regarded as pre-epistemic. More research is needed, however, to differentiate clearly between naïve and pre-epistemic beliefs.

Principles and barriers for fostering nuanced epistemic beliefs

Several studies explored how contextual factors mediate the "transfer" of epistemic beliefs to historical reasoning tasks (with students) or to pedagogical decisions (with teachers). Studies with students established prior knowledge as an important mediating variable (e.g., Barzilai, Thomm, & Shlomi-Elooz, 2020; Iordanou et al., 2020). In interviews with teachers, beliefs about

students' abilities, grasp of content knowledge, availability of historical sources and inquiry tasks, and the duration of history lessons were mentioned—among others—as important factors (e.g., Voet & de Wever, 2016; Wansink et al., 2016, 2017).

However, contextual factors could also support the development of nuanced epistemic ideas and the transfer of these beliefs into "action". Educational background, in particular, appeared to be an important factor. Several studies with history teachers showed that the amount of training as a historian correlated with the sophistication of epistemic beliefs (e.g., Miguel-Revilla et al., 2021; Namamba & Rao, 2016; Nitsche, 2019). Interestingly, Nitsche found that courses in history didactics did not contribute to this development. In addition, Wiley et al. (2020) attributed the finding that students in the AP-program held more sophisticated epistemic beliefs to the pedagogical approaches in these classes (e.g., working with sources and inquiry questions). Other studies suggested that explicit reflection on epistemic questions, providing students with epistemic scaffolds (i.e., a "disagreement explanation", highlighting, collecting claims), and working with primary sources might lead to a higher agreement with items related to criterialist beliefs, as well as epistemic performance (Barzilai, Thomm, & Shlomi-Elooz 2020; Barzilai, Mor-Hagani et al., 2020; Mierwald, 2020; Stoel, Van Drie, & Van Boxtel, 2017).

Conclusion

Recent studies in history education have made significant contributions to our understanding of the role epistemic beliefs play in history teaching and learning. Most importantly, these studies reinforced the idea that epistemic beliefs influence meta-cognitive processes and explain (a certain level of) variation in teachers' and students' epistemic cognition. Studies showed that epistemic ideas influence (although do not determine) constructs, such as goal setting, teaching orientation, epistemic strategies, and outcomes of historical reasoning. However, studies also indicated that these correlations are primarily found with items that assess criterialist or evaluativist epistemic ideas and raised several questions regarding conceptualization and operationalization. These issues will be discussed below.

Previous results found with the *BHQ* showed that classifying students within a specific stance was problematic (VanSledright & Maggioni, 2016), with research conducted before 2016 suggesting that qualitative data was needed to substantiate this classification. Interestingly, in this review too, only studies with a qualitative element assigned students or teachers to one epistemic perspective (Voet & de Wever, 2016; Iordanou et al., 2020; Iordanou et al., 2019; Ioannou & Iordanou, 2020). It is striking that the studies of Iordanou and colleagues, based on the Livian War scenario, classified students predominantly as objectivists, as this finding is not fully supported by other studies. In general, participants in studies that used the Livian War scenario tended to score higher on objectivism than participants in studies that used the *BHQ* or other instruments. However, in their studies with the Livian War scenario and the *ETA*, Barzilai and colleagues found that students agreed with both an evaluativist perspective and an absolutist perspective. Thus, the question may be raised of whether assigning participants to one "dominant" perspective is capable of covering the nuances in epistemic thinking?

In contrast, most studies in this review that built on a developmental framework did not aim to categorize students within a specific perspective. Instead, these studies presented mean scores for each perspective. The benefit of this approach is that all data are used. Furthermore, it embraces the fact that people can hold multiple, partly contradicting beliefs. Such an approach can be useful when exploring a preferred perspective, investigating correlations with other constructs, or measuring differences between groups, or between pre- and post-tests, as studies in this review showed. However, this approach also complicates interpretation; for instance, how does one interpret a positive score on both an objectivist and subjectivist perspective? Or agreement with both an objectivist and criterialist perspective? These studies appear to operationalize epistemic perspectives as if they are dimensions of epistemological beliefs.

Alternatively, a dimensional framework offers researchers a flexible and adaptive approach to conceptualizing epistemic beliefs, which can be tailored towards specific aspects of historical reasoning, such as causal historical reasoning (e.g., Wiley et al., 2020). However, a limitation of these instruments is that it is difficult to interpret outcomes on different scales. Studies that used this approach focused primarily on comparing differences between groups, and on exploring correlations between values found on dimensions of epistemic thinking and outcomes of reasoning tasks, strategies, and interest.

With respect to how epistemic beliefs are conceptualized, this review showed that a development can be discerned towards integrating developmental and dimensional approaches. This development allowed researchers and practitioners to assess epistemic ideas more adaptively (depending on research or educational goals) and to analyze results in finer detail (e.g., by exploring specific dimensions in relation to epistemic development). The development of an epistemic belief scale tailored toward causal historical reasoning (Wiley et al., 2020) is one example of how studies have aimed to align the broader construct of epistemic beliefs in history with specific types of reasoning.

Our comparison of how studies conceptualized and evaluated epistemic ideas also raised questions for future research. An important question remains as to how to qualify outcomes on epistemic dimensions in dimensional studies. Stoel, Logtenberg et al. (2017) theorized that a "mild" rejection of objectivist items, in combination with an agreement with items that emphasize methodological criteria, might indicate a criterialist perspective. However, it remains unclear as to where the "tipping points" between naïve and nuanced beliefs lie. Another question focuses on outcomes found with developmental studies. Most recent studies reported mean scores for each perspective, which raises the question of how these scores should be interpreted. A solution might be to diagnose students on their preferred perspective, although this might lead to overestimating a specific stance, as the studies of Iordanou and colleagues suggest. Another solution might be to return to an approach originally suggested by Maggioni and colleagues, who calculated "consistency scores". In this approach, a percentage is calculated based on the amount of objectivist and subjectivist items that students reject and the amount of criterialist items that students value. However, the premise of this approach is that students ought to reject both objectivist and subjectivist items, which is problematic given that idiosyncratic results on subjectivity were found even among experts (Stoel, Logtenberg et al., 2017). It also obscures the finding of many recent studies that students can positively value both objectivist and criterialist beliefs.

In light of this, future research could focus on questions regarding the validity of both objectivist and especially subjectivist perspectives. Studies found that objectivist ideas develop in line with expectations between students and teachers. However, almost no correlations with aspects of historical reasoning or interest were found. Wiley et al.'s (2020) study was an exception, though. This study found that viewing historical knowledge as simple and certain was negatively related to outcomes on a causal reasoning task. Regarding subjectivism, studies found largely varying outcomes between students and teachers that could not be interpreted. Furthermore, almost no relationships were found between subjectivist ideas and aspects of historical reasoning.

Another focus for future studies could be to validate and calibrate different instruments (e.g., collecting and comparing scores with the *BHQ*, the *ETA*, and scores on dimensional questionnaires, in one sample). It also remains important to compare outcomes on the questionnaires with more qualitative approaches that enable the inference of epistemic ideas from students. By doing this, these studies could strengthen the predictive power and concept validity of the instruments. It might never be possible to "solve the riddle", but future research could provide theory and practice with multiple instruments that can be applied flexibly depending on which aspects of epistemic thinking researchers or teachers want to illuminate.

From this review, we draw several implications for practice. The primary implication from research with students is that history education should challenge students' epistemic beliefs. Studies have shown that these beliefs are an important aspect of students' self-regulative behavior. Working with inquiry tasks based on multiple sources from different perspectives, discussing

controversial issues, scaffolding argumentation, and explicitly discussing why experts disagree, are important principles towards this goal. Furthermore, reviewed studies suggest that it is important for teacher training to teach interpretational history, and explicitly reflect with (prospective) history teachers on their epistemic beliefs and on the relationship between these beliefs, ideas about learning and teaching, and goals for history education. This suggestion is in line with theoretical contributions in recent years that discussed the importance of epistemic reflection and reflexivity in teacher training and professional development (e.g., Hofer, 2017; Mathis & Parkes, 2020). Teacher training should show prospective history teachers that epistemic beliefs are susceptible to change. Furthermore, teacher training should provide teachers with curriculum materials, or support them in (co-)designing these materials, but also focus on "counterbalancing" the impact of contextual factors such as school culture or (national) curriculum demands.

For educational purposes we assume that both developmental and dimensional approaches provide useful frameworks for teachers to address epistemological questions in their classrooms and to bring these beliefs "to the surface". An important advantage of the dimensional approach is that it can support teachers in formulating specific epistemic questions about concrete history tasks and topics, and it can promote reflection on different aspects of epistemic thinking in history. Questions may focus on the nature of historical knowledge, historical knowing, or criteria for judging the validity and reliability of historical sources and accounts. In contrast, a developmental framework allows teachers to diagnose students' epistemic ideas more specifically, conceptualize progression, and provide adequate feedback. Although studies suggest that it remains difficult to classify students within a specific perspective and the expression of epistemic ideas may vary across contexts, qualitative remarks of students nevertheless provide rich formative information on how students make sense of history. Developmental frameworks may help teachers in making sense of this information.

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Thinking aloud about epistemology in history: How do students understand the Beliefs about History Questionnaire?

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ABSTRACT

This study aims to explore the cognitive validity of a popular epistemological beliefs self-report instrument used in history education, namely the Beliefs about History Questionnaire (BHQ) developed by Maggioni (2010). The validity and reliability of this instrument were found to be problematic during the quantitative validation of both the original English questionnaire and its foreign language versions. Therefore, we conducted cognitive interviews with four students (all 17 years old) using a German version of the BHQ to gain a comprehensive insight into students' understanding of the questionnaire and the possible difficulties they experience in answering its items. The analysis of the interviews showed that the cognitive validity of the questionnaire was good. However, some items were found to be problematic because the students showed differences in understanding and difficulties in responding. Furthermore, four overarching problem areas were identified: the complexity of terms; epistemic ambiguity; length and comprehensibility; and irritating references to the school context. In this article, we address these and other difficulties in using the BHQ to assess students' thoughts about epistemology in history. Finally, possible improvements to the questionnaire and conclusions that can be applied to both research and practice are presented.

KEYWORDS

Epistemological beliefs, cognitive interviewing, questionnaire, cognitive validity, domain of history, secondary school education

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Introduction

While Sarah[1], a student who participated in our study, was thinking aloud about an item of the German version of the Beliefs about History Questionnaire (BHQ) originally developed by Maggioni (2010), she told us more about her understanding of the past and the role of historians:

> Well, I think that the past is actually what is not today, that is, it was before. And I do not know to what extent historians make the past. I think that the historian can represent the past in his way, but the past is still there. Thus, I do not think that the past depends on a historian.[2]

For researchers in the field of educational psychology and history education, the investigation of the concepts of knowledge and knowing (i.e., epistemological beliefs), such as those in this student's example, is important because they are assumed to influence both teaching and learning (e.g. Hofer & Bendixen, 2012; VanSledright & Limón, 2006). Regarding history education, some framework models exist that link epistemological beliefs and "knowing and doing" in history (e.g. Havekes, van Boxtel, Coppen, & Luttenberg, 2012; van Drie & van Boxtel, 2008; VanSledright, 2014). This argument is supported by observations from qualitative research, as students' difficulties in dealing with primary sources and historical accounts have been attributed to them having naïve beliefs about history (Lee & Shemilt, 2003; VanSledright, 2002; Wineburg, 2001). In addition, quantitative studies have shown that students' epistemological beliefs in history are related to second-order and strategic knowledge (Stoel, van Drie, & van Boxtel, 2017), the use of learning strategies and text comprehension (Ioannou & Iordanou, 2019), as well as argumentation skills (Mierwald, 2020; Mierwald, Seiffert, Lehmann, & Brauch, 2016).

As a result of the great importance of epistemological beliefs for historical learning and thinking, researchers have long been interested in how epistemological beliefs can be theoretically conceptualized and measured using valid and reliable instruments (e.g. Maggioni, Alexander, & VanSledright, 2004; Maggioni, VanSledright, & Alexander, 2009; Mierwald, Seiffert, Lehmann, & Brauch, 2017; Nitsche, 2019; Stoel, Logtenberg, Wansink, Huijgen, van Boxtel, & van Drie, 2017). In particular, the BHQ, developed by Maggioni (2010), became a key measurement tool used in research on epistemological beliefs in the domain of history. The theoretical model that the questionnaire is based on differentiates between three epistemic stances, including the perspectives of history as a "copy" of the past (*objectivist stance*), and history as just a matter of historians' interpretation (*subjectivist stance*), as well as the more developed view of history as a critical method of inquiry about the past (*criterialist stance*). Maggioni (2010) and many other researchers (e.g. Kidwai, 2015; Mierwald et al., 2017; Miguel-Revilla, Carril-Merino, & Sánchez-Agusti, 2020; Stoel, van Drie, & van Boxtel, 2015, 2016) have used the BHQ and its foreign language translations in their research with varying degrees of success. In particular, the validity and reliability of the instrument have been found to be problematic. For example, individual items did not load as expected in factor analyses, and certain scales showed low reliability. This could have arisen due to the theoretical background of the instrument itself, the individual formulations inserted in the instrument, the terminology of items, the translation or adaptation of items for non-English speaking participants, and the different educational and cultural contexts of respondents (Mierwald et al., 2017; Miguel-Revilla et al., 2020; Stoel et al., 2017).

To obtain more detailed insights into how students understand the questionnaire, we conducted cognitive interviews with a sample of secondary school students. The aim was to examine the cognitive validity of the existing BHQ using the German version as an example and to provide suggestions for future optimization of the instrument (e.g. Greene & Yu, 2014). Following this, it may be possible in the future to optimize the measurement of epistemological beliefs using the BHQ or its adaptions. Importantly, a better measure is essential for identifying educational implications at a diagnostic level and for verifying the effectiveness of interventions that aim to enhance epistemological beliefs about history (Mason, 2016).

Therefore, the research questions guiding this study are:

1. What are students' general impressions of the BHQ?
2. How do students understand the BHQ and what problems do they have with the individual items?
3. To what extent are the items that turned out to be particularly problematic in the exploratory factor analysis (EFA) perceived by the students?

Subsequently, we describe the modeling and assessment of epistemological beliefs in history education at the present time. Following this, we present the method and results of our study and, finally, the discussion of our findings.

Theoretical Framework

Theoretical conceptualization of epistemological beliefs in history education

Epistemological beliefs refer to the assumptions, views, and ideas of individuals in relation to the nature of knowledge and the process of knowing (Hofer & Pintrich, 1997; VanSledright & Limón, 2006). Therefore, they can be assigned to the psychological construct of epistemic cognition, which refers to research focusing on "what individuals believe about knowledge and knowing and how they think and reason about the epistemological aspects of knowing" (Hofer, 2016, p. 19). While empirical research on epistemic cognition began in the 1970s or even earlier (Hofer, 2016), the systematic study of the construct in history education is much more recent (VanSledright & Maggioni, 2016). However, various theoretical models of epistemological beliefs have emerged from psychological and educational studies that have influenced the work of history educators. The two main approaches can be characterized as developmental or stage models and models with independent dimensions (Buehl & Alexander, 2002; Hofer & Pintrich, 1997).

Developmental or stage models assume that epistemological beliefs can be divided into distinct stages ranging from naïve to developed beliefs about knowledge and knowing. These models include the three-stage reflective judgment model (King & Kitchener, 2002) and the four-stage model of epistemological understanding (Kuhn & Weinstock, 2002), which formed the basis for the development of the BHQ (Maggioni et al., 2004, 2009). Certain educational psychologists conducting research in the domain of history have also used stage models as their theoretical basis (e.g. Kuhn, Weinstock, & Flaton, 1994; Ioannou & Iordanou, 2019). Priemer (2006) stated that these different stages can be divided in terms of "(1) absolutist views of knowledge (in the sense of true or false), (2) relativist views of knowledge (with a subjectivity), and (3) a moderately relativist view of knowledge (plurality and a certain subjectivity)" (p. 163, translated). Further to this, other researchers (e.g. Schommer, 1990) propose the multidimensionality of the construct of epistemological beliefs. In a meta-analysis, Hofer and Pintrich (1997) identified two core areas that underpin most of the models, including beliefs about the nature of knowledge with the dimensions of knowledge certainty and simplicity, as well as beliefs about the nature of knowing with the dimensions of source of knowledge and justification for knowing. Recent research in the domain of history has utilized a combination of both approaches for modeling epistemological beliefs by conceptualizing the beliefs as separate stages comprising several dimensions (Barzilai & Weinstock, 2015; Stoel et al., 2017).

The BHQ was developed by Maggioni (2010) and colleagues (Maggioni et al., 2004, 2009), and to date represents the measurement instrument for epistemological beliefs about history that has the best theoretical foundation, is the most well-known, and has been most frequently adapted for other languages. Based on psychological development models (King & Kitchener, 2002; Kuhn & Winstock, 2002) and the progression model for the concept "evidence" in history established by Lee and Shelmit (2003), three epistemic stances were developed. Maggioni (2010) defines these stances as "a system of beliefs about the nature and justification of knowledge that people entertain at a certain moment in time" (p. 6). The first epistemic stance is the *objectivist stance,* formerly known as the copier stance, which is characterized by the objectivist view that history is

an image of the past and can be understood directly from historical sources. According to this stance, a comprehensive understanding of the past can be formulated by collecting all the facts from primary sources. The second epistemic stance is characterized by a subjectivist idea of history. In the *subjectivist stance,* formerly known as the borrower stance, history simply arises from the interpretation and is dependent on the personal views, preferences, and causal inferences of the historian. In the third epistemic stance, the *criterialist stance*, history is viewed as a research process in which the past is reconstructed based on a discipline-specific method. In this stance, history is the result of a subject encountering an object, such as the selection, interpretation, and evaluation of sources by the historian. Therefore, underpinning the epistemic stances is the progression of ideas about history that, for each level, determines what is considered historical knowledge for an individual and how this knowledge is both generated and applied (VanSledright & Reddy 2014; VanSledright & Maggioni, 2016). It should be noted that these three epistemic stances can exist simultaneously and in different forms within individuals. Maggioni (2010) describes this situation as epistemic inconsistency. Indeed, this epistemic inconsistency is typical for novices in a domain, as they may still have unestablished, different, and sometimes divergent conceptualizations of historical knowledge. However, the findings of Stoel and colleagues (2017) indicate that even among history experts, conflicting epistemic views are held, especially regarding the subjectivity of history. This complicates the measurement of epistemological beliefs in the domain of history.

Empirical assessment of epistemological beliefs in history education

In recent years, there has been increasing interest in the study of epistemological beliefs and their connection to historical thinking skills. Indeed, some studies have even examined the effectiveness of interventions that aim to promote both epistemic understanding and historical competencies (e.g. Mierwald, Lehmann, & Brauch, 2018; Stoel et al., 2017). In this domain, researchers have focused on secondary school and college students, as well as both training and practicing history teachers (VanSledright & Maggioni, 2016). In order to assess epistemological beliefs in history education, qualitative approaches are occasionally used, as well as the more common quantitative instruments.

For example, researchers in educational psychology often use a fictional historical scenario called the Livia problem to classify students as “absolutists”, “multiplists”, or “evaluativists” based on their responses (e.g. Ioannou & Iordanou, 2019; Iordanou, Muis, & Kendeou, 2019; Kuhn, Iordanou, Pease, Wirkala, 2008; Kuhn, Weinstock, & Flaton, 1994). Furthermore, Barzilai and Weinstock (2015) developed a closed-format Epistemic Thinking Assessment (ETA) based on Kuhns et al.’s (2000) developmental model of epistemic understanding integrated with the multidimensionality of epistemic thinking. In addition, researchers across different domains, such as history and biology, have used questionnaires to measure epistemological beliefs that are based on Schommers (1990) considerations about the dimensionality of the construct (Buehl, Alexander, & Murpy, 2002). Finally, questionnaires have also been developed focusing on sub-aspects of epistemic cognition, such as beliefs about the value of integrating information across multiple documents in history (Wiley, Griffin, Steffens, & Britt, 2020).

In history education itself, there is a wide range of possibilities for examining epistemological beliefs. Indeed, history educators have used interviews, class observations, and, more frequently, questionnaires for this purpose (e.g. Maggioni, 2010; Maggioni et al., 2004, 2009; Miguel-Revilla et al., 2020; Nitsche, 2019; Nokes, 2014; O’Neill, Guloy, & Sensoy, 2014; Stoel et al., 2017; Voet & De Wever, 2016). It should be mentioned that qualitative and quantitative methods can also be combined depending on the research question. In particular, the BHQ (Maggioni, 2010) has become important for research on epistemological beliefs in history. The BHQ represents a refinement of an earlier questionnaire that was used to assess the beliefs of primary school teachers about the teaching and learning of history (Maggioni et al., 2004, 2009). The questionnaire consists of 22 items based on the three epistemic stances, including objectivist, subjectivist, and criterialist stance, and is used to measure epistemic beliefs in history among secondary school students and history teachers, both prospective and practicing (e.g. Maggioni,

2010; VanSledright & Reddy, 2014; VanSledright, Burkholdt, & Montgomery, 2018). Previously, history educators have translated and adapted the questionnaire for different languages (Mierwald, 2020; Mierwald et al., 2016, 2017; Kidwai, 2015; Miguel-Revilla et al., 2017, 2020; Namamba & Roa, 2016; Stoel et al., 2015, 2016) and even developed new questionnaires from it (Nitsche, 2019; Stoel et al., 2017).

However, several problems have been identified in the use of the BHQ in research studies. Regarding construct validity, a factor analysis using the original questionnaire with a sample of 66 history teachers suggested a division into two factors; the first factor included the subjectivist and the objectivist items, and the second factor contained the criterialist items (Maggioni, 2010). Further validation of the German version of the questionnaire using a sample of 124 secondary school students also suggested such a two-factor solution, including both naïve and developed epistemic beliefs. However, an adaptation of the questionnaire for a sample of 272 prospective history teachers in Germany resulted in a three-factor solution and, thus, a subdivision including all three epistemic stances (Mierwald et al., 2016, 2017). Importantly, for this questionnaire, the contrast between the objectivist items and the subjectivist items was increased by changes to the item wording. Based on these studies, the contrast between the subjectivist items and the objectivist items was strengthened further by slight adaptations to the translation and the addition of three new items (i.e., two objectivist items and one criterialist item) in order to optimize the instrument for use with secondary school students. Following this, exploratory factor analysis in an intervention study with a sample of 161 students revealed a three-factor structure of the instrument with sufficient to good reliability of the factors (Mierwald, 2020). In a recent study with 92 students, a three-factor solution and similar internal consistency of the factors was also reported (Behrendt & Brauch, 2020). However, in studies using Dutch and Spanish translations of the questionnaire, it was observed that factor loading of single items was problematic, and there was low reliability, especially for the objectivist scale (Miguel-Revilla et al., 2017, 2020; Stoel et al. 2015, 2016). This result similarly applies to the new German-language student questionnaire (Mierwald, 2020).

Previously, researchers assumed that these problems may have arisen from shifts in the meaning as a result of translating the BHQ. Indeed, difficulties may be caused by differences in understanding of the items in the US context, for which the questionnaire was originally designed, and in other countries (Stoel et al., 2016), as well as by slight adaptation of the items (Mierwald et al., 2017). Additionally, the mix of items could also prove problematic, as they are mainly related to the domain of history, but some also focus on the educational context (Miguel-Revilla et al., 2020). Furthermore, the theoretical background of the questionnaire has been criticized. For example, Stoel et al. (2017) outlined the ambiguity of the subjectivist items, "…acknowledging the subjective character of historical knowledge can both reflect naïve beliefs (i.e., history as opinion) but also more nuanced beliefs (i.e., historical knowledge as interpretative and constructed)" (p. 123).

Based on these issues, history educators have emphasized that further research is required in this area (Miguel-Revilla et al., 2020; Stoel et al., 2017). Cognitive interviews have been shown to be effective in verifying the comprehensibility of questionnaires and identifying difficulties with items, which is important to understand and address the root of these problems (Barzilai & Weinstock, 2015; Greene & Yu, 2014).

Method

Design

We conducted cognitive interviews based on the problems with the validity and reliability of the BHQ outlined above.[3] In previous studies, cognitive interviewing or cognitive pretesting was found to be helpful for assessing the cognitive validity of questionnaires used to assess epistemological beliefs (Barzilai & Weinstock, 2015; Greene & Yu, 2014; Greene, Torney-Purta, Azevdeo, & Robertson, 2010). Cognitive interviewing is a method for examining the

comprehensibility of the individual items in a questionnaire and identifying the potential problems with them. In this way, it can be determined whether the items are interpreted as intended by the questionnaire respondents, in line with their theoretical background (Beatty & Willis, 2007; Willis, 2005; Woolley, Browen, & Browen, 2006). Therefore, the goal of our approach was to investigate and improve the cognitive validity of the self-report items of the German version of the BHQ (Karabenick et al., 2007). Specifically, we used a combination of a think-aloud procedure as the students filled out the questionnaire and semi-structured interviews or follow-up probes to obtain in-depth information regarding the students' understanding (Beatty & Willis, 2007).

Participants

A sample of four students in eleventh grade (1 female, 3 male) from two different secondary schools participated in the cognitive interviews. These students were attending the highest-level educational track in the German secondary education system (i.e., Gymnasium) and were in the final years of their formal history education. The average age of the students was 17 years. This sample was chosen because the German-language version of the BHQ was designed for this target group. In addition, foreign-language versions of the BHQ are often conducted with students of this age (e.g. Stoel et al., 2016). We acknowledge that our sample size is very small. However, it should be noted that cognitive interviews are designed to elucidate the thoughts and provide a deeper understanding of a few participants rather than be representative (DeMaio et al., 1993). Therefore, smaller samples are often used, although these samples should cover a variety of characteristics relevant to the goal of the study, such as performance level and language skills (Beatty & Willis, 2007; Willis, 2005). In our study, the students who took part in the interviews were recruited by their history teachers at the request of the second author. The selection criteria were communicated to the teachers to appropriately evaluate the cognitive validity of the BHQ. Firstly, the study aimed to interview students with different levels of achievement in history, assessed by their history courses and grades. Furthermore, participating students had to be native German speakers so that any understanding difficulties with the BHQ could not be due to general language skills. Finally, the selected students had to be considered by their teachers as open-minded enough to think deeply about the questionnaire and verbally express their thoughts about it. Detailed information on the sample is presented in Table 1.

TABLE 1: Overview of the personal characteristics of the participants

Characteristics	**Ben**	**Paul**	**Sarah**	**Alex**
Age	17	17	17	17
Gender	male	male	female	male
Course type in the subject history	basic course	advanced course	basic course	advances course
Points in the subject history	13	4	14	7
Criterialist stance (*M*)	5.11	5.44	5.67	4.67
Subjectivist Stance (*M*)	3.56	3.11	3.56	2.78
Objectivist stance (*M*)	2.20	4.80	4.00	4.40

Notes: Advanced courses are taught five hours a week while the basic courses for only three hours a week. This means that the advanced course covers historical topics in greater depth than the basic course. Points are an equivalent of the grades in German secondary school system, ranging from 15 = best to 0 = worst. The mean values (*M*) of the three epistemic stances are on a scale ranging from 1 = strongly disagree to 6 = strongly agree.

Instrument

In this study, we used a German version of the original English BHQ by Maggioni (2010). We refined an earlier translated version of the instrument (Mierwald et al., 2017). In this process, small changes in the formulation of existing statements were made to enhance the applicability of the items to German secondary school students, and three new items were added. The entire questionnaire, including the changed and added items, can be found in Table 3 (see also the note below the Table). These changes were made to the German version of the BHQ because the first version indicated only two epistemic stances, and the two-factor idea was established based on this result. The first factor is related to differentiated beliefs, containing all criterialist items, and the second factor is related to naïve beliefs, containing the subjectivist and objectivist items. Although the internal consistency of the factors in scales that were created later was satisfactory, it was observed that the objectivist items did not contribute much to supporting the factor of naïve beliefs (Mierwald et al., 2017). Therefore, changes were enacted to improve the validity and reliability of the German language version of the questionnaire. Indeed, firstly, the changes enhance the contrast between the objectivist items and the subjectivist items on a linguistic level. Secondly, three new items (i.e. two objectivist items and one criterialist item) were added based on the theoretical background of the instrument to strengthen the reliability of the respective scales. Following modification, the final instrument contained a total of 25 items. When answering the questionnaire, students expressed their agreement or disagreement with pre-formulated statements on a 6-point Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The statements were designed to exemplify the *objectivist*, *subjectivist*, and *criterialist stance* (see Table 3).

An exploratory factor analysis (EFA) was utilized to determine the factor structure of the instrument, as previous studies using foreign language adaptions of the questionnaire have identified different factor structures. Previously, an EFA with a sample of 161 students in a pre-post quasi-experimental intervention study (Mierwald, 2020, p. 324f.) revealed a three-factor structure of the instrument with sufficient to good reliability of the factors (objectivist scale [5 items]: $\alpha_{pre} = .53$, $\alpha_{post} = .59$; subjectivist scale [9 items]: $\alpha_{pre} = .78$, $\alpha_{post} = .83$; criterialist scale [9 items]: $\alpha_{pre} = .70$, $\alpha_{post} = .81$). Two items in the objectivist scale loaded against our theoretical assumption of three separate epistemic stances, so we decided to exclude these items. In addition, two criterialist items showed high cross-loadings on the objectivist factor. The objectivist scale did not reach an appropriate value for reliability recommended for standardized tests. However, it should be noted that studies measuring epistemological beliefs frequently work with lower reliabilities (i.e., less than .70) because of the complexity of the construct, so the reliability of the scale can be seen as still accepTable (e.g. Shraw 2013).

Procedure

The second author met with the history teachers, explained the study and was able to recruit suiTable participants for the cognitive interviews through them. The recruited students were asked about their willingness to participate in the interviews. In addition, written consent was obtained from parents for the students' participation in the study. Participants were interviewed during their regular class time in separate rooms. The second author, a trained student finalizing his Master of Education in History and German with experience in this field, interviewed each student. The individual interviews were conducted in the spring of 2018.

Each interview began with the students completing a questionnaire to obtain socio-demographic information, and an identification code was generated for each student to guarantee the anonymity of the collected data. In the first phase of the interview, the students were asked with written instructions (see Appendix A) to read each item of the BHQ aloud, mark their agreement or disagreement with the given statements, and verbalize the thoughts that came into their minds while they answered. The second phase was the semi-structured interview. For this purpose, an interview guide (see Appendix B) was used, which divided the interview into three parts. Firstly, in order to begin the interview in an easy way for the students, they were asked

about their general impressions of the whole questionnaire and the "thinking aloud" component. The main part of the semi-structured interview then included more specific questions about items that were either unexpected or not clearly assigned during factor analysis. Specifically, the questions focused on the two objectivist items that loaded on the factor for the subjectivist stance in the factor analysis (items 19 and 20), as well as the criterialist items that had high cross-loadings on the objectivist stance (items 18 and 21). Furthermore, the interviewer asked the students about important features that they noticed during the think-aloud component of the first phase. These questions related to the phrase "reconstruction of the past" that the students read in the questionnaire, as well as other such terms that may have influenced their assessment behavior. In order to end the interview process for the students, they were asked about their general understanding of history. With the consent of the students and their parents, the cognitive interviews were audio-recorded to enable accurate analysis of the verbal data afterward. The cognitive interviews lasted on average 43.21 minutes (*SD* = 10.08).

Analysis

The four recorded interviews were transcribed into text form with the software f4 (Dresing & Pehl, 2015). The data from the students thinking aloud in the first phase of the cognitive interviews were used as the basis for the thematic analysis. For the thematic analysis of the interviews (Kuckartz, 2014), we used a coding scheme comprising seven categories to identify the different types of problems associated with the items of the BHQ (research question 2). Our coding scheme was developed based on theoretical considerations from the literature, thus dividing the problems with the questionnaire into the four categories of comprehension, recall, judgment, and response selection (DeMaio & Landreth, 2004; Jabine, Straf, Tanur, & Tourangeau, 1984; Willis, 2005). In addition to these categories, we used an already existing coding scheme by Anschütz (2012). The first draft of the whole coding scheme was initially tested, discussed, and adapted using one of the interview protocols. The final coding scheme (see Table 2) was then independently applied by the first and second authors to the entire dataset.

TABLE 2: Coding scheme for questionnaire evaluation

Category	Subcategory	Description
No Problems	-	The students' statements indicate that the item was understood in the intended sense. Students can express the content of the item in their own words and give reasons for their opinion. They can add explanations, statements or examples from school or everyday life that reflect the meaning of the item presented. No significant problems can be identified in the statements of the person interviewed.
Understanding difficulties	**words and technical terms**	The students do not know a word *or* do not understand what is meant by this word in the context of the item. The students say that they find a word or phrase difficult to understand. They do not know a technical term in the item or have problems understanding the meaning of the technical term.
	misunder-standing	The students interpret an item statement differently from intended meaning of the item. They can add examples or explanations that show that their understanding does not correspond to the content or intention of the item. They need not be aware that they have misunderstood the item. This can also mean that they interpret the content or the epistemic beliefs (criterialist, subjectivist, or objectivist stance) of the item differently from the intended meaning (e.g., when an item aims at subjectivist stance and the students interpret the item statement as a criterialist stance).
	incomprehension	The students explicitly state that they do not understand all or part of the item's message. They do not know for sure what is meant by the item presented.
Reply difficulties	**reply format**	The students have difficulties in answering the item because of the answer's format (e.g., by double negation) *or* may say that they have misunderstood *or* do not fully understand the scale gradation (e.g. by labelling).
	uncertainty of response and explanation	The students are unsure of their answers to the item. They may think that the item cannot be answered in this way or may not know this. They may have an opinion on the statement presented, but do not really know how to answer it due to their level of knowledge, or they may state that they have no previous experience.
Assignment not possible	-	It is not clear from the students' statements whether the item was understood. They use the same words and phrases as it is present in the given items. The students say that they understood the meaning of the item, but do not explain how they understood the meaning of the item or why they arrived at the chosen answer.

For the content analysis of the students' answers from the semi-structured interviews, we used a technique of summarizing and inductive category formation from Mayring (2014). The authors independently prepared the summaries from the interviews. Additionally, the students' answers were categorized into positive and negative aspects depending on their impressions of the BHQ (research question 1) and their understanding of individual problematic items in yes/no form (research question 3). Following this, we compared the independent summaries and categorizations.

The inter-rater reliability (Cohen's κ) between the two raters for measurement of the entire dataset varied across all the categories from a minimum of $\kappa = .62$ to a maximum of $\kappa = 1.00$ (corresponding to "substantial" to "perfect" inter-rater reliability; Landis & Koch, 1977). Any disagreements concerning the coding between the raters were resolved through discussion, and a consensus was reached for all of them.

Results

General impressions of the BHQ

During the interviews following the thinking aloud section, the students discussed various positive and negative aspects of the questionnaire when asked to give their general impressions. Sarah and Paul reported that the questionnaire had a clear design and the items were mostly short and easy to understand. Furthermore, Paul emphasized that the answer options were easy to handle because they were based on a German grading scale. Alex even reported that he found using the questionnaire interesting in terms of thinking about what history is and how to study history appropriately, rather than just discussing content in history lessons.

However, Sarah, Ben and Alex expressed negative concerns about some items being very similar in their content. The students also presented criticisms relating to uncertainties in the understanding of certain terms in the questionnaire (i.e., Sarah: "history"; Paul: "historical facts"; Ben: "research methods"; Alex: "evidence"). Additionally, Paul stated that items 18 and 20 utilized very long sentences, meaning that he had to read the items several times to fully understand their meaning.

Understanding of the BHQ and problems with individual items

We used the coding scheme described in the method section for the analysis of the data from the thinking aloud section in the first phase of the cognitive interviews. Certain general observations were derived from the absolute frequency distribution of the categories per item (see Table 3). Firstly, in most cases (73) the four participating students had no problems with the items of the BHQ, meaning that the students understood them according to their intended meaning. Fourteen out of 25 items were found to be unproblematic based on the students' statements. In addition, it is of note that all of the items were understood by at least one participant, showing that there was always at least one student who understood each item. Secondly, the absolute frequencies demonstrated that there were some problems with individual items, which mainly arose due to difficulties in understanding (18 cases). These difficulties predominantly included misunderstandings and problems in relation to certain words and technical terms, but difficulties in responding to the items were less frequent. Indeed, there were only 5 cases where students were uncertain in their responses and explanations. However, in 4 cases, no assignment was possible due to the students' reports. Thirdly, in terms of the three scales (*criterialist*, *subjectivist*, and *objectivist*), we observed that the objectivist scale presented the main problem. For this scale, only 3 out of the 7 items could be classified as appropriate. For the criterialist scale and the subjectivist scale, 5 and 6 out of a total of 9 items were considered unproblematic, respectively. However, it is important to understand exactly which features were problematic regarding the remaining 11 items.

TABLE 3: Frequency and nature of problems experienced by students for individual items and subscales of the German Beliefs about History Questionnaire (BHQ_G)

Items	No problems	Understanding difficulties			Reply difficulties		Assignment not possible
		Words and technical terms	Misunder-standing	Incom-prehension	Reply format	Uncertainty of response and explanation	
Criterialist Scale							
1. It is fundamental that students are taught to support their reasoning with evidence.	4	0	0	0	0	0	0
3. A historical account is the product of a disciplined method of inquiry.	1	0	1	1	0	1	0
7. Students need to be taught to deal with conflicting evidence.	4	0	0	0	0	0	0
11. History is a critical inquiry about the past.	2	0	0	0	0	1	1
13. Comparing sources and understanding author perspective are essential components of the process of learning history.	4	0	0	0	0	0	0
15. Knowledge of historical method is fundamental for historians and students alike.	4	0	0	0	0	0	0
18. Reasonable accounts can be constructed even in the presence of conflicting evidence.	4	0	0	0	0	0	0
21. History is a reasonable reconstruction of past occurrences based on available evidence.	3	1	0	0	0	0	0
24. Historians reconstruct the past based on regulated research methods.*	1	0	1	0	0	2	0
Subjectivist Scale							
2. History is simply a matter of interpretation.	1	1	1	0	0	1	0
4. Students who read many history books learn that the past is what a historian makes it to be.	2	0	1	0	0	0	1
6. Good students know that history is basically a matter of opinion.	4	0	0	0	0	0	0
8. Historical claims cannot be *substantiated*, since they are simply a matter of interpretation.	1	2	1	0	0	0	0
10. Since there is no way to know what really happened in the past, *students can choose whatever story they believe.*	4	0	0	0	0	0	0
12. The past is what the historian makes it to be.	4	0	0	0	0	0	0
14. It is impossible to know anything *with certainty* about the past, since no one of us was there.	4	0	0	0	0	0	0
17. Students need to be aware that history is essentially a matter of interpretation.	4	0	0	0	0	0	0
22. There is no evidence in history.	4	0	0	0	0	0	0
Objectivist Scale							
5. Disagreement about the same event in the past is always due to lack of evidence.	4	0	0	0	0	0	0
9. Good general reading and comprehension skills are enough to learn history well.	2	0	2	0	0	0	0
16. The facts speak for themselves.	1	1	2	0	0	0	0
19. Even eyewitnesses do not always agree with each other, so there is no way *of knowing* what happened *in the past*.	4	0	0	0	0	0	0
20. Teachers should not question students' historical opinions, *but only check whether they know the historical facts.*	1	1	1	0	0	0	1
23. Differences in historical accounts result from absence or falsity of historical facts.*	4	0	0	0	0	0	0
25. History consists of the sum of collected historical facts.*	2	0	1	0	0	0	1
Total	73	6	11	1	0	5	4

Note: The formulations in italics indicate which changes were made in the German questionnaire compared to the original BHQ in order to strengthen the contrast between objectivist and subjectivist items. The marked items (*) were added to the corresponding scales.

Criterialist Scale: Regarding the items in the individual scales, items 3, 11 and 24 of the criterialist scale were observed to be problematic. Item 21 ("History is a reasonable reconstruction of past occurrences based on available evidence.") can be excluded here, as only Paul had slight difficulty explaining the meaning of "reconstruction (of past occurrences)". Although this term may be difficult for students to define, the other three students demonstrated that it could be understood through the context and wording of the item. However, item 3 ("A historical account is the product of a disciplined method of inquiry.") caused greater issues. For example, Sarah showed uncertainty about her response for item 3, as well as for items 11 and 24. In the case of item 3, her uncertainty resulted from the fact that she did not fully understand the term "historical accounts" nor know to what extent a historian should have done "subject-specific research" or "studied" to produce their texts. Ben reported that he did not understand the item because of the phrase "disciplined method of inquiry". However, he assumed that this was related to critical appraisal of sources. Alex made a statement suggesting that he misunderstood the item, as he confused historical accounts with primary sources and said that historians would write these sources.

Further to item 3, two students had difficulties with item 11 ("History is a critical inquiry about the past."). Indeed, Sarah was unsure of how to respond to the item. Although she agreed with the item and reported that she had been taught this in class, she experienced confusion regarding the term "history" and the phrase "a critical inquiry about the past". Paul reported that history is "always a critical inquiry about events". Moreover, he added, in general terms, that "historians or reporters should be critical of historical or political events". Therefore, his understanding of the items was unclear, making it difficult to assign his response to a coding category.

Finally, item 24 ("Historians reconstruct the past based on regulated research methods.") also caused problems for the students. Sarah reported that she could not assess the extent to which historians use "regulated research methods", and this view was shared by Ben. In relation to this, Sarah reported:

> I can't really say anything about this, because I'm only at school. I have little to do with historians, except with my history teacher who once studied history. I would now say that this is true. At least when you write a text in an exam, you make sure that a certain form is followed to meet criteria and so that everything seems more or less well-founded.

In this statement, Sarah compared the research methods of historians with the formal guidelines for writing texts in history exams. However, the research methods used to reconstruct the past are not clear from her statements. Alex misunderstood the item and thought that primary sources are written based on the research procedures of historians. In this way, he appeared unable to clearly distinguish between the concepts of "primary source" and "historical account", nor was he able to explain the meaning of regulated historical research methods.

Subjectivist Scale: Regarding the subjectivist scale, items 2, 4 and 8 can be considered problematic based on the results. For item 2 ("History is simply a matter of interpretation."), both the terms "history" and "interpretation" caused difficulties. Sarah experienced particular problems with the term "history" due to her school experiences. Indeed, during the thinking aloud section she reported:

> This is difficult to answer because I wonder how history is defined. In our class, there are discussions about history or working with primary sources. So, I think that this is true. But especially in school, we are taught views. A lot of teachers tell us: "So and so it was in the past". Consequently, there is not so much room for interpretation at school.

Alex was unsure how to answer the same item because his views were equivocal. Indeed, he stated that history is based on evidence, but, contrastingly, he acknowledged that there are always opportunities for interpretation. Based on Pauls' statements, it appears that he misunderstood both terms:

> I understand the item to mean that history can be understood in several ways. In the subject history, there are actually rather few different interpretations. Of course, there are different areas of history. There is military history, there is the history of any country, especially of any people. These could be different interpretations of history. But I think in itself that history is always something historical, a certain point in time, a certain person, so the interpretation is always the same.

As is clear from the statement, this student's explanations of the concepts of "history" and "interpretation" were vague. For example, Paul reported that there are different "areas" for which "interpretations" occur, but he did not explain what these interpretations are. In contrast, he approximately equated history with the past. In the end, it was clear that this student understood the item more as an objectivist rather than a subjectivist item. Overall, Paul appears to conceptualize history like a fixed fact, meaning that the interpretations of the past should always be the same.

Two students experienced problems with item 4 ("Students who read many history books learn that the past is what a historian makes it to be."). Sarah deviated from the core meaning of the item and began thinking about her history lessons, so her statements could not be assigned to any category of the coding scheme. In Ben's case, whether he understood the item as an item from the subjectivist scale or the criterialist scale was unclear. He reported that "Depending on what you read and in which country you are hearing the history, historiography is already a little different. For example, when you look at the colonies, they have a different view of the past of the colonies compared to Great Britain." One can conclude from this statement that Ben was aware that historiography exists and that it arises from different interpretations that depend on individual perspectives.

Regarding item 8 ("Historical claims cannot be substantiated, since they are simply a matter of interpretation"), three students showed difficulties. Alex's interpretation of the item was ambiguous regarding whether historical claims originate directly from primary sources or represent contemporary claims about the past. Although the latter is in line with the intended meaning of the item, Alex did not decide on a meaning in his further interpretation of the item. Sarah expressed criticisms regarding the word "historical" in the context of the item. She commented:

> Well, claims are always something that is very subjective. Therefore, they are of course a matter of interpretation. But theoretically, "historical" always means that something should have been researched. But if there is a lack of information or there is little source evidence, then it is definitely a matter of interpretation.

Sarah justified her agreement with the item by referring to the general subjectivity of all claims. Concurrently, she referred to the fact that history is based on research. Ultimately, she believed that gaps in understanding can be filled using interpretations. Therefore, Sarah was also unsure what "historical claims" meant in the context of the item. Paul also misunderstood the same, assuming that historical claims arise from the individuals involved in the history themselves.

Objectivist scale: For items 9, 16, 20 and 25 in the objectivist scale, it was found that the students had some problems giving answers. Sarah and Paul misunderstood item 9 ("Good general reading and comprehension skills are enough to learn history well."), as they did not understand the item as intended in terms of directly extracting knowledge from primary sources to learn about the past. Instead, it was clear from their answers that they understood "general reading and comprehension skills" as referring to the critical-analytical competencies used when working with historical media. This suggests an interpretation of item 9 that is more typical of the criterialist stance than the objectivist stance. In this regard, Sarah reported that "In history lessons, we have to read a lot and understand these texts. I think that if you can't get along with these texts, you can't acquire knowledge. On the other hand, we also have caricatures, for which you need good comprehension skills." Similarly to Sarah, Paul did not consider the word "enough" but emphasized that good reading and comprehension skills are necessary to reconstruct historical

processes, understand the political and economic aims of wars, and to be able to understand historical contexts.

Item 16 ("The facts speak for themselves.") was also found to present problems. Firstly, Sarah had issues with the term "historical facts". Indeed, more precisely, she was not sure to what extent historical facts relate to source evidence. Even for Paul and Alex, the term "historical facts" remained unclear, thus leading to vague interpretations. For example, Paul described his understanding of the item as follows:

> My understanding is that historical facts are largely the core statement of historical events. Even if historians or persons talk about historical facts and give their own interpretation of them, the historical proof is actually the most fundamental. All opinions or reports are based on it. That is why I agree with it if the own interpretation is present.

From this statement, it is not clear to what extent the item is interpreted as an objectivist item or expresses beliefs more typical of the subjectivist or criterialist stances. Overall, Paul modified the content of the item in his understanding and agreed with the item for reasons that were not apparent from the item.

The interpretation of item 20 ("Teachers should not question students' historical opinions, but only check whether they know the historical facts.") was also challenging for the students. Ben related the content of the item to his own history lessons and discussed his ideas about what methods would be better for studying history. Therefore, it was not possible to assignment his response to a category of the coding scheme. Sarah also related the item to her own history lessons and said that agreement with this statement depends on the teacher. As with item 16, she emphasized that she would not know what "historical facts really are now". Finally, Paul misunderstood the item because he read over the phrase "should not", stopped following the first part of the sentence, and then related the item to his own ideas about what constitutes good history teaching. In general, the item appears too long in its wording and, due to its relation to the school context, it may encourage the students to express personal opinions instead of considering the item's content.

In contrast to item 20, item 25 ("History consists of the sum of collected historical facts.") appeared less problematic. Paul and Ben had difficulties with this item, as they struggled with the term "historical facts" again. When thinking aloud, Paul repeated and reformulated the content of the item, thus making it difficult to assign his response to a category of the coding scheme. Ben agreed with the item but interpreted it more as a subjectivist or criterialist item rather than objectivist. He explained that there are no facts in history, only opinions that must be justified and interpreted carefully. Therefore, for this student, history is derived from "what can be deduced from the collection of sources".

Perception of problematic items from the exploratory factor analysis (EFA)

In an exploratory factor analysis from an earlier study, which used data from the BHQ and a sample of 161 students, four items showed unusual loadings (Mierwald, 2020). Specifically, items 19 and 20 of the objectivist scale loaded unexpectedly on the factor uniting all subjectivist items. Additionally, items 18 and 21 of the criterialist scale showed high cross-loadings on the factor that includes all objectivist items. Based on these findings, our students were questioned in-depth about these items during the semi-structured interviews.

During the thinking aloud section, item 19 ("Even eyewitnesses do not always agree with each other, so there is no way *of knowing* what happened *in the past*.") was correctly understood and explained by all four students. Furthermore, this did not change when they were asked again about their understanding in the interview section. Theoretically, the students may have interpreted the item to mean that, if you cannot know what happened in the past, only your own views of the past matter. Indeed, this type of interpretation could explain why the item loaded on the subjectivist factor. In our interviews, the students did not express such strong subjectivist

views of the item. However, a few statements from Paul and Alex may indicate that they believe there are ways for historians to find out what happened in the past, suggesting some subjectivism in their understanding of the item.

As mentioned previously, Sarah, Paul and Ben had significant difficulties understanding item 20 ("Teachers should not question students' historical opinions, *but only check whether they know the historical facts."*). Firstly, the reference to the school context appeared problematic for this item, as the students tended to express their experiences with history lessons and teachers rather than addressing the actual message of the item. For example, Paul said: "I ticked 'I strongly disagree' because I don't like to learn things by heart and of course I want the lessons to be a bit interesting." Secondly, the students were unsure of the meaning of the term "historical facts". Their statements regarding this term ranged from "what is already certain from the past" (Sarah), "probable truth" (Ben) to "dates", "treaties like the Treaty of Versailles", "events like the discovery of America" and "quotes by politicians and kings" (Paul). These statements suggest that the students had diverse and varied understanding of the term "historical facts". It is also possible that the contrast between "historical opinions" and "historical facts" in the item led to it being associated with subjectivist views, thus potentially explaining the incorrect loading of the item on the subjectivist factor.

Item 18 ("Reasonable accounts can be constructed even in the presence of conflicting evidence.") showed a high cross-loading on the factor which all objectivist items loaded onto in the factor analysis. In this item, the focus on "evidence" may attract the students' attention rather than the term "reasonable accounts". This, in turn, may have led the students to associate the item more with objectivist views. Although this item did not cause many difficulties during the thinking aloud section, it should be noted that Sarah and Paul considered the term "evidence" for a long time during the semi-structured interviews. When explicitly asked about their understanding of the term, they appeared to find it difficult to explain. For example, Sarah reported:

> Evidence is something that is already definite in my eyes. [...] Instead of evidence, one can also say proof synonymously. Thus, already something, for which there are several facts, which speak for itself. Now, I actually find it difficult to say what evidence is. Particularly since this is to be conflicting.

Item 21 ("History is a reasonable reconstruction of past occurrences based on available evidence.") could be explained correctly by almost all students. Only Paul, as noted above, showed ambiguities in his understanding. When asked what a "reconstruction" is during the interview section, his answer fluctuated between "reproduction of any event based on available source evidence" and "self-interpretation of sources". Overall, a high cross-loading of the item onto the objectivist factor could be due to the item's strong emphasis on the importance of evidence, which could have led to an implicit objectivistic interpretation of the item.

Interestingly, all the items showing unusual loadings (items 18, 19, 20 and 21) were presented next to each other and at the end of the questionnaire. Therefore, it is possible that the order of the items influenced their interpretations. In addition, the large number of items in the questionnaire may have caused a reduction in concentration and, thus, inaccuracies in the students' interpretations.

Discussion and Conclusions

Summary and interpretation of the findings

In summary, the translated and adapted BHQ was designed effectively for our sample of German-speaking students, the Likert response scale was easy to use, and most items were clearly formulated and understandable. Furthermore, the problematic items were not equally difficult to understand across all the students in our cognitive interviews. Regarding the cognitive validity of the scales, coherent connections were identified between the students' interpretation and the intended meaning of most BHQ items.

However, some students had problems with individual items based on the results of the cognitive interviews. These problems were mainly due to difficulties in understanding some items and, to a lesser extent, difficulties in responding to them. It was found that items from the objectivist scale were more problematic than items from the criterialist and subjectivist scale. This may explain why the objectivist scale, or the factor which most objectivist items loaded onto, had relatively low reliability in the factor analysis. Furthermore, the sequential arrangement of the problematic items (18, 19, 20 and 21) at the end of the questionnaire could have influenced the students' responding behavior. Based on the results of this study, four overarching general and potential problem areas were identified, and corresponding items were assigned to them. Specifically, these problem areas represent potential issues that some students may experience difficulties with when interpreting the items. Some of the interviewed students struggled with these issues when they thought aloud about the items of the BHQ or were explicitly asked for their understanding. Additionally, in some cases, one item caused several potential problems.

The first problem area relates to the *complexity of terms*. This refers to the fact that some items (2, 3, 8, 11, 16, 18, 20, 21, 24 and 25) of the BHQ utilized terms that were abstract and ambiguous to the interviewed students. Such semantic problems often occur with questionnaire items (e.g. Willis, 2005), and they are also common for questionnaires that assess epistemological beliefs, as their items often relate to complex concepts such as "truth" or "expert" (e.g. Hyytinen, Postareff, & Lindblom-Ylänne, 2020). In the case of the BHQ, students are given items that relate to complex meta-concepts, such as "disciplined method of inquiry", "evidence", "interpretation", and "historical facts". As in other studies (e.g. Greene et. al., 2010; Muis, Duffy, Trevors, Ranellucci, & Foy, 2014), the students often refer to previous experiences in class or everyday life in order to understand these terms. Furthermore, students' prior knowledge of these meta-concepts in history is often implicit and incomplete, thus making them difficult to understand (van Drie & van Boxtel, 2008). Additionally, it is difficult for students to understand because the same terms occur in various items with different connotations (e.g. "History is a critical inquiry about the past." vs. "History is simply a matter of interpretation.").

Besides the complexity of terms, the *epistemic ambiguity* of items presented a challenge to the interviewed students. Epistemic ambiguity means that the wording of individual items (2, 4, 9, 16, 18, 19, 20, and 21) causes the item to be unintentionally associated with one or more of the other epistemic stances. Indeed, items can be formulated in such a way that the students do not focus on their intended core statement, as certain words or phrases may allow a different interpretation. For example, as in item 21 ("History is a reasonable reconstruction of the past occurrences based on available evidence."), the emphasis on the term "evidence" may cause the students to interpret the item in a more objectivistic way. This could also be related to a reinterpretation of items, which would be most consistently related to the students' prior knowledge or current epistemological beliefs (Barzilai & Weinstock, 2015). For some items, the students' difficulty in differentiating between the subjective and objective components of historical knowledge and knowing was also evident (Stoel et al., 2017).

Further to this, another problem relates to the *length and comprehensibility* of items (18 and 20), which caused problems for some of the interviewed students. For example, with item 20 ("Teachers should not question students' historical opinions, but only check whether they know the historical facts."), students may misunderstand the content because they may not understand the statement when they first read it, overlook certain words, or focus on only one part of the sentence.

Finally, some of the items (4, 9, 20) distracted the students from the item's message and made them think about school experiences or their opinions about history teaching. As mentioned in the literature, the issue of *irritating references to the school context* may lead to inconsistent response behavior (Miguel-Revilla et al., 2020). In our study, these sporadic references to the school context were found to be problematic for some respondents. This could also be related to the fact that these items address less epistemological beliefs and more beliefs about teaching and learning history (Nitsche, 2019).

Limitations of the study

The findings of this study were obtained using a small sample of four students from two secondary schools in Germany. Furthermore, we use a German-language version of the BHQ as the basis for our cognitive interviews. These factors limit the generalizability of the findings to other German students and students from other countries. For example, students from other educational tracks in Germany may experience problems completing the questionnaire that are different from the difficulties of the students interviewed in this study. Moreover, students from other countries may experience other types of difficulties with translated versions of the BHQ due to their socio-cultural and educational contexts. For example, it is conceivable that some of the complex historical meta-concepts, such as "historical facts", "evidence", or "account", may be more comprehensible to students from North America due to differences in history instruction (Seixas, 2016). However, the goal of this study was not specifically to generalize to other groups but to identify the potential strengths and weaknesses of the BHQ. For this purpose, we used a sample of secondary school students, as the German-language BHQ questionnaire was designed for this group (Mierwald, 2020), and this group is commonly used in studies assessing foreign-language adaptations of the BHQ (e.g. Stoel et al., 2016). An additional limitation is that this study did not consider the effects of instructional practices or teachers on the epistemological views of the students in our study sample (VanSledright & Maggioni, 2016). Overall, future research in this area may benefit from larger, more diverse samples that have been recruited systematically (Greene & Yu, 2014).

It should also be mentioned that the method employed in this study of asking the students to think aloud may have influenced the results (Funke & Spering, 2006). Two students reported no difficulties with this method. However, the other two students said that they may have answered the items a little differently in writing without giving verbal comments. Indeed, they reported that thinking aloud encouraged them to examine the questionnaire more intensively. Furthermore, the thinking aloud method depends on the participants' abilities to verbalize their cognitions. Regarding some items, the students' comments were very brief and, in some cases, it appeared that comments given on a previous item influenced their response to a later item. All of these factors complicated the researchers' interpretations of the student statements. Although we aimed to achieve objectivity through the coding scheme and the use of two raters, the experience of the raters with epistemic cognition may have influenced their interpretation of the thinking aloud protocols (Greene & Yu, 2014). Despite these issues, a range of potential problem areas was identified that may be helpful for improving the BHQ in the future.

Implications for research and practice

The problems with the items of the BHQ identified in this article are noteworthy in general. Firstly, they represent potential problems that may arise in the development of other self-report questionnaires. Secondly, questionnaires that assess epistemological beliefs may be particularly affected by these problems because they measure very complex and sometimes vague constructs (Mason, 2016), which inherently makes it difficult to formulate items that are clear and easily comprehensible.

In terms of future optimization of the BHQ items, certain important solutions have been identified for the potential problem areas. Firstly, researchers should reduce the *complexity of terms*, and we recommend rewording the BHQ to improve its clarity and interpretation (Barzilai & Weinstock, 2015). For example, terms could be reworded, such as texts by historians vs. historical accounts and claim about the past vs. historical claim. If possible, the definitions of relevant terms should be included in the instructions (Muis et al., 2014). The *epistemic ambiguity* identified in the BHQ could be addressed by increasing the emphasis on the intended epistemic stance for each item (Barzilai & Weinstock, 2015). This could be done by omitting terms that are strongly identified with other epistemic stances (e.g. avoid using the term "historical opinions" in objectivist items) or by utilizing qualifiers (e.g. emphasize subjectivist items by using phrases such as "not with certainty" or "you can believe what you want"). The issue with the *length and*

comprehensibility of some items could be solved by shortening or reformulating the items. Furthermore, *irritating references to the school context* should be removed from the affected items. In addition, due to the low reliability of the objectivist scale, we suggest the development and addition of further items in this stance. Indeed, the statements of the interviewed students could help with this task. Further to this, a new arrangement of the items at the end of the questionnaire could also be beneficial for the instrument and such changes should, in turn, be studied by cognitive interviews. These changes would also require further factor analyses with larger sample sizes to validate the newer versions of the BHQ.

Based on the results of the cognitive interviews, we suggest that historical meta-concepts should be thoroughly discussed with the students (e.g. Limón, 2002). As Stoel and colleagues (2017, p. 131) suggest, a stronger emphasis on the "epistemological dimension of historical inquiry" and the development of "pedagogies that incorporate classroom reflection on the nature and sources of historical knowledge" is also advisable in the domain of German history teaching.

In the future, the development of questionnaires to assess domain-specific epistemological beliefs may pose significant challenges for history education, both theoretically and methodologically. Importantly, we believe that the present study contributes to the improvement of the BHQ and other questionnaires based on this measurement tool.

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Appendix A

Before the students started to think aloud, they were given the following instructions, which were adapted from Sandmann (2011, p. 184):

> PLEASE THINK LOUD!
> Please tell us everything you think when you answer the questionnaire. Continue until you have assessed the last statement in the questionnaire.
> To do this, please READ ALOUD.
> Ideally, you should speak out your thoughts about the statements you have just assessed without interruption, i.e. as much as possible without pauses.
> However, you should not order your statements in any particular order before speaking, nor should you express your thoughts in a particularly comprehensible way, nor should you explain your thoughts to the interviewer.
> Imagine that you are ALONE IN THE ROOM and speaking only to themselves. It is important that you are ALWAYS SPEAKING.

Appendix B

1. **Warm-Up**
   - Now you have filled out the questionnaire and thought about it aloud. Thank you very much for your effort! Would you like to start with a general comment on the questionnaire?
   - Did you notice anything that you have not yet "thought aloud"?
   - What is the first thing you think of when you think back to filling out the questionnaire?

2. **General questions about the items**
   - In retrospect, were there any item in the questionnaire that were difficult for you to understand? (Can you find them again? Why were the item difficult to understand?)

3. **More detailed questions about problematic items**
   - Let us take a closer look at item 19 again. Please describe in your words what should be assessed. How do you understand this item?
   - Let's go straight on to item 20: Why did you check the box like you did? What are "historical facts" for you?
   - Please explain why you agreed/disagreed with item 18. What did you think source evidence is? Can sources be contradictory?
   - To the last item: How do you understand item 21? There the "reconstruction of past events" appears. What do you understand by this?

4. **Closing**
   - We come to the end of the interview: Imagine your little brother coming into the fifth grade and getting history as a new subject. How would you explain what the subject history is about?

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Endnotes

[1] The names of students who participated in our study were anonymized.

[2] The student quotes in this article were translated from German into English.

[3] The interviews from this study are taken from the thesis of the second author, which was written under the supervision of the first author. The present study is based on a re-analysis of the data.

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Development and validation of a practical classroom assessment of students' beliefs about differing historical accounts

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ABSTRACT

History teachers in multicultural societies are increasingly responsible for facilitating students' awareness of and understanding of multiple accounts of the same, or related past events. The primary goal of the Historical Account Differences questionnaire is to help history teachers assess their own students' beliefs about why accounts can differ, and the effectiveness of lessons and units aimed at developing students' epistemological conceptions about such accounts. The theoretical underpinnings, design and validation of the questionnaire are discussed. As part of the validation, responses were provided by 899 Canadian students from 8th grade through postsecondary studies. Findings failed to support the hypothesis of strict stage-like progression in students' conceptions claimed by the developmental theory on which the instrument was based. However, other claims implicit in the theory were supported. Theoretical and practical implications are discussed.

KEYWORDS

Classroom assessment, epistemological conceptions, historical accounts, history teaching, developmental theories, dimensional theories

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Introduction

> The past makes itself accessible to us in the present via residue in the form of accounts. (VanSledright 2015, p. 81)

Historical accounts often have a central place in history teachers' practice. Narrative is a central way of understanding human experience in time (Cronon, 1992); but helping students to understand the nature of historical accounts has always been challenging work. This task is particularly challenging in multicultural societies today, which arguably have multiple pasts (Conrad, Ercikan, Friesen, Létourneau, Muise, Northrup, & Seixas, 2013). As societies have better recognized their diversities, educators have faced growing demands to facilitate their students' awareness and understanding of multiple accounts of the same, or related past events (Banks, 2008; Seixas, 2004; Takaki, 1993).

Textbooks have traditionally offered a single, univocal narrative in the impersonal "voice of history" (Wineburg, 1991); but even there, sidebars today invite students to consider different, related stories – to say nothing of accounts from popular media and other sources. For example in Canada, high school students read textbooks that tell the story of their history as beginning when Europeans boldly set forth to tame a "new" land, heroically surmounting many hardships, including resistance from Indigenous peoples. At the same time, there is growing recognition (including in official federal government reports) that these "heroes" were systematically eradicating culturally advanced Indigenous nations that pre-dated European colonization by thousands of years, and repeatedly violated agreements they made with them. Such differing accounts bring urgency to the question: How well are students equipped to appreciate differing historical accounts, and their increasing prevalence in history teaching and society at large?

In practice, openness to the multiplicity of historical accounts (or what Chapman (2017) alternatively terms "interpretations") carries risks which educators must manage in an informed manner. Without a mature understanding of why various carefully-researched historical accounts might differ, there is a chance that students will respond to them by hardening to either a cynical view of the accounts they are presented with (e.g. "history is written by the victors") or an "anything goes" conception according to which all accounts are equally valid in principle, and everything is a matter of perspective (Lee & Shemilt, 2004; Maggioni, VanSledright, & Alexander, 2009; Chapman, 2017). Such conceptions not only render the discipline of history meaningless for students, but are inconsistent with democratic participation in a pluralistic society, which many educators make it their aim to enable (Castro, Field, Bauml, & Morowski, 2012; Miller & Toth, 2012).

How can teachers refine curricula and teaching strategies that will lead students toward mature ideas about why and how historians have produced differing accounts of the past? We believe that any complete response to this question must include tools of assessment that are practical for teachers to use, without the support of researchers. Without knowing what beliefs a specific classroom full of students already holds about differing historical accounts, teachers are essentially left guessing what lessons and activities might be effective for them. In the work described below, we pursued the design of an assessment that would, to borrow VanSledright's words, "assist teachers in making the pedagogical adjustments necessary to grow possibilities for understanding" of history (VanSledright 2015, p. 80).

The Historical Account Differences (HAD) questionnaire is designed for use with students in both secondary and postsecondary classrooms. Here we discuss the theoretical underpinnings of the questionnaire, explain how it was developed, and present analyses of 899 responses provided by students spanning Grade 8 through postsecondary studies, which were gathered as part of our validation effort.

Epistemological Conceptions in History

In the North American context, the scholarship of history learning has focused for decades on the development of historical thinking skills (Lightning, 2021). So, to situate this work it is important to underscore the distinction between *historical thinking* and *domain-specific epistemological conceptions in history*. Historical thinking refers to a complex and theoretically-contested set of cognitive processes. One example is *sourcing* – the process of considering the origins of a source when interpreting it (Britt, Perfetti, Van Dyke & Gabrys, 2000), such as who wrote it and for what purpose. Another important historical thinking skill is *contextualization,* which involves considering the time period and circumstances surrounding an event when interpreting evidence about it (Mitrovic, 2015).

While undoubtedly important, historical thinking skills have proven challenging to capture in assessments, for a variety of reasons (Ercikan & Seixas, 2015). For example, since authentic historical thinking tasks often involve students reading and interpreting difficult texts, historical thinking assessments may be unable to avoid conflating students' facility in historical thinking with their general reading skill (Reisman, 2015). Further, such assessments can become so time-intensive to administer and score that it becomes impractical to use them very often in the classroom context.

History-specific epistemological conceptions, on the other hand, include an individual or group's beliefs about the discipline of history and the nature of historical knowledge at a given moment in time. They are distinct from historical thinking skills, but are equally important because they shape how those skills are used (Chapman, 2017; Wiley, Griffin, Steffens, & Britt, 2020). For instance, in order for a student to use a set of varied historical accounts to make a judgement about the significance of a particular battle in World War I, she needs *both* appropriate skills in contextualization and sourcing, *and* beliefs about why accounts can differ that will promote the relevant application of those skills. There is good evidence that students' epistemological conceptions shape their performance on historical reasoning tasks, and that some conceptions are more "activity appropriate" than others when engaging with multiple texts (Wiley et al., 2020, p. 14).

Thus, history students' domain-specific epistemological conceptions are of practical concern for teachers of history. In many instances, attempts to involve students in historical thinking may not be fruitful without first addressing their epistemological conceptions. For example, document-based questions (DBQs) (Rothschild, 2000) can be fruitful skill-building opportunities for students who already hold sufficiently mature conceptions about the nature of historical evidence; but if a student approaches a DBQ with the naïve belief that every account must be either unbiased and true, or biased and untrue, he is not likely to have a fruitful encounter (Chapman, 2017). Indeed, he may simply be confused as to why his teacher has chosen to mislead him with competing accounts, some of which must be untrue by definition. Such responses from students have been documented (Lee, 2004, 2005; Lee & Shemilt, 2004; Seixas, 2006; Wineburg, 2001).

In recent work, Wiley et al. (2020) developed an instrument aimed specifically at gauging students' ideas regarding the value of integrating evidence across multiple documents in history, which proved predictive of student performance on document-based questions. The agenda we pursue here can be seen as related. We chose to focus our development effort specifically on students' beliefs about why historical accounts may differ. We chose narrative accounts as the focus for our work because they are focal to the potentially urgent issue in many instructors' practice alluded to earlier – the differing accounts that can be at issue in modern, multicultural classrooms. Further, as we have suggested, students' beliefs about why accounts differ may strongly influence the effectiveness of teachers' attempts to teach historical thinking. As Lee & Shemilt (2004) wrote,

> Tackling historians' reasons for writing one story rather than another before students grasp that accounts cannot be copies of the past is a recipe for leaving them helplessly shrugging their shoulders in the face of competing stories. (p. 31)

The central goal of the work described below has been to provide a time-efficient, logistically simple and pedagogically useful way for history instructors to assess the beliefs that their *own* students hold at a *particular* time about why historical accounts may differ. As Smith and Breakstone (2015) argued,

> [L]engthy essays that students compose…make it difficult for teachers to quickly identify particular skills or concepts that need further attention. Teachers with classes of more than 30 students have to wade through hundreds of pages of student writing to determine next steps for teaching. It is unrealistic to expect teachers to frequently assign DBQs to all of their students or to use them to make quick adjustments to classroom instruction (Smith and Breakstone 2015, p. 234).

Given these practicalities, our goal was to develop a zero-stakes assessment tool that instructors would be able to use as often as they needed to, without researchers' help. Ideally the assessment would be understandable to students as young as 13, would be quickly completed, and easy to score.

The challenge of this agenda should not be underestimated, because as Maggioni et al. (2009) wrote, "in trying to model individuals' epistemic beliefs, we are attempting to categorize commitments that people, for the most part, may perceive as fuzzy and somewhat vague" (p. 189). Understandably, there is a diversity of theoretical approaches to the problem of assessing epistemological conceptions. Theories of personal epistemology presented in the literature have differed in two broad ways: they have been either domain-general or domain-specific, and they have been either developmental or dimensional in nature. Theories are described as domain-general if they attempt to make claims that hold true across disciplines, rather than confining themselves to a single one. Theories are developmental in nature if they predict that epistemological conceptions will change predictably in a series of discrete, ordered stages along a fixed trajectory, while dimensional theories model epistemological conceptions using multiple dimensions that can vary independently.

In early work, Perry (1970) presented a domain-general developmental theory of personal epistemology that described university undergraduates as progressing in a series of nine ordered stages from what he termed "dualist thinking" to "commitment." The theory is domain-general in the sense that it does not pertain to students in any one discipline, and developmental in that it predicts advancement along a fixed trajectory of ordered stages. Shemilt (1987) also presented a developmental theory, though in contrast his was domain-specific and addressed students at a different level of schooling. This theory described adolescent history students progressing through a series of four ordered stages relating to their ideas about evidence and methodology in history. More will be said of this theory later.

Over time, skepticism has grown regarding the ability of stage theories to adequately represent the complexity of students' epistemological conceptions and their transformation over time (Chandler, Hallett & Sokol, 2002). Empirical findings have problematized the assumption of strict stage-like progression, demonstrating inconsistency in learners' conceptions. This is sometimes described as "epistemic wobbling" (VanSledright and Reddy, 2014, p. 43), and may in part be an artifact of the instruments that researchers have developed and used.

Partly in reaction to such findings, models of epistemic beliefs have been developed that represent them not on a single scale, but using a number of independent dimensions. For example, Schommer-Aikins' (2004) Epistemological Belief System model comprises five dimensions relating to people's beliefs about the certainty of knowledge, the simplicity of knowledge, omniscient authority, the extent to which learning should be quick, and whether intellectual

ability is innate. Such dimensional models do not assume the existence of an apex of development or a series of ordered stages; thus they are less subject to the challenge of "wobbling."

The issue of domain generality or specificity in epistemological beliefs was explored in depth by Muis, Bendixen and Harle (2006). They noted that, "research on problem solving and critical thinking supports the notion that expert knowledge is predominantly domain specific" (p. 4). Thus, it seems reasonable to posit that epistemological beliefs are also domain specific in important ways. In their extensive review of literature, Muis et al. (2006) examined 19 empirical studies designed to examine the domain specificity or generality of epistemological beliefs, noting that most "found predominant support for domain-specific beliefs across varying levels of education." (p. 24) For the purposes of analysis, the researchers involved in these studies assessed epistemological beliefs using instruments based on a consistent set of dimensions; but outcomes often showed that the domain asked about (e.g. science versus history) significantly altered the beliefs that students reported.

To conclude this section we would like to note that much of the recent research on epistemological conceptions in history has taken the approach of adopting a domain-general theoretical model of epistemological beliefs, and then localizing it to the domain of history, so to speak, when designing instruments. We elaborate on this observation in the following section.

Quantitative Measures of Epistemological Conceptions in History

While there is a longstanding body of work on quantitative measures of epistemological beliefs (e.g. Schommer-Aikins, 2004), studies of epistemological beliefs in history have been conducted using purely qualitative methods until relatively recently. The first scholars to publish a quantitative instrument to gauge epistemological beliefs in history appear to have been Maggioni, VanSledright, & Alexander (2009). They developed a questionnaire called the Beliefs about Learning and Teaching of History Questionnaire (BLTHQ), using theoretical underpinnings that were domain-general and developmental in nature. This 21-item questionnaire was designed specifically for use with K-12 teachers, to evaluate the effectiveness of professional development in the domain of history. Using the questionnaire, Maggioni et al. (2009) were able to document changes in the epistemological beliefs of 72 fourth- and fifth-grade student teachers over the course of a summertime professional development opportunity.

Items from the BLTHQ were adapted by Nitsche and Waldis (2018) for their own instrument, the Epistemological Beliefs Questionnaire in History (EBHQ). Using this instrument they investigated the relationships among history teachers' epistemological beliefs in history, their pedagogical beliefs, and several other internal and external variables such as age, sex, level of education, socioeconomic status and teaching experience. Analyzing responses from 177 pre-service teachers in German-speaking Switzerland, they found primarily small effects. For example, it was found that the number of history courses a student teacher had completed had a small but signficant relationship to narrative constructionist epistemological beliefs in the domain of history. Similarly small effects were observed with respect to age, sex and socio-economic status (SES), with increasing age and higher SES predicting skeptical beliefs. Intriguingly, the researchers also found that a larger number of courses in history education taken by a pre-service teacher predicted transmissionist perspectives on teaching and learning, while a larger number of semesters of study overall predicted less transmissionist views (Nitsche & Waldis, 2018).

Stoel, Logtenberg, Wansink, Huijgen, van Boxtel, & van Drie (2017) extensively modified Maggioni's instrument in an effort to develop one that could be used with school-aged students. Their 26-item instrument was designed to distinguish between naive and nuanced views with regard to the nature of historical knowledge and historical knowing. Using responses from 922 students enrolled in one of the two highest educational tracks in the Netherlands, they were able to develop a 3-factor scoring scheme that allowed them to assess differences between school tracks, and relationships between epistemological beliefs, interest in history, and history grades. However, some of their findings were confusing considering the developmental theoretical basis

of their instrument. They reported being "puzzled...that students could simultaneously report a positive score for both the naïve and the nuanced nature-of-knowing items." (p. 131) This finding is reminiscent of the "wobbling" mentioned above.

Finally, Wiley et al. (2020) developed and validated a 12-item measure of epistemological beliefs that was specifically tailored to measure beliefs relevant to integrating knowledge across documents in the domain of history. This work was a departure from previous research on epistemic cognition in history, in that it did not adopt wholesale a theory of personal epistemology and then attempt to capture all of its facets in the research instrument. Instead, the researchers adapted items from previously-published research that gauged beliefs which prior research suggested were specifically relevant to students' work on document-based questions. Over a series of three experiments conducted with hundreds of university undergraduates, high school students and middle school students, Wiley et al. (2020) demonstrated that "activity appropriate" (p. 14) beliefs contributed unique value in predicting students' performance on document-based questions, over and above students' academic track (AP or non-AP) and level of schooling (high school or middle school). This task-specific approach to measuring epistemological beliefs bears similarity to what we have done in the work reported below.

Developing the Historical Account Differences Questionnaire

In this section we describe the theoretical basis for HAD and the methods we used in developing and validating the questionnaire.

Theoretical Underpinnings

Counter to the approach taken in much of the prior research, we opted for a domain-specific theoretical foundation for HAD. Due to the research on expertise referred to by Muis et al. (2006), we speculated that a domain-specific foundation was a potentially fruitful route to an instrument that could provide the most pedagogically-useful information to instructors with the minimum number of items and demand on instructional time. The theoretical basis of our instrument came from Shemilt (1987).

As part of the Schools Councils History project in the United Kingdom, Shemilt conducted many hours of interviews with British adolescents in order to understand the development of their ideas about the discipline of history (Shemilt, 1987, 2000). Based on these cross-sectional interviews, Shemilt then formulated a 4-stage theory that speculatively described the development of students' understanding of historical evidence, methodology and accounts in a series of four ordered stages.

At Stage 1 of Shemilt's model, the lowest level of understanding, students are described as taking knowledge of the past as given. The only difficulty they associate with history is the difficulty of reading or listening to stories and remembering them. By extension, they think of historians as no more than good memorizers of stories about the past.

Students attain a Stage 2 understanding when they realize that the past does not speak with a single voice: knowledgeable people do disagree in their accounts of the past. However, the only explanations a Stage 2 thinker can muster for this disagreement are that the evidence may not be reliable (e.g., some reporters witnessed the events in question while others did not) or that some reporters may be biased. At this stage, students think of historians as people who are somehow able to sniff out false or biased stories about the past, "read off" the truth from sources, and piece together the one true account.

Students at Stage 3 are distinguished by the understanding that historical knowledge can never be absolutely certain. At best, we can use the evidence available about the past (some of which is other peoples' stories, but which also includes non-narrative relics such as tax records and maps) to reduce the uncertainty of our knowledge. In line with this view, Stage 3 thinkers understand historical scholarship to involve reasoning methodically with evidence to come up with an

account that represents the most likely and believable *reconstruction* of events. Stage 3 thinkers understand historians as people who know how to do this methodical work.

In the fourth and most advanced stage of Shemilt's model, students are described as viewing historical knowledge like a kaleidoscope. There is no single true account, or even necessarily a single most likely account. Rather, students recognize that it is possible to have several equally defensible accounts of the past – particularly if they have been constructed to address different questions. In this view, a historical account is understood to be a creature of its time, constructed to address a need. It is constrained by the available evidence, but is also shaped by the questions it seeks to answer. Like a kaleidoscope, history's "patterns are ordered and determinate, but do not yield a single stable picture" (Shemilt, 2000).

Shemilt's 1987 model was elaborated to a six-stage model in later publications (Lee & Shemilt 2004); yet we chose the 4-stage model for its parsimony, which is particularly important for a practical classroom instrument. An instrument based on a 6-stage model would clearly need to involve a larger number of items to demonstrate reliability, and would thus take longer to complete.

Note that while our instrument built on the ideas in Shemilt's 1987 developmental model, we did not assume that the epistemological conceptions of our secondary and postsecondary participants in British Columbia would progress in the particular way described by Shemilt for British adolescents in the 1970s. Our research was planned to provide opportunities to empirically test, on a substantial scale, whether students' conceptions progressed in the stagelike way predicted in Shemilt's theory. To our knowledge, such a test has never been attempted.

Question Structure

While we have published about previous versions of the Historical Account Differences questionnaire (O'Neill, Guloy and Sensoy, 2014), the version examined here (Appendix A) was more sophisticated than those used earlier. It is composed of six questions, each of which was inspired by Shemilt's original interviews, and designed to provide a context for examining students' ideas about differing accounts:

- What makes somebody a historian?
- How do historians develop their stories about events in the past?
- Why do historians write or tell stories about the past?
- Why do historians write new books about events that were already written about before?
- What makes a story about the past useful?
- If a historian is learning about the events of a period and finds two stories about them that disagree, what should she do?

Students respond to each question by rating a set of four belief statements on a 5-point scale from "strongly agree" to "strongly disagree." Each statement is written to reflect the beliefs that Shemilt (1987) hypothesized students to hold at each of the four stages. For example, the question "What makes somebody a historian?" asks students to rate the following four statements:

- They have studied and memorized what happened in the past *(Stage 1)*
- They can figure out which stories about the past are biased or untrue, and put together the one true story *(Stage 2)*
- They can use evidence to figure out what probably happened in the past *(Stage 3)*
- They re-consider past events, and think about what those events mean to us today *(Stage 4)*

Here, the four statements are presented in stage order for ease of reading. In the questionnaire presented to students, the four statements were presented in a different, random order for each question, without the stage numbers appended.

The approach of framing rating scales with questions is not common in the literature, though it bears some similarity to the scenario-based approach of Barzilai & Weinstock (2015) in their Epistemic Thinking Assessment instrument. In that work it was assumed that brief scenarios could enhance the meaning of abstract scales and make them easier for students to respond to. In HAD, the six questions help give meaning to otherwise abstract scales.

Respondents are free to rate each of the statements as they choose. Thus, in responding to a question a student could hypothetically choose to strongly disagree with all 4 statements, or strongly agree with all 4 statements – though in practice they rarely do.

Methods

Construct Validity

To ensure that each of the four statements specifically targeted one stage from Shemilt's theory, we recruited four history professors and one historical archaeologist to perform a sorting validation task. The five professors, who represented varying specialties including Canadian history, Middle East history, Latin American history and U.S. history, had not collaborated with the research team previously.

Two rounds of hour-long, one-on-one interviews were carried out with each professor between August 2012 and October 2012. During each round, a researcher explained that the purpose of the interview was to check the language of the questions and belief statements for their correspondence with Shemilt's theory. The professor was then asked to review Shemilt's 4-stage theory, using a one-page description very similar to the summary provided earlier in this paper. Interviewees had no difficulty understanding or distinguishing the four stages, but kept the one-page description for reference while they were presented with the draft statements for the questionnaire, one by one, in random order.

One at a time, items from the draft questionnaire were presented, with the instruction, "If a student strongly agreed with this statement, which stage would he or she be at?" The professor then sorted the item into one of four piles corresponding to Shemilt's hypothesized stages. After all the draft statements had been sorted, the interviewer recorded the professor's sorting of the cards. When the professor's sorting of a card was observed to disagree with the stage intended by the questionnaire authors, he or she was asked to recommend improvements to the formulation of the item.

Improvements suggested by the panel of professors in round 1 of the interviews were tested in round 2 using the identical procedure. Cohen's Kappa was then calculated for each pile of cards sorted by each participant, comparing the intended stages of the statements to the stages they were sorted into.

Known-groups Validity

The questionnaire was made available on a web site hosted at our home institution. In collaboration with teachers and professors of history across the greater Vancouver area of British Columbia, Canada, we solicited responses to the HAD questionnaire from a total of 899 students between September 2013 and May 2014: 566 secondary school students and 342 postsecondary students. The secondary school students spanned grades 8 to 12, with approximately 100 participants per grade (see Table 1).

TABLE 1: Makeup of the secondary students by grade level

Grade	8	9	10	11	12	Total
# Responses	138	129	88	85	118	558

Secondary school students were invited to complete the questionnaire during the school day in a computer lab. Completion of the questionnaire required a unique participant ID code that was provided to each student by a researcher only after parental consent for the research had been verified. One or two researchers were present during each administration of the questionnaire to verify parental consent, and provide any technical support that might be required. In the course of data collection, it was observed that nearly all students could complete the HAD questionnaire in 15 minutes or less.

At the postsecondary level, student participants were recruited in class (usually through a brief announcement in a lecture), but completed the questionnaire on their own time. Postsecondary students provided research permission electronically before proceeding to the questionnaire. In addition to the questions described earlier that formed the core of the HAD questionnaire, postsecondary students answered questions about their involvement with history as a discipline, e.g. as a minor or major.

The postsecondary participants had widely varying exposure to history as a discipline (see Table 2). While the majority of the postsecondary students were recruited from 100- and 200-level history courses at three different institutions, the sample also included 31 students enrolled in postsecondary engineering courses requiring no background in history beyond high school, and a handful of students pursuing masters and doctoral degrees in history.

TABLE 2: MAKEUP OF THE POSTSECONDARY STUDENTS BY INVOLVEMENT WITH HISTORY

Involvement in history as a discipline	Not taking history	History elective course	Completing history minor	Completing history major	Completing history masters	Completing history PhD	Total
# Responses	22	180	38	68	5	9	322

We conducted analyses to test four hypotheses based on Shemilt's theory:

- H1: Postsecondary students' scores will reflect more sophisticated beliefs than those of secondary students
- H2: Secondary students' scores will reflect more sophisticated beliefs as they progress through the grades
- H3: Among postsecondary students, those with greater involvement in history as a discipline will demonstrate more sophisticated beliefs
- H4: Students will not at the same time hold beliefs that Shemilt's theory describes as naïve and sophisticated

Data Analysis and Results

Construct Validity

At the end of round 2 of the sorting task, Cohen's Kappa was calculated for each professor's sorting of the questionnaire items. In this step, the history professors' categorization of the statements was compared to the stages the research team had intended these items to capture. Values of Kappa ranged from a high of .78 for one professor (83% agreement with intended stage) to a low of .61 (71% agreement with intended stage). The average value of Kappa across the five professors was .71 (78% agreement). Given that HAD is not intended as a high-stakes assessment, these levels of reliability were judged acceptable. Further small refinements suggested by professors in round 2 were made before the data collection for known-groups validity testing was carried out.

Known-Groups Validity

Students' responses were scored on two scales. The "Knowledge and Reliability" (K&R) scale reflects the expressed strength of a student's agreement that historical accounts only differ due to the the fallibility of some storytellers due to ignorance or bias. In Shemilt's theory, these are considered naïve ideas. The K&R score is calculated by summing each student's ratings of the items developed to address Stage 1 & 2 conceptions. The "Reconstruction and Purpose" (R&P) scale reflects the expressed strength of a student's agreement that historical accounts differ due to differences in the interpretation of limited evidence or differences in storytellers' purposes. These Stage 3 & 4 beliefs are considered sophisticated in Shemilt's developmental theory. The R&P scale is calculated by summing each student's ratings of the items developed to address Stage 3 & 4 conceptions. Chronbach's alpha was calculated at .760 for the K&R scale, and .669 for the R&P scale.

Note that since the instrument was intended for use by classroom teachers, we opted to compute scale scores as sums rather than means, to keep the scoring simple. Since each scale includes 12 of the 24 items, and students' responses to each statement take the form of a rating from 1 to 5 (1= strongly disagree to 5=strongly agree), the range of possible scores for each of the two scales lies between 12 and 60.

Using scores calculated for the two scales, analyses were carried out to test the four hypotheses stated in the previous section. Since the distribution of students' scores on both scales were found to be normal (see Figures 1 and 2), parametric tests were used.

Figure 1: Comparison between secondary and postsecondary students' scores on the K&R scale items

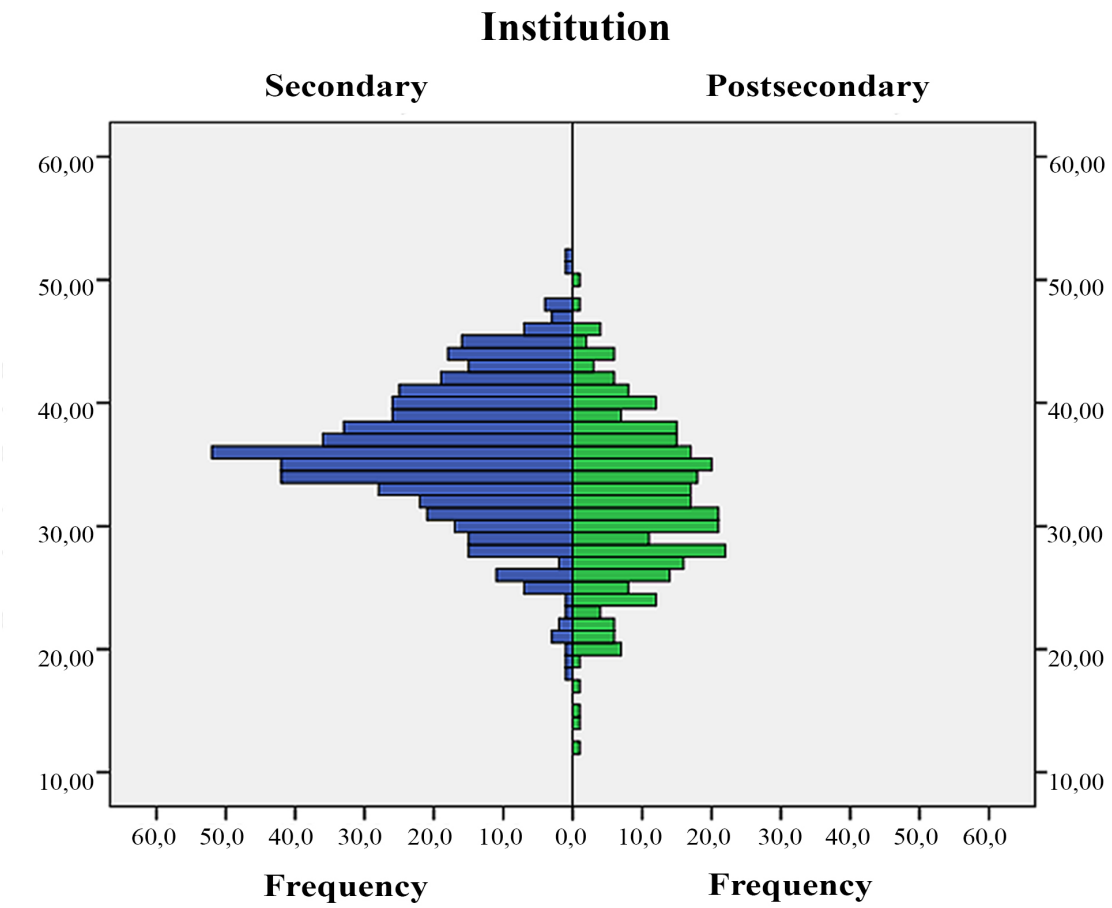
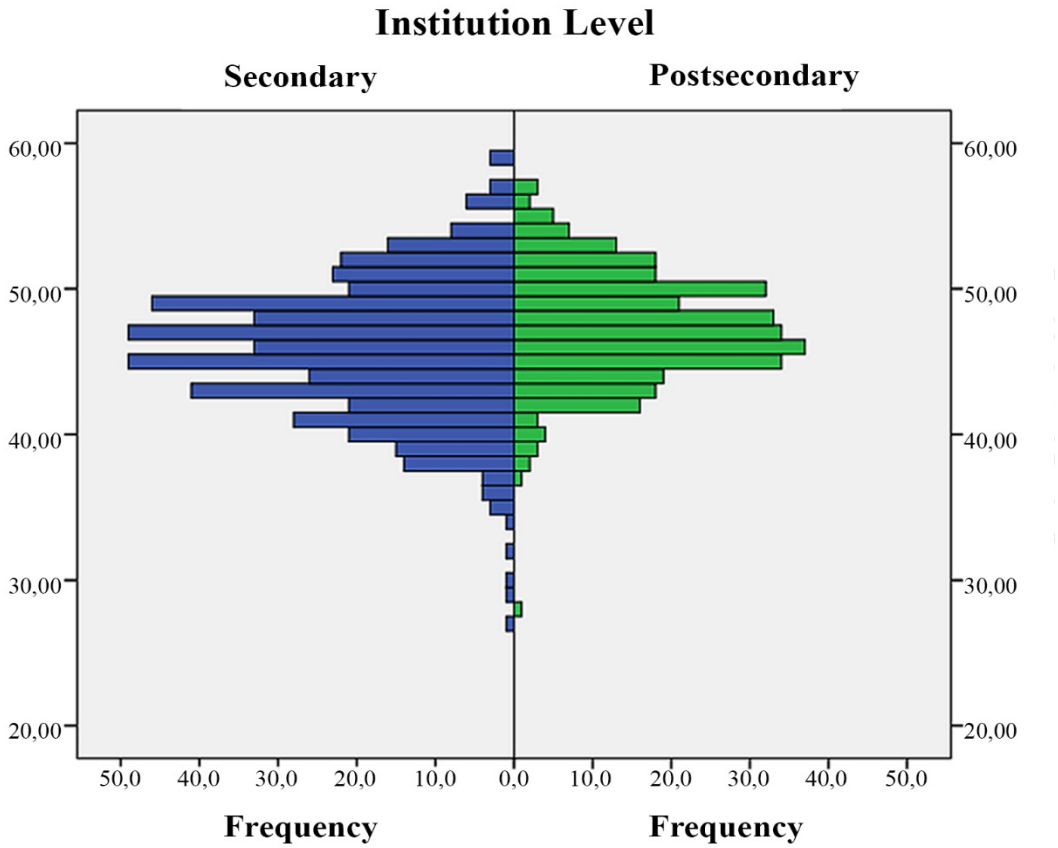


FIGURE 2: Comparison between secondary and postsecondary students scores on R&P scale items



With regard to H1, we found that as expected, the average scores of secondary and postsecondary students were significantly different on both the K&R and R&P scales. On the K&R scale, a statistically significant difference was found between secondary students (n=514; M= 36.03; SD=5.49) and postsecondary students (n=322; M=32.05; SD=6.47); t(599.28)=9.17; p<.001, 95% CI [3.13, 4.83], with secondary students' higher average scores reflecting more naïve beliefs. The effect size of level of schooling, d=.66, would traditionally be interpreted as moderate.

On the R&P scale, a statistically significant but smaller difference was found between secondary students (n=494; M=45.83; SD=4.79) and postsecondary students (n=324; M=47.36; SD=3.87); t(781.34)=-5.04; p<.001, 95% CI [-2.13, -.94]. The effect of level of schooling would traditionally be interpreted as small (d=.35), but the expected direction was in line with what Shemilt's theory would predict – ie. postsecondary students were assessed as expressing more sophisticated beliefs.

Analysis did not produce evidence to support H2. Despite gathering complete HAD responses from approximately 100 students at each grade level from 8 to 12, we found no significant differences between grade levels on either the K&R or R&P scales.

At the postsecondary level, the number of research participants we were able to recruit varied widely by involvement with the discipline of history. For this reason, before conducting analyses to test H3, Levene's test was used to ensure the homogeneity of variances on each scale among four groups represented in the data: those not taking history, those taking a history elective, history minors and history majors. (Given the small numbers of history Masters and Ph.D. students included in our sample it seemed likely that their responses would be idiosyncratic; therefore these two groups were excluded from this particular analysis.)

TABLE 3: DIFFERENCES IN K&R SCALE SCORES BY INVOLVEMENT WITH HISTORY

Involvement Comparison	Mean Difference (out of 60)	Significance	Cohen's *d*
Not taking history vs. history elective	1.18		
Not taking history vs. history minor	3.79		
Not taking history vs. history major	5.09	$p<.01$	0.88
History elective vs. history minor	2.61		
History elective vs. history major	3.92	$p<.001$	0.67
History minor vs. history major	1.31		

An omnibus ANOVA test was used to determine whether differences existed among the four groups. *F*-tests showed that significant differences ($p <. 05$) did exist between these groups for both the K&R and R&P scales; so we used the Tukey-Kramer test to examine the differences on each scale between those not studying history, the elective takers, history minors, and history majors.

As indicated in Tables 3 and 4, the differences found between the groups were generally non-significant; but the significant differences were in the directions that would be predicted by Shemilt's theory. On the K&R scale, students not taking history or taking a history elective had average scores that suggested greater naivete than those of students completing a history major. Using Cohen's *d,* the effect size of taking a history major versus not taking history was calculated at .88. This would traditionally be interpreted as a large effect. The effect of taking a history major versus a history elective was calculated at .67, which would traditionally be interpreted as a moderate effect. On the R&P scale, students taking a history elective course were found to have significantly lower scores on average than those working on a history minor. The effect of taking a history minor versus an elective course was calculated at .60, a moderate effect.

TABLE 4: Differences in R&P scale scores by involvement with history

Involvement Comparison	Mean Difference (out of 60)	Significance	Cohen's *d*
Not taking history vs. history elective	- 0.43		
Not taking history vs. history minor	- 2.51		
Not taking history vs. history major	- 1.30		
History elective vs. history minor	- 2.09	$p<.05$	0.60
History elective vs. history major	- 0.88		
History minor vs. history major	1.21		

Shemilt's theory described a stagewise progression in which naïve conceptions about differing historical accounts are abandoned as more sophisticated ones are taken up. If the theory were correct, students should not appear to hold naïve and sophisticated beliefs at the same time. Logically according to H4, students' scores on the K&R and R&P scales should be inversely correlated; but we did not find this to be the case. Pearson's *r* was calculated at .089 (p=0.13) between the scores for all participants on the K&R and R&P scales. Therefore, H4 was not supported.

Discussion

In order to refine their practices of inquiry-oriented history teaching, instructors would benefit from practical and time-efficient ways to assess their students' epistemological beliefs. HAD shows promise for addressing the specific need of assessing students' beliefs about why historical accounts may differ.

In important respects, the findings of our validation effort were consistent with the predictions of Shemilt's original developmental theory. The validity of scores derived from HAD gains credence from statistically significant differences detected between secondary and postsecondary students' scores on the questionnaire, and statistically significant differences detected between students with varying involvement in history as a discipline at the postsecondary level. We were surprised not to find significant differences in secondary students' scores between grades 8 and 12; but it is important to note that Shemilt did not claim that students' ideas would develop simply as a function of age, but rather as a function of experience and history teaching. When our data were collected, the social studies and history curriculum in British Columbia focused on content coverage, largely to the exclusion of historical research methods. Therefore, the educational treatment across these grades was not necessarily of a kind that would be expected to increase the sophistication of students' epistemological beliefs in history.

A key finding that ran counter to Shemilt's 4-stage theory was the lack of a significant *inverse* relationship between students' scores on the K&R and R&P scales. Students do not appear to abandon altogether the beliefs that Shemilt's theory describes as unsophisticated as they gain experience with history as a discipline. Rather than a rigid stagewise progression in students' conceptions regarding differing accounts, our data suggest instead that greater exposure to the discipline of history tends to reduce students' *exclusive* reliance on bias and storyteller ignorance as explanations for differing accounts – broadening the range of possible explanations they consider. This finding echoes those of other researchers, who have noted signs of "epistemological wobbling" in their own studies (VanSledright and Reddy, 2014; Stoel et al., 2017). In the context of the broader research on personal epistemology these findings might be considered unsurprising; but they beg consideration as to whether researchers focused on epistemic cognition in history should be as committed as they are to developmental theories rather than dimensional ones.

Future Directions

The main purpose of the HAD questionnaire is to serve as a tool in history teachers' curriculum planning and evaluation. As Chapman (2017) noted,

> There are impressive examples, in the pedagogic literature, of strategies that seek to engage students in the analysis of historical interpretations as 'deliberate' and 'crafted' artefacts…designed to achieve particular effects… (p. 101).

The important question for classroom teachers is whether and when to deploy the strategies referred to by Chapman. In the future, we plan to make the HAD questionnaire freely available on a web site so that instructors can have their own students complete it anonymously, and be immediately presented with automatically-scored results. Ideally, the web site would also run statistical tests automatically, so that for example, a teacher would be able to know whether her students' beliefs had, in aggregate, significantly shifted after her deliberate attempts to enrich their understanding of differing accounts using the kinds of activities that Chapman refers to.

Another potential use of HAD is to gauge students' readiness for activities that involve working with differing accounts. For this to be feasible, further research needs to be done to establish benchmarks for the instrument. At this point we have no empirical basis to assert what a particular set of scores on the K&R and R&P scales implies in terms of the kinds of tasks that students are likely to be capable of. However, the work of Wiley et al. (2020) is encouraging, for it

suggests that a targeted measure of epistemological beliefs like HAD may help predict when a particular group of students is in a position to benefit from particular classroom tasks.

Through carefully planned investigations, we hope to develop HAD into a useful tool for instructors as they experiment with novel curriculum and pedagogical approaches in modern, multicultural history classrooms.

Limitations

A number of limitations are worthy of mention. First, since our primary objective was to develop a practical classroom assessment that could be completed in approximately 15 minutes, our instrument did not include a large enough number of items to reliably assess students' commitment to beliefs associated with each individual stage of Shemilt's developmental theory. If the primary objective of the research had been to test the four-stage theory in detail, more items would have been required.

Second, this study did not involve gathering data on the specific content or methods of instruction that our questionnaire respondents had been exposed to in history classrooms. For this reason, we cannot make detailed claims about *why* students' HAD scores differed (or did not differ) according to the depth of their involvement in history as a discipline, or their exposure to more or less history instruction. The secondary school data represent a partial exception to this limitation, since we know that during the time of our data collection (and for many years prior) secondary school curriculum in the area where our data were collected did not mandate any study of historical research methods. Due to curriculum revisions this situation is now changing, so in years to come our data may provide a baseline against which to examine the efficacy of the curriculum changes.

Third, the differences we detected between secondary students' and postsecondary students' scores on HAD cannot be attributed to the influence of postsecondary instruction alone. While the postsecondary institutions involved in our study do not select students based on the sophistication of their epistemological beliefs, it may be the case that those who are admitted to and choose to pursue postsecondary education hold more sophisticated beliefs due to their socioeconomic status and other influences, rather than by virtue of postsecondary instruction alone. Further studies will be needed to disentangle students' epistemological beliefs from their socioeconomic status, institutions' choices to admit, students' long-term goals, and other variables.

Fourth, limitations on both our access to potential research participants and the time available to conduct our study resulted in a small number of responses for some groups of strong potential interest in a study of this kind – particularly Masters and Ph.D. students in history. In future work it will be important to better represent these groups.

Finally, as with Shemilt's original 1987 study, the work presented here involved using cross-sectional data to make inferences about a process of change in students' epistemological beliefs that unfolds over years. In the absence of instruction aimed at improving students' epistemological beliefs, change may never occur, or may take a long time; however our large-scale data were collected in just a few months. To directly examine change in students' epistemological beliefs, one would ideally follow the same cohort of students longitudinally over a period of years, gathering simultaneous data regarding the nature of the history instruction they received, extracurricular encounters with history (e.g. museums, popular media) and other possible influences.

Conclusion

To our knowledge, the research reported here represents the first attempt to design and validate a domain-specific quantitative measure of students' beliefs about differing historical accounts that would be practical for instructors to use independently in their own classrooms. Acknowledging their limitations, the data and analyses presented above suggest that the HAD questionnaire,

which is quick for students to complete and can be scored easily, holds promise. With further research we hope to demonstrate its utility for classroom teachers. With regard to theory, our failure to find evidence of stage-like developmental progression in our data resonates with the findings of other researchers, and highlights limitations in the ability of developmental theories to describe the changes that take place in students' beliefs about historical knowledge over the course of their education.

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Appendix A: The Historical Account Differences Questionnaire[1]

Instructions: Carefully read each question, and rate each of the four possible answers that follow it, according to how strongly you agree or disagree with it. This is not a test, and there are no right answers.

Q: What makes somebody a historian?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
They re-consider past events, and think about what those events mean to us today. (4)					
They can figure out which stories about the past are biased or untrue, and put together the one true story. (2)					
They can use evidence to figure out what probably happened in the past. (3)					
They have studied and memorized what happened in the past (1)					

Q: How do historians develop their stories about events in the past?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
They consider several possibilities and make an educated guess about what happened based on the evidence available. (3)					
They add new stories by re-examining evidence to answer questions that may not have been asked before. (4)					
They look at what several people have said about the events, and decide which one's story is the least biased. (2)					
They read only what has been written or recorded about the event by the witnesses who were there to see it. (1)					

[1] The Shemilt stage that each belief statement is intended to capture is marked in parentheses for the convenience of readers. These stages do not appear on versions used with students.

Q: Why do historians write or tell stories about the past?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Because questions come up today that can be answered by looking at the past (4)					
So that other people can know what happened in the past (1)					
To provide other people with a careful examination of the best evidence available today (3)					
Because they want to provide other people with stories that are true and unbiased (2)					

Q: Why do historians write new books about events that were already written about before?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Historians write new books because old historical evidence can be examined in new ways that give us a better understanding. (3)					
Historians should not write new books. Older books are more trustworthy because they were written closer in time to the events themselves. (2)					
Historians writing new books makes no sense because there should only need to be one book about each event. (1)					
Historians write new books because as time goes on, people have new questions that need to be answered. (4)					

Q: What makes a story about the past useful?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
It comes from a witness who intends to be fully truthful and unbiased (2)					
It gives you a straightforward description of what happened in the past (1)					
It answers your questions about why things turned out the way they have (4)					
It is based on careful examination of a variety of evidence from the past (3)					

Q: If a historian is learning about the events of a period and finds stories that seem different, what should she do?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
She should try to figure out which story writer is less biased or was closer to the events, and use only that one. (2)					
She should try to understand the questions that the people who wrote the stories were trying to answer. (4)					
She should make an educated guess about what most likely happened, based on other evidence. (3)					
She should disregard both stories because it does not make sense for there to be different stories. (1)					

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"We can't really know cos we weren't really there": Identifying Irish primary children's bottleneck beliefs about history

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ABSTRACT

While there has been a wave of interest in epistemology as a field of study, there have been few studies focused on primary-aged children and even fewer on their epistemic beliefs about history. Due to the lack of research with younger age groups, much of the explanatory power of the prevailing frameworks in epistemic research has been extrapolated from research conducted with older populations. To address this concern, this paper reports on a series of semi-structured interviews designed to identify primary children's beliefs about the nature of history and historical knowledge. Thematic analysis of the data provided a rich and textured insight into their understanding of the nature of history and historical knowledge and it was found that these beliefs appear to have their origins in both the children's experiences of history and their common sense (or domain-general) ideas of how the world works. This analysis also highlighted a number of "epistemic bottlenecks" (beliefs about the nature of history and historical knowledge that served to constrain historical understanding). Though emergent, these bottlenecks parallel older students' preconceptions of the nature of history. This suggests that if unchallenged, the epistemic beliefs young children form about history in the early years can remain relatively stable throughout their education. Identifying and challenging those beliefs that can constrain student understanding is therefore crucial to both a student's learning experience and the progression of their conceptual understanding of history.

KEYWORDS

Epistemic bottlenecks, children's epistemic beliefs, historical knowledge, historical enquiry, conflicting accounts

CITATION

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Introduction

Frequently, public discourse claims that young people today do not know any history, citing lack of content knowledge as proof of this (see: Lee & Ashby, 2000; Lowenthal, 1998; Wineburg, 2001); however, as Foster, Ashby and Lee (2008) argue, recall of discrete content items is a poor indicator of historical understanding. In addition to content knowledge, students also need a conceptual understanding of the disciplinary features of the subject. Central to this understanding is an epistemic awareness of how knowledge of the past is constructed, adjudicated and arbitrated (Lee, 1991; Counsell, 2018). The turn towards this interpretative view of historical knowledge has resulted in a move away from approaches to the teaching of history that focus on the transmission of content and towards approaches which develop both content knowledge and disciplinary ways of historical understanding.

Influenced by the revolutions in cognitive and social theories, historical thinking emerged as a conceptual construct which places emphasis on developing in students the epistemological and heuristic skills that are characteristic of an interpretative approach to studying the past (Wineburg, 2001; Lee, 2005). While there are a number of definitions of the term 'historical thinking', most concur that it entails an emphasis on cultivating student competencies in the disciplinary processes of historical work. Thinking historically, however, demands a particular epistemic stance, a stance that requires an appreciation of the complex and multi-layered nature of historical knowledge. Such an approach to the teaching of history, therefore, necessitates a pedagogy that is informed by the epistemological structure of the discipline, and though there may be some contestation around what that might be, one core idea is the centrality of the role of evidence in the construction of historical knowledge.

Historical enquiry is a pedagogical approach to the teaching of history that allows for the generation of such knowledge. Engaging in the process of historical enquiry allows the student to both ask and answer historical questions, interrogate the integrity of evidence, engage with multiple perspectives, construct or deconstruct historical narratives and create their own understandings of the past (Barton & Levstik, 2004). History, when conceptualised as an act of enquiry, requires students to not only search for and construct new knowledge but also to determine its veracity. This requirement to judge the credibility of information connects the study of history to one of the oldest philosophical disciplines in the Western tradition i.e. epistemology. Epistemology studies the nature of truth and how we acquire, understand and validate knowledge (VanSledright & Maggioni, 2016) and an increasing body of research argues that epistemic cognition plays an influential role, not only in teaching and learning, but also in everyday interactions with new information (Hofer, 2016).

Yet while some epistemic beliefs can support an understanding of the intricate relationship between evidence and historical knowledge through cumulative and recursive processes of historical enquiry, others can act as "epistemic bottlenecks" (Ní Cassaithe, 2020; see also Middendorf & Pace, 2004) that, just like bottlenecks on a roadway, are impediments towards developing deeper understanding. If educators are to support progression in historical thinking and understanding, they need to be aware of these bottlenecks and actively challenge them in their teaching.

Young children's epistemic beliefs about history

The beliefs an individual holds about knowledge and knowing have been the focus of a growing body of work on epistemology; however, despite this interest, few studies have concerned children. In fact, some experts query if children can hold beliefs about knowledge and knowing while others accept the construct but question the ability of children to verbalise such abstract ideas (see Moschner, Anschuetz, Wernke & Wagener, 2008). Though limited, there are studies in history education that, while not explicitly focused on epistemic beliefs, provide insights into young children's ideas about history and historical knowledge. One such example is the CHATA

(Concepts of History and Teaching Approaches) project in the UK that sought to map the development of students' ideas about history (Lee & Ashby, 2000). While the project concentrated primarily on 7-14 year olds' ideas about historical accounts and interpretations, it also found that the ideas children have about the nature and justification of historical knowledge play a large part in their learning experiences and can contribute towards their own personal theory of history. Though this six-stage model appears to chart a developmental trajectory moving from objective to more sophisticated levels of thinking, the researchers discovered that children's ideas fluctuated and that some seven-year-old children responded to questions at a higher level than some 14-year-olds. According to the CHATA model (Lee & Shemilt, 2004), students hold a number of epistemological assumptions on the nature of history. Students can view accounts of the past:

- **as given** – the past is treated as if it were the present, accounts are treated as stories that are just 'out there' and competing accounts are just different ways of saying the same thing.
- **as inaccessible** – accounts are not accurate because people in the present were not there to witness the event when it happened and so conflicting accounts are a matter of opinion.
- **as determining stories** - because stories about the past are fixed; if the facts are known, then there is just one true account and conflicts in accounts are due to gaps in information or mistakes.
- **as reported in a biased way** - accounts are copies of the past that can be distorted for ulterior motives.
- **as selected from a particular viewpoint** – accounts are not copies of the past because stories are written from the author's position, perspective and selection
- **as re-constructed in answer to questions in accordance with criteria** because accounts of the past cannot be complete and are created to address particular questions

These findings have been complemented by other studies that give an understanding of primary-aged children's perceptions of history and historical knowledge. A number of these have highlighted a tendency amongst children to view history as a fixed tale or to conflate history and the past (VanSledright, 2014; 2010). For example, Waldron (2003) found that Irish primary children frequently equated the past with history; however, she also concluded that they often held an emergent understanding of the discipline as a field of study that was shaped by their experiences both inside and outside the history classroom. Barton (2008) also emphasised the importance of formal and informal sources in shaping students' understanding of history; however, he noted that, though knowledgeable about historical content, most students at primary level did not understand how historical accounts are formed nor did they appear to have considered the origin of historical knowledge. When engaged with conflicting historical sources, he found that few children understood the evidentiary basis of historical accounts and acted as if knowledge of the past existed independently of the historical evidence. His study of American primary children's understanding of historical evidence showed that when pressed to explain how people in the present know what happened in the past, the majority of students struggled to connect examining historical evidence with the creation of historical knowledge. They also tended to view historical knowledge as either based on handed-down stories or derived from authoritative, canonical books that provide a definitive account of the past (Barton, 1997). Though not situated in the field of epistemic cognition, these studies draw attention to some of the epistemic difficulties students can encounter when thinking historically. In particular, they highlight the importance of providing experiences to challenge the preconceptions they hold about the nature of history and historical knowledge in the history classroom.

Conceptual framework

Influenced by Perry (1970), Kuhn, Cheney and Weinstock (2000) put forward a domain-general three-stage model of epistemic understanding. An Absolutist stance holds that knowledge is objective, derived from the external world and certain; Absolutists view knowledge as an

accumulation of absolute, fixed facts and from this point of view, there is only one right answer. Given this position, multiple perspectives are unattainable. A Multiplist stance indicates a belief that the source of knowledge is within the individual and knowledge is multiple, subjective and uncertain. Multiplists view knowledge as both subjective and contextual and consider conflicting viewpoints and perspectives as equally valid opinions and ideas. From a Multiplist viewpoint, multiple perspectives are considered possible however, all opinions and perspectives are given equal weight. An Evaluativist stance balances the two and recognises that there are various criteria by which to judge truth claims and that these claims need to be critically assessed. Evaluativists play an active role in looking for further information and show a tendency to explore issues and events from multiple perspectives. This model argues that the central feature of epistemic development is the coordination of objective and subjective dimensions of knowing (Kuhn & Weinstock, 2002).

Absolutist and Multiplist beliefs, referred to by Stoel, Logtenberg, Wansink, Huijgen, van Boxtel and van Drie (2017) as naïve beliefs, are generally consistent with the knower assuming a passive role and viewing the past as fixed or a knower adopting an active (but uncritical) role in that interpretations are conceived as simply opinions about the past. More sophisticated or nuanced epistemological beliefs are consistent with the knower accepting the existence of multiple interpretations of the past whilst also acknowledging the disciplinary criteria needed to evaluate evidence. In the study of history, such naïve beliefs can act as "epistemic bottlenecks" (Ní Cassaithe, 2020; Middendorf & Pace, 2004) to constrain historical understandings.

Influenced by the developmental model devised by Kuhn et al. (2000) and drawing on the data from Project CHATA, Maggioni, VanSledright and Alexander (2009) developed a domain-specific, derivative three-stage epistemic beliefs about history model which describes beliefs as being spread across three stances: "Copier", "Borrower" and "Criterialist". This model has proved useful in identifying the epistemic stances of older populations such as upper-secondary students, student teachers and teachers but has not, to date, been applied to younger children; therefore, the original Kuhn et al. (2000) model was used as the orienting framework for this study.

Methodology

This paper draws on data from a larger design-based teaching experiment that sought to identify and then challenge, through the implementation of a series of researcher-designed and theory-informed learning trajectories, the epistemic bottlenecks held by primary children about the nature of history. The semi-structured interviews reported here were part of a pre-intervention suite of instruments which included a Levels of Epistemic Understanding questionnaire (Kuhn & Weinstock, 2002) and historical enquiry tasks. Semi-structured interviews were used because of the complex nature of both epistemology and historical thinking. This allowed for deeper insights that otherwise may have been undetected if a set format of structured questions was rigidly followed. While the interview questions covered a range of topics, only data related to questions of an epistemic nature are presented here (see Appendix for the interview protocol). These questions were designed after the research of Barton (1997) who enquired about primary-level students' understanding of historical evidence.

Participants

Seventeen children were selected from three classes at St. Barnabas Primary School (a pseudonym), Dublin, Ireland. St Barnabas' is a co-educational, Catholic school with 189 children on roll and is located within the inner city. The St. Barnabas' Whole School Plan for History sets out a broad syllabus for each class level which in general corresponds with the content of the school textbook series used by all classes in the school. The school textbook was the predominant form of history teaching that students in Class 3 (3a) and Class 5 (5a) of the study had experienced. Students from Class 4 (4a), however, rarely used the textbook and were very familiar with the process of historical enquiry. Five students from 3a (out of a class of fifteen) were selected using

random sampling to ensure, as far as possible, that the sample was representative of third class students. Six students were chosen from 4a and 5a in the same manner. There was a wide range of achievement across the three groups with five receiving additional support in both literacy and mathematics and three attaining the highest score in standardised tests in literacy. Additionally, four of the children interviewed, though fluent speakers, had English as a second language. All students were born in Ireland.

TABLE 1.1

3rd Class (3a)				
	Participants	**Age**	**Gender**	**Ethnicity**
	Sammy	9	Male	Irish/Indian
	Calvin	10	Male	Irish
	Danny	9	Male	Irish
	Rachel	9	Female	Irish
	Sofia	9	Female	Irish
4th Class (4a)				
	Dawn	10	Female	Irish
	Róise	10	Female	Irish
	Seoda	9	Female	Irish
	Jenna	10	Female	Irish/Nigerian
	Gavin	11	Male	Irish
	Daire	10	Male	Irish
4th Class (5a)				
	Caoimhe	10	Female	Irish
	Eimear	10	Female	Irish
	Katelyn	10	Female	Irish
	Danka	10	Female	Irish/Polish
	Ivan	11	Male	Irish/Russian
	Callum	11	Male	Irish
Total	**17**			

Data analysis

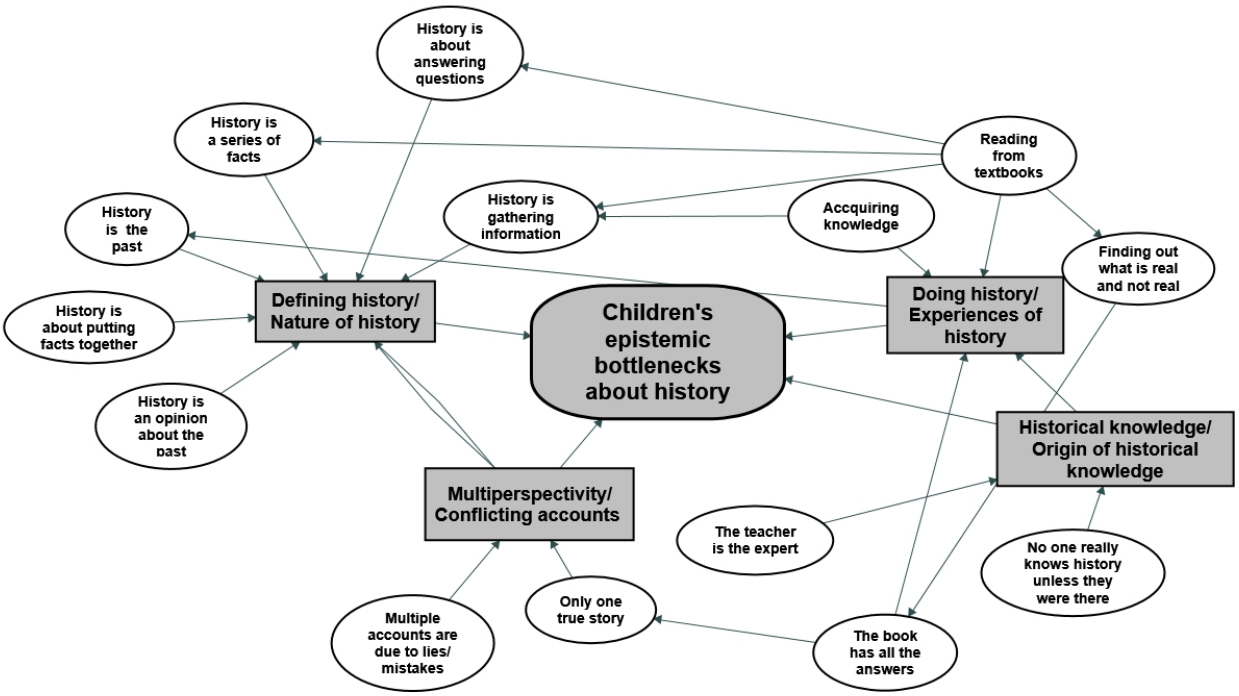
Braun and Clarke's (2006, 2019) six-step approach to thematic analysis was used to analyse the interviews. Thematic analysis involves creating categories of meaning and identifying the relationships between those categories through a systematic process of inductive or deductive reasoning. This involves organising the data into units and assigning them to categories. The interview transcripts were subjected to two rounds of coding. In the first round, it was decided to approach the data by primarily reading and re-reading through the interview transcripts and marking areas of interest (see Table 1.2 for the initial categories). The data analysis software package NVivo was used to manage the interview data.

A second round of coding with a specific focus on the children's epistemic beliefs about history was also carried out. The categories were subjected to an iterative process of revision and refinement as the units were compared and categorised. This constant comparison helped identify how concepts and categories were connected to each other and to build an explanatory model (see Figure 1.1). Four key categories were identified as key indicators of the epistemic bottlenecks the children held. These were defining history, doing history (or experiences of history), origins of historical knowledge and multiple perspectives.

TABLE 1.2 Initial inductive categories

Inductive Codes	Description	Theme
Ability in history	Child's estimation of how 'good' they are at history	**Historical dispositions**
Personal connection	Instances where history has impacted themselves	
Learning history	References to doing history in class	
Positive view of history	Enthusiastic about history	
Negative view of history	References to not liking history	
Neutral view of history	Not bothered about history as a subject	
Defining history	Explaining their own view of history	**Beliefs about history**
Continuity and change	References to how things have changed/stayed the same	
Multiple viewpoints	Recognition that there are other ways to view things	
Characteristics/Role of historians	What traits make someone 'good' at history Describing what a historian does	
People from past	Children's ideas about people from the past	
Evaluating evidence	Examples where children engaged with evidence	
Reconciling Conflicting Accounts	Describing ways conflicts can be adjudicated	
Real or not real	References to real/not real, true/fake	
Acquiring historical knowledge	Sources of historical knowledge	
Importance of genealogy	Family history as a purpose for studying history	
Probing further	Researcher clarifying or pressing further	
Epistemic stance	Indicators of epistemic stances	
Origin of historical knowledge	Origin of historical knowledge – where it comes from	**Historical knowledge**
Doing history/using evidence	References to doing history in class	
Historical references	Historical topic mentioned	
Linking past present or future	Creating links between past, present and/or future	
Evidence as source	Drawing historical knowledge from evidence	
Family as source	Drawing historical knowledge from family	
History books as source	Drawing historical knowledge from books	
Media as source	Drawing historical knowledge from media	
Public history as source	Drawing historical knowledge from museums etc.	
Textbooks as source	Drawing historical knowledge from school text	
Using evidence	Examples where children engaged with evidence	
External/Internal	References to knowledge as internal/external	

FIGURE 1.1 Thematic map



This phase in the analysis also consisted of theoretical thematic analysis (Braun & Clarke, 2006) which involved comparing the themes with the literature related to epistemic beliefs (see Table 1.3). During this analysis, a number of indicators were identified that proved helpful in evaluating the students' epistemic stances. These related to explicit comments about how the students conceptualised the nature of history and historical knowledge and were coded as explicit indicators. Additionally, some comments were conceived as indirect indicators of their epistemic stance and were organized into additional categories such as preferred texts, historical experiences and cognitive activities. These were eventually categorised as Historical Experiences. One additional category was created to contain episodes that appeared to relate to student epistemic beliefs more broadly. These included comments relating to domain-general epistemic ideas about knowledge or conflicting accounts and the role and purpose of history.

TABLE 1.3 Deductive codes

Deductive Codes		
Explicit Epistemic Indicators (Informed by the literature: Lee & Shemilt, 2004; Maggioni et al., 2009; Kuhn & Weinstock, 2002, Nokes, 2014)		
Absolutist (Copier)	**Multiplist (Borrower)**	**Evaluativist (Criterialist)**
Nature of history ● History is the past/is as given/a copy ● History is teaching what happened ● History is remembering facts ● To be good at history you need to have a good memory	***Nature of history*** ● History is opinions about what happened ● Learning history involves guessing about what happened	***Nature of history*** ● History is the study of the past ● Learning history is piecing together evidence to construct interpretations ● Evidence is essential
Historical knowledge ● Historical knowledge is objective ● One-way sources of knowledge to provide factual information ● The teacher/book are preferred sources of knowledge (no consideration of where this knowledge originates – just out there)	***Historical knowledge*** ● Historical knowledge is subjective ● Historical knowledge is transmitted by a sensorial experience or by an external authority	***Historical knowledge*** ● Historical knowledge is constructed ● Historical knowledge is dependent on evidence and the questions asked
Multiple Perspectives ● There is only one way history happened ● Differences in accounts are just other ways of saying the same thing	***Multiple Perspectives*** ● Any account is equally valid ● Nobody really knows what happened ● Multiple viewpoints possible but only one correct version	***Multiple Perspectives*** ● Accounts influenced by perspective or point of view ● the person is an active constructor of meaning/sense-making ● There may be different accounts of historical events but based on valid criteria, one may be more right than the other
Implied Indicator 1: Texts/Sources		
Textbook is the best for learning history. Texts/sources give information	Uncritical acceptance of any source. Texts are opinion based. Evidence is biased	Critical evaluation of artefacts, evidence. Looks at the provenance of the source Evaluates information
Implied Indicator 2: Historical Experiences		
Listening. Teacher lecturing. Reading textbook. Worksheets. True/false exercises. Finding facts	Learning history involves guessing about what happened.	Asking questions. Using evidence for evidence/clues. Detective work – analysis/interpretation. Using different sources. Comparing across sources
Implied Indicator 3: Cognitive Activities		
Remembering/memorizing Questioning (as information gathering)	Guessing, Choosing Challenging without supporting evidence	Analyzing. Enquiring, Problem solving. Questioning. Synthesizing Reading between the lines.
Other Indicators		
Domain general beliefs about multiple perspectives	Purpose of history	Domain general beliefs about knowledge

The transcripts were then examined by applying a combination of the inductive and deductive categories derived from the conceptual framework based on four key themes: the nature of history, the origin of historical knowledge, doing history and reconciling conflicting evidence. The response types are presented in order from Absolutist to Evaluativist and for the most part, these categories were easy to discern. Within the Multiplist category relating to Conflicting Accounts, however, there were subtle shifts in children's explanations for differences in accounts of the same event. These ranged from the acknowledgement of the existence of different claims towards evaluations of multiple accounts that lacked robustness. The differences were fine-grained and seemed to mark a shift from Absolutist thinking. These are categorised from less to more elaborated explanations for the source of conflict in order to show the progression of explanations given (see Table 1.4).

TABLE 1.4 Epistemic Stances

Category	Indicators	Example
Nature of history		
Objective (Absolutist)	History is the past.	It's something that happened in the past, like every second is history.
Factual (Absolutist)	History is facts about the past.	History is like facts from the past.
Relative (Multiplist)	History is opinion or guessing about what happened	There can be false stuff and there can be true stuff. Like there are things that you don't know could be true and things that you don't know that could be false.
Subjective (Evaluativist)	History is the study of the past. History is constructed from evidence	History is built up information that's from the past and historians study it to find out what really happened
Origin of historical knowledge		
Knowledge by acquisition (Absolutist)	Knowledge is acquired through books, teachers experts, passed down (passive)	Like maybe there's one big book that has everything in it? And stuff gets taken from that and put in other books? But only some of it does, that's what I think, not that it's all in one book but that there's a set of books.
Knowledge by experience (Multiplist)	Knowledge is experienced (multisensory)	But you could never know not unless you went back in time. Ha ha! We can't really tell because we can't go back in time so we don't know
Knowledge by enquiry (Evaluativist)	Knowledge is sought through investigation (active enquiry)	Let me think, they could have left clues or things and people look at them and find out what they are, look at things they had in the past and then they look at things they have in the present. That's what they do. They compare them.
Experiences of history/Doing history		
Absolutist	Learning history is remembering information (from text/teacher) To be good at history you need to have a good memory.	History is just remembering things about what happened ages ago. We just, like, read the story and done loads of the questions. That was it.
Multiplist	Learning history involves guessing about what happened	You find evidence [in the textbook] and you have to judge if it's true or not
Evaluativist	Learning history involves piecing together evidence to construct interpretations	• We ask questions. We look at old evidence and photos. • Yes, but I think they are more like barristers really. Detectives use evidence to build up a case, barristers use evidence to prove a point, that's what we were doing here
Conflicting accounts		
Single, objective claim (Absolutist)	No recognition of divergent claims. There is only one answer	There can only be one story, like of Jesus Christ and all. There's only one version of history.
Multiplist (Minus)	Recognition of diverging claims but still only one possible answer. Divergent claims recognised but no attempt to justify why	• It could be different but one of them would be lying. • Like if they didn't know for sure a historian could just make up what I think happened. He could be right or he could be wrong
Multiplist (subjective relativism)	Divergent claims recognised but any account is equally valid	Everyone's entitled to their own opinion.
Multiplist (Plus)	Divergent claims recognised and random justification given for differences (e.g.: numbers, mistakes)	Yeah well if two people had different stories about the same thing, you would see which one got the most amount of votes and then you go with that one.
Evaluativist (uncertain)	Divergent claims recognised and valid justification (e.g. perspective, evidence) given for differences.	Yeah it would be possible because like there is loads of different versions of, like, stuff and stories. Like people can see the same thing happening but understand it differently

In accordance with the ethical protocols of the Research Ethics Committee at Dublin City University, measures were taken to ensure that the children had been given the required information and were supported in developing an adequate understanding of the research. The children were also made aware that they could pull out of the study at any time. The data were collected with the consent of the children and the principle of anonymity was observed as far as was possible in that individual participants and the school were given pseudonyms in all of the research documentation. Parental and/or guardian (informed) consent was also collected for each child to participate in the study.

Limitations

Like all research, this study has several limitations which need to be acknowledged. It is a small-scale qualitative study that took place in one school site and additionally, the lead investigator was researching in her own place of work. Not only was she a member of the teaching staff, she was also the class teacher of Class 4a and, therefore, her subjectivity creates an additional limitation for this research. To offset this, each session was recorded by audio and comprehensive rubrics were devised to create a degree of independence between the researcher and the participants. While the lead author conducted the coding, a reflective journal was kept and both the journal and the coding were shared with the two co-authors, one with expertise in the subject area and one with expertise on the methodology, on a regular basis to sense-check ideas and explore multiple assumptions or interpretations of the data (Braun and Clarke 2013).

Findings

The range of stances and the diversity of the children's thinking that emerged from the interviews highlight the need for educators to be familiar with children's epistemic beliefs about history, particularly the ones that can act as bottlenecks. The following section explores these bottlenecks in detail and begins with the children's definitions of the subject. The majority of the children, just like second-level (see Chapman, 2011) and third-level students (see Miguel-Revilla, Carrill-Merino & Sánchez-Agusti, 2020), conflated history with the past. This influential bottleneck impacted on the children's subsequent perceptions of the origins of historical knowledge and their classroom experiences appeared to solidify these. Similar to studies with older students (Limon, 2002), these ideas were supported by the belief that one cannot know what happened in the past unless one was there to directly observe it. The final section looks at children's ideas about conflicting accounts; a central feature of historical thinking but also a strong indicator of the epistemic beliefs that a student may hold about knowledge in general.

Key epistemic bottlenecks identified:

Nature of history

- History is the past
- History is finding out what is true and false
- History is facts about the past that must be learned
- History is fixed and uncontested
- History cannot change, it has happened already

Nature of knowing

- Historical knowledge exists independently (it is just out there)
- Historical knowledge is derived from internal sources (first-hand experiences etc.)
- Historical knowledge is derived from external, authoritative sources
- Historical knowledge is unknowable (we were not there)
- If there are differences in historical accounts, one must be wrong

The nature of history: History is the past

When asked to define history, the majority of the children referred to history as "the past" and this proved to be one of the main epistemic bottlenecks articulated during the interviews. As Rachel (3a) explained: "like the skipping that we did today, that's history now" and similarly, Dawn (4a) insisted that "even the words I'm saying are history". Like many others, Sofia (1a) was clear that the terms "the past" and "history" were not only synonymous with each other but that every single event anyone encounters can be considered as history. Bain (2005) attributes this conflation to an every-day understanding of the word "history" and argues that this misinterpretation can reinforce the idea that history is but a mirror of the past. Although the words "history" and "the past" share a semantic connection, they are in fact, two very different constructs. While the past can be described as encompassing all events that have happened before this precise moment in time, history is the process of organising those events into comprehensible and connected narratives to allow those in the present make sense of them.

The majority of the children in 4a (who had experienced an enquiry-based approach to history) demonstrated an understanding of the interpretative nature of the discipline that was more consistent with an Evaluativist stance. Gavin (4a) referred to history as "the study of the past" rather than simply the past itself and likewise, Róise stated "history is arguments about the past". Additionally, references were made to the use of evidence to construct historical knowledge: "history is built up information about the past" (Seoda, 4a). Such references were noticeably absent amongst the other two groups. In fact, many (but not all) defined history with respect to practices they engaged with in the classroom. According to Rachel (3a) "history is facts from the past" and Eimear (5a) described history as "remembering and putting facts together". Likewise, Callum saw history as "facts, myths and legends that you can get in your book". These definitions can be linked to the belief that history was both a fixed and objective series of facts rather than the interpretation and analysis of the past. From an epistemic perspective, this view of history highlighted the children's belief in an external reality that exists independently of the knower. From a disciplinary point of view, by removing themselves from the process of actively engaging in historical interpretation, many students viewed history as an objective chronicler of the facts of the past.

The origin of historical knowledge: We can't really know because we weren't really there

When asked about the origin of historical knowledge, the children's answers fell into three overarching categories: knowledge by experience (e.g., through the senses), knowledge by acquisition (e.g., acquired through books, teachers, experts, passed down) or knowledge by active enquiry. The majority of students, particularly from 3a and 5a, fell into the first two categories whereas the children from 4(a) referred on numerous occasions to the construction of historical knowledge through using evidence. As Jenna (4a) stated: "We can be history detectives. We look at old pictures… we can see lots of differences from then and now. We can also learn from diaries and census and old carvings from long ago". The majority of these children viewed themselves as historians and articulated their own contribution to the generation of historical knowledge.

In contrast, and reflecting the view that history is a mirror of the past, when asked where historians get their information from, Sofia (3a) replied "they get it from the past" as if historical knowledge was simply something that one could reach into the past and collect. Sammy (3a) also shared the belief that historical knowledge was obtained directly from the past itself but when probed for further clarification added that as the past no longer exists, it is impossible to know what actually happened: "Well, history is ages ago so if they were dead, we would never know because it's over. I don't really know, cos if it happened in history, how could you tell?" In this statement, Sammy touched on what can be considered as another epistemic bottleneck: a belief that much of the past remains unknowable because it was not personally experienced. Katelyn also expressed this belief and remarked, "We can't really know history because we weren't really

there". This idea of a knowable past based on direct experience was very evident in the children's comments about historical knowledge.

In this study, the students initially seemed puzzled when asked to consider the origin of historical knowledge. Immediate responses to the question included: history textbooks, the teacher or media, and the internet itself. Seoda (4a), for example, identified Google as a source of knowledge but cautioned that sometimes it could be wrong. Danny (3a) was initially certain that all information comes from technology, especially iPhones, and seemed perplexed when asked where iPhones got the information from. After a number of attempts, he eventually settled on a transmission model and stated that further historical information could be obtained from "a person in the museum" who gets his information from "his mam or his dad and from their mams and dads". Like Danny, many children revised their initial answers when pressed further about the origin of historical knowledge. It was apparent from her initial comments that Sofia (3a) had never considered many of these issues before and her responses were immediate reactions to the questions posed. When given time to think, her responses became somewhat more considered (see an excerpt of Sofia's interview in Appendix B). Her comment "it's making sense to me now that I am thinking about it" seemed to capture a small shift in her epistemic thinking that may have been prompted by the discussion itself. Reflecting upon this unknowable past caused her to think about how knowledge of the past might be constructed and she considered a range of plausible explanations. This resulted in a move from the idea that knowledge comes directly from the past towards the idea that historical knowledge can be derived from oral testimony.

Many students articulated a belief in oral testimony, using a transmission model to explain how people find out about events in the past. They suggested that information was handed down in families by word of mouth until, eventually, "somebody in the family thought to write it down". As Rachel (3a) explained, "I'd say maybe like a family may have had one book and it was about one certain thing. They might have got the book like ages and ages ago and they pass it on". Danny (3a) also argued, "like maybe there's one big book that has everything in it? And stuff gets taken from that and put in other books?" The majority of the children spoke of the probable existence of one big book (or many big books) filled with the events of the past to explain how historical knowledge is acquired. Less common, though still present, was the idea that historical knowledge comes from authoritative experts such as the teacher or historians or as Róise (4a) asked "maybe the curriculum writers?" Similar to the views expressed on their definitions of history, the role of the individual in the construction of historical knowledge was noticeably absent in the answers given by children from 3a and 5a. In contrast, most children from 4a saw themselves as active participants in constructing their own interpretations.

Experiences of history: You have to judge if it's true or not

One of the strongest outcomes of the How People Learn project (Bransford, Brown & Cocking, 1999) was the finding that students' prior knowledge and assumptions played an influential role in how they made sense of the past. Subsequent research indicates that inherent tensions between the way the past is conceptualised outside of the classroom and the way it is practised within can create challenges for students (Wineburg, 2001; Lee & Shemilt, 2004). In light of this, it was necessary to interrogate the children's actual experiences of history to ascertain the influence these may have had on the children's epistemic beliefs about the subject. The history textbook was the dominant resource used by the children in 3a and 5a. The prescribed textbook contains content-focused history chapters presented in narrative form. Each chapter concludes with a series of higher and lower order questions that are designed to assess the children's factual retention. When discussing their experiences of doing history, almost every child in both of these cycles mentioned the textbook and the importance of recalling information. For example, Calvin (3a) described doing history as:

> We just, like, read the story and done loads of the questions. That was it. You can read myths and legends and it asks you questions all about it, like "where did he find the thing?" and "do you think this is real?

These binarised conceptions of real/not real or true/false were very evident in the children's discussions around history. Sofia (3a) referred to the importance of knowing what is real and what is not real on numerous occasions throughout her interview. Ivan (5a), who earlier in the interview displayed a sophisticated understanding of the nature of historical research, described his experiences of doing history as "you find evidence [in the textbook] and you have to judge if it's true or not." Whereas he saw the historian in an active role searching for evidence to construct an understanding of the past, his own role in the history classroom was centred on his experiences of reading the text and understanding the content from a substantive perspective. These binaries of "real" and "not real" had an impact on how Sofia (3a) viewed both the past itself and how she viewed the discipline of history. Sofia defined history as "myths which are not real" though she hedged this statement by adding "well some of the myths could be real like the Giant's Causeway." She saw the purpose of studying history as "to learn it so that you understand, like…oh, I don't know, what is real and what is not?"

Waldron's (2005) exploratory study on Irish children's perceptions of the Romans found that primary history textbooks had a discernible impact on children's perceptions of the past. While Waldron acknowledges that children do not obtain all their information about the past from the class textbook, her findings suggest that in textbook-led classrooms there is "a remarkable congruence between the themes and ideas expressed by the children and those found in the textbook used" (p. 283). Perhaps the same can be said of the style of questions used in the textbook? A survey of the class textbooks History Quest 3 and 4 (Fallon, 2012; Fallon, 2006) revealed a high number of myths and legends on the syllabus and many of the end of chapter questions revolved around asking "what parts of this myth/legend do you think are true/not true?" This seems to suggest that the structure and types of questioning in the class textbook may also play a part in forming children's conceptions of the subject which raises further questions over how much influence the activities contained within the textbooks have on children's epistemic beliefs about history. Absolutist thinking is characterised by a belief that assertions or claims are facts that can be either correct or incorrect and if, as Kuhn and Weinstock (2002) argue, epistemic beliefs progress from an objective view of knowing to a subjective/objective interpretation of knowledge claims, then end of chapter questions based around myths and legends being true or not true do little to shift Absolutist thinking. While teasing out the validity of truth claims in myths and legends is a worthwhile historical endeavour that allows students consider the values and social mores of a past civilisation, it is one that should be underpinned by discussions around the purpose of the activity rather than an as an add-on exercise at the end of the chapter. In fact, without such conversations, approaches like this may work towards perpetuating the idea that there is but one objective reality and that history is indeed simply a matter of discerning between what is true and what is not true without searching for credible justification for these choices.

The children from 4a had a very different experience of doing history in the classroom. In this class, the children used an enquiry approach to history where the focus was on the children working as historians as opposed to textbook instruction. The children in this class followed a five-phase historical enquiry approach that centred on: generating historical questions, identifying sources to answer these questions, developing historical thinking skills through the analyses of evidence and synthesis and communication of their findings and reflecting on their findings and connecting these to the wider community (Ní Cassaithe, 2020). Róise describes this approach in detail:

> We ask questions. We look at old evidence and photos. Like when we were doing the census, we looked at the names and streets and who lived there and what they did. Looking at old artefacts and going and looking at old gates and comparing to what we have today… to actually go out and do it like we did on Kesh Road when we looked at the old gates.

Notably absent from most of the interviews conducted with the children from 4a was any reference to the binaries of real and not real which lends some weight to the argument that the textbook played a part in shaping some children's conceptions of history in both 3a and 5a. In fact,

the use of textbooks was a rare occurrence in the history lessons the children in 4a experienced. These children also indicated a more critical approach to the contents of the history textbooks. Róise, for example, argued that "sometimes the history book is wrong" and when asked to explain, she connected this statement to her experiences of engaging with a variety of evidence: "Well, sometimes you show us different things that are not the same as the history books." In this statement, Róise showed a growing awareness that there is more than one story of the past. Such awareness is, in fact, a central aspect of historical thinking.

Conflicting historical accounts: One person is right, that is all

In order to determine the children's epistemic beliefs about the nature of historical knowledge, questions relating to the issue of conflicting accounts were asked and these provided a wide range of answers. When asked if it were possible to have two versions or accounts of the same historical event, if nobody was lying, most of the children indicated either an Absolutist or Multiplist stance. Some children insisted there could only be a single, objective claim: "there can only be one story, like of Jesus Christ and all" (Callum, 5a). Callum, like a small minority of students, displayed a strong Absolutist stance and was adamant that both in everyday life and in the study of history, there could be only one correct answer. A few children showed an emergent Multiplist stance and acknowledged that there could be multiple versions of an event but could not provide a reason why: "like if two different people say different things about the same thing? Well, one could be right and one could be wrong" (Daire, 4a). In some cases, there was an acknowledgement that there existed some form of naive criteria (e.g., numbers, mistakes) to assess sources. Róise (4a), like three of the other students, equated this to a numbers game and using the example of friends fighting in school, argued that the majority always wins. Here, the children were drawing on their own experiences of conflicts in everyday life and applying their own criteria for resolving these. "Yeah well if there's different stories about the same thing, you would see which one got the most amount of votes and then you go with that one" (Jenna, 4a).

Yet, while the majority of these children appreciated that differences in accounts in real life could be attributed to a variety of reasons, they were reluctant to apply similar criteria to the study of history. This reluctance was identified by phrases such as "there can't be any other histories, if there were, one would be fake" or "there's only one way that something can happen, only one real story of history" (Sammy, 3a). Even children who had exhibited more subjective leanings in earlier discussions tended to fall back on this perspective. Danka (5a) provided an example of two journalists reporting about an event from two different vantage points to justify the existence of multiple accounts of the same event but when asked to apply this to history, was adamant that this was impossible "because history has already happened". A small minority showed the beginnings of Evaluativist thinking and offered plausible reasons that included: differing perspectives, additional information or evidence available to one party and not to the other. Interestingly, almost all children drew on everyday examples rather than historical ones to illustrate their thinking.

Only one student provided a concrete historical example to explain her thinking in relation to conflicting accounts. "Like one time, I read something about Titanic, that 45 people survived, that wasn't true. First of all, I thought it was true and I went into class and I told everybody and then a few of my classmates said "no it was more" and my teacher said that 150 survived... It was fake". Rather than considering why the numbers of deaths were different, Katelyn (5a), reflecting an Absolutist stance, reduced the issue of deaths on Titanic to a matter of real or not real. For Katelyn, history was simply finding facts that were true and even more significantly, when faced with a conflict, she relied on a higher authority, the teacher, to decide which of these facts were correct.

History as fixed and uncontested: History is history, it doesn't change

Building on an Absolutist view of conflicting accounts was the conviction that there could be only one version of history, because, based on the children's observations of their own personal pasts, events can only happen one way. The majority of children indicated a belief that history is fixed and unchanging and expressed an everyday understanding that because there is only one way in which events can happen, there can be only one way in which they can be reported. Callum (5a) stated, "history is history, it doesn't change, so you just have what happened, you know?" Caoimhe (5a) displayed how deeply the view of history as fixed was entrenched in her thinking and argued (when talking about history) "if my brother robbed my sweets, he robbed them, you can't turn around and say he didn't cos he did". For Caoimhe, history and the past were both the same thing so if events in her immediate past could not have more than one version, then neither could history.

Discussion

The identification of a number of epistemic beliefs that act as "bottlenecks" to impede children's conceptual understanding of the discipline both corroborate the findings of previous studies that have looked at children's thinking in history (Waldron, 2003; Barton, 1997; Cooper, 1995; Lee & Shemilt, 2004; Lee & Ashby, 2000; VanSledright, 2002) and expand on them by situating this thinking within the emerging field of epistemic cognition. One of the most prominent bottlenecks was a belief that the past and history are the same. Conflating "the past" with "history" is a common preconception that is also found with second and third level students (Ashby, 2011; Chapman, 2011; Bain, 2005), primary student teachers (Miguel-Revilla, Carril-Merino & Sánchez-Agustí, 2020) and even other adult populations (VanSledright & Maggioni, 2016; Maggioni VanSledright & Alexander, 2009). Equating history with the past can influence children's understanding of history in a number of ways and can cause children to develop a series of assumptions based on their everyday encounters of a knowable past they have directly experienced (Chapman, 2011). When students view history as "everything from the past" they do so with everyday conjectures about that past such as "the past cannot change" and "things can only happen one way" and struggle to recognise that history is the study and interpretation of selected past events and those interpretations can and do change based on the reading of evidence. Underpinning this, from an epistemic perspective, is an Absolutist position in which multiple perspectives are non-existent as there can be only one attainable truth. From a disciplinary point of view, this epistemic belief translates into a view that history is an uncontested narrative. Facts are viewed as authorless bodies of information to be learned off by heart and historical narratives are seen as single, true accounts of a fixed past. History, for many of these children, was either "the past" or "what you get in the textbook" and the historian's job, whether the professional or the scholar, was to piece together these facts with little attention given to the interpretative nature of historical research. By equating history to the accumulation of historical knowledge, the role of evidence in the construction of historical knowledge claims was considered unnecessary or irrelevant.

Multiperspectivity, within the discipline of history, is built upon the premise that history is a discipline based on interpretation and that multiple perspectives of historical events and figures are not only possible but necessary (Low-Beer, 1997). It requires a personal understanding that people can have differing interpretations of an event or a source. From a historical point of view, multiperspectivity also allows children to explore a historical event from a variety of perspectives. The capacity to engage with multiple perspectives rests upon an acknowledgement of the "slippery nature" (Monte-Sano & Reisman, 2015) of historical knowledge itself. Historical narratives often contain multiple and conflicting perspectives and a key learning point children should take from the study of history is that these narratives can be constructed and interpreted in a variety of ways. In relation to history education, the epistemic idea that history is interpretative draws on an appreciation of the existence of multiple narratives or perspectives

about historic events (Wansink, Akkerman, Zuiker, & Wubbels, 2018) yet the ability to conceptualise the existence of these was rare in these interviews. Studies with second-level students have shown remarkable congruity with the responses found in the present study. Limon's (2002) Spanish study, for example, found that some students viewed history as one true and uncontestable narrative that is found in the textbook and discrepancies in accounts were the result of errors or lies. The results of the present research, particularly those concerning the existence of multiple accounts of the same historical event, indicate that though many children exhibited a growing personal awareness of the constructed nature of knowledge, they displayed a reluctance to apply this to the discipline of history. It has been proposed that Multiplist beliefs about subjective knowledge (e.g., personal preferences and aesthetic judgments), develop early; however, beliefs about objective disciplines, such as history, may not develop until later (Burr & Hofer, 2002; Kuhn & Weinstock, 2002). This proposition has been complemented by Theory of Mind (ToM) studies.

ToM relates to the ability to predict and explain the behaviour of ourselves and others and to understand that other people's thoughts and beliefs may be different from our own (Devine, 2016; Wellman, Fang & Peterson, 2011). Some researchers propose that key facets of epistemic cognition, such as competence in understanding theory-evidence coordination as well as the ability to connect the role of the human mind to knowing, have their roots in children's early ToM achievements (Iordanou, 2017). Kyriakopoulou and Vosniadou's (2020) study of multiple interpretations in science learning suggests that primary children's ability to reflect on the differences between their own beliefs and the beliefs of others in the social domain is a forerunner of an ability to comprehend that the same event in the physical world can receive more than one interpretation. This, as Kyriakopoulou and Vosniadou (2020) propose, may allow for such understanding to apply to other domains. Recognition of differing beliefs/interpretations in the ToM domain, therefore, may provide the foundation upon which a conceptual understanding of the nature of domain-specific knowledge is built. While the findings presented in this paper support the idea that children's ToM achievements in the social sphere can support their understanding of domain-specific concepts, the relationship between them is not linear. Studies that demonstrate the persistence of epistemic bottlenecks in the historical thinking of older students (see Chapman, 2011; Limon, 2002; Chapman & Goldsmith, 2015) suggest that, for most students, naive beliefs need to be explicitly challenged. Many of the children interviewed in this study displayed a Mulitplist stance in regard to subjective knowledge in that they recognised the existence of multiple interpretations of the same event but most reverted to a more Absolutist stance when applying this to the discipline of history. This has implications for the teaching of complex disciplinary concepts and suggests that such teaching should begin with challenging the everyday assumptions children have prior to introducing discipline-specific activities. Purposeful teaching for conceptual understanding therefore needs to make explicit those links between everyday thinking and disciplinary thinking.

Implications for teaching

The current Irish Primary History Curriculum, like many other history curricula, advocates an enquiry-based framework for school history that favours engaging the child in analysing sources and identifying how historical claims are constructed (National Council for Curriculum and Assessment (NCCA, 1999). Anecdotal evidence, however, suggests that teacher-led textbook instruction is still prevalent in Ireland (NCCA, 2008a, 2008b; Waldron et al., 2009) and elsewhere. The evidence from these interviews indicates that such an approach to history education can work to constrain children's understanding of the discipline, and of more concern, can contribute towards strengthening epistemic bottlenecks. These results suggest that the educational environment has a substantial bearing on the way students conceptualise the nature of history. From a pedagogical point of view, these initial conceptualisations are important as they act as the "foundation upon which the more formal understanding of the subject matter is built" (Donovan, Bransford & Pellegrino, 1999, p.15).

Though emergent and initially inchoate, the epistemic bottlenecks identified here show commonalities with second and third-level students' preconceptions about the nature of history. This indicates that the bottlenecks young children form in the early years about history can remain relatively stable throughout their education. The persistent nature of these often implicit bottlenecks suggests the need for specific interventions to contest them as they may not disappear of their own accord. Teachers need to be familiar with these bottlenecks and incorporate ways to challenge them into their pedagogical approach to learning. Challenging such beliefs is critical to the development of powerful ideas about history (Chapman & Goldsmith, 2015). Without explicit teaching on the work of historians, or engagement with historical thinking and historical enquiry, many students will continue to view history as the past and view it as factual, fixed and uncontested.

Further directions

Though embryonic, some of the children's comments showed that questions posed were unlocking new ways of thinking. This process of "epistemic disruption" (Ní Cassaithe, 2020) appeared to be set in motion through posing epistemic-framed questions that prompted children to reflect on abstract, philosophical issues they may have never considered before. The children's responses indicated that such reflections can initiate a disruption in their current conceptions. In a number of instances, once prompted to reflect on such issues, children such as Sofia and Danny began to move to more sophisticated levels of thinking. This suggests that questions promoting reflective dialogue and the provision of opportunities to engage with abstract topics can provide a context for the activation of particular forms of epistemic thinking. Further research will need to be conducted to verify if discussions alone can stimulate epistemic change.

Conclusion

Children enter the history classroom with preconceptions on the nature of history and historical knowledge. Some of these originate in their own everyday understandings of how the world works and others are reinforced by the educational practices with which they engage. These experiences can combine to create epistemic bottlenecks that constrain historical understanding. Introducing students to the epistemological features of history may help overcome these. Although further research is needed, the present results indicate that epistemic beliefs are important factors to take into consideration as children negotiate their way through the difficult conceptual terrain of understanding the nature of history. Rather than conceptualising epistemic bottlenecks as deficits, they can be put to constructive use, particularly if classroom teachers utilise them as catalysts or springboards to enable children to critically examine their own ingrained beliefs about historical knowledge and ways of knowing.

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Appendix A: Semi Structured Interview Questions

(bulleted questions were used if the child had difficulties with the initial question)

1. What is history?
   - If an alien was to land here, how would you explain to him or her what history is?

2. Where does historical knowledge come from?
   - How do people in the present find out about how things were in the past?
   - How do we know about what happened in the past?

3. Do you think we know everything there is to know about the past?

4. What does a historian do?
   - If you were to watch a historian at work what might you see them doing?

5. If two people witnessed the same event, would it be possible for them to give different accounts of what happened?
   - Why?
   - Why not?
   - If yes, how would you know which one to believe?

6. What about a historical event?
   - Could there be different accounts of what happened?
   - If yes, how would you know which one to believe?

7. What are the best ways to learn history?

8. During a history lesson, what do you typically do?

9. Are you good at history?
   - Why do you think this?
   - Why do you not think this?

10. How would you describe someone who is good at history?

11. Do you like school history? Why/Why not?

12. Have you ever learned about history outside of school?

13. Why do you think we study history in school?
    - Do you think is it important to study history in school?

Those are all the questions I have for you. Do you have any questions for me?

Appendix B: Excerpt from Sofia's interview (3a)

Interviewer: Sofia can you explain to me, what is history?
Sofia: History is everything that happened in the past. Even this I'm saying now is history. History is… emmm… myths that are not real and are from the past like Tir na nÓg - you know when you weren't allowed to put your foot back on the ground in Ireland? You know your man who was gone for a few years and then he came back and he put his foot on the ground and he became old? That's a myth.

Interviewer: **So history is myths that are not real?**
Sofia: Well some of the myths could be real like the Giant's Causeway, well it is real - the Giant's Causeway.

Interviewer: **Right, so how do we know what is real in history?**
Sofia: Some of it could be true and some of it couldn't be true but you'd never know because you've never seen what actually happened because you weren't born when it happened. You only know if you are there.

Interviewer: **So can you only really know history if you were there when it happened?**
Sofia: Well you could know by books as well.

Interviewer: **And were the people who wrote the books there then?**
Sofia: (shrugs shoulders) Maybe? I don't know.

Interviewer: **So where do you think the people who write the books get their information from?**
Sofia: They get it from the past

Interviewer: **So they ring up the past and say tell me what was happening?**
Sofia: (Laughs) Hang on, let me think …. emmm … no, it probably comes from the past when it was written first and they probably made the history book and put it in there. People that are from the past probably writ it and then people who write the new books get it from that. So somebody who was there writes it down but they could they could still be alive you never know, and then they would write the book themselves or they could tell the story to their family.

Interviewer: **What if we wanted to find out something from the ancient past, like really far back?**
Sofia: You can go to a castle or some sort, and you might meet one, like, a Viking, or if there's no Vikings left alive you can find someone who was related to them and related to them and related to them and then the person that still alive now, they were his cousin sort of and they passed the story down. It's … it's making sense to me now that I am thinking about it, so somebody who was there writes it down but they could they could still be alive you never know, and then they would write the book themselves or they could tell the story to their family.

Interviewer: **Ok, it's making sense to you now is it? So how else can we find out about things in the past?**
Sofia: Emmm … We could meet a historian? We could go to the Viking Castle and get all the broken things like in the 1916 Rising. You could get the photographs like of Joseph Plunkett then you'd know what was real. Or old people who lived back then, talk to them, they'd tell this us what happened.

Interviewer: **Ok, so let's say we have two of those people and they witnessed the same event would it be possible for them to give different versions of what happened?**
Sofia: Course, but one would be lying

Interviewer: **Let's say no one was lying. Could they still have different versions?**
Sofia: Emmmm, yeah. I think so.

Interviewer: **Can you explain how?**
Sofia: It could be different but one of them would be lying. Like if they didn't know for sure a historian could just make up what I think happened. One historian could tell lies and one could one could tell the real truth, But there are master historians who know everything so maybe they judge. Like if ***you*** wrote a book about the Romans, and the master historian did as well, he could say "actually know more about them because I am a master historian."

Interviewer: **So if a historian can tell lies about the past how do we know who is telling the truth?**
Sofia: That's it, you don't know, Maybe you might know from your own knowledge. Like if one historian picked up something covered in blood it could be fake blood or it could be red sauce or it could be real blood. Like if they were investigating who killed somebody. Real blood is fresh blood and ketchup is just horrible.

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What makes a testimony believable? Spanish students' conceptions about historical interpretation and the aims of history in secondary education

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ABSTRACT

Epistemic beliefs about history can have a profound impact on the way students understand and approach this discipline in the classroom. During the last decades, significant efforts have been made in order to conceptualise different epistemic stances, which can be linked with historical thinking concepts such as the use of evidence. Recent research indicates that epistemic beliefs in history are not only connected to an understanding about the nature of the discipline and the debate about objectivity, but also to the conception of evidence and interpretation in history. This study makes use of a qualitative design in order to examine the conceptions and ideas regarding history of 107 fourth-year secondary education students from three different regions in Spain. Participants were asked to discuss and analyse recent and contrasting interpretations of sources linked to the Spanish transition to democracy (1975-1982), a recent and controversial period. Information was obtained using a structured questionnaire, and responses were transcribed, codified and qualitatively analysed using emerging categories with ATLAS.ti. Results indicate that a majority of students argued that all testimonies can be equally valid in history, even if they show different interpretations or contradictory visions. Only a reduced number of participants focused on the notion of evidence as a determining factor that can indicate whether a testimony is believable, in line with a criterialist epistemic stance. Spontaneous and implicit references to the notions of objectivity and subjectivity in history were also analysed. Results also show diverse conceptions about the aims of history: many secondary education students explicitly indicated that history can be a useful tool to avoid the mistakes of the past, and argued that it should not be imitated. Some participants argued that history can help understand our present, while only a minority of students explicitly argued that each particular historical context should always be taken into account before drawing any lesson from the past. Finally, a discussion is provided about the possibility of examining students' epistemic beliefs by allowing them to address history first-hand. The study concludes that some of the conceptual shortfalls that were detected in secondary education students could be addressed by fostering historical thinking and understanding, and by allowing students to work with sources and testimonies.

KEYWORDS

Epistemic beliefs, history education, historical thinking, use of evidence, epistemic cognition

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Introduction

Over the last few decades, numerous efforts have been made in order to conceptualise and analyse the way students and educators think about history, and to develop comprehensive theoretical frameworks capable of characterising their ideas about the nature and practice of this discipline. Following an approach first originated in the United Kingdom in the 1970s with *The Schools Council History Project,* which later influenced and was influenced by other national traditions (Lévesque & Clark, 2018), researchers started focusing on second-order concepts such as evidence, empathy or causation to delineate key historical thinking concepts (Lee, 2005; Seixas, 2017a).

Many of the studies that have examined how students think about these concepts have also addressed topics such as epistemic beliefs in history due to the connection and, sometimes, assimilation between second-order concepts and ideas related to how history is constructed over time (Mathis & Parkes, 2020; VanSledright & Maggioni, 2016). Characterising and then exploring these ideas can, in fact, provide multiple opportunities to understand how students think about the nature of history, something that can help detect students' learning difficulties and preconceptions, and inform teaching practices. For that reason, this research focuses on secondary education students, and aims to examine their ideas regarding validity and interpretation in history, while also analysing their conceptions about the aims of history. By doing this, the goal of the study is to also consider participants' epistemic beliefs, in connection with some of the ideas in discussion.

Characterising epistemic beliefs about history

The scientific literature exploring the conceptualisation of epistemic beliefs in history, while not as extensive as that focused on non-domain-specific epistemic beliefs, has recently made significant advances. By focusing on history education as a field with its own characteristics, researchers have been able to adapt general stages of epistemic cognition, such as the pre-reflective, quasi-reflective and reflective levels conceptualised by King and Kitchener (2002), and conceptualised specific stances, that is, epistemic positions to be adopted, for this particular discipline.

In this regard, Lee and Shemilt (2003) were among the more prominent researchers who developed a comprehensive model that tried to explain progression in the way students understand the second-order concept of evidence in history. By defining a series of different stages, Lee and Schemilt tried to characterise diverse ways in which students perceived historical evidence (as pictures of the past, information, testimony, scissors and paste, evidence in isolation, and evidence in context). This model was very influential in the development of a new theoretical framework by Maggioni and her colleagues, with the understanding that the concept of evidence "is a pivotal idea in epistemic cognition in history" (Maggioni et al., 2009, p. 196).

Maggioni, who had been interested in the assessment of epistemic beliefs about history for a long time, proposed a conceptual model based on three different epistemic stances (Maggioni, Alexander, & VanSledright, 2004; VanSledright & Maggioni, 2016). The *copier* or *objectivist* stance is described a static conception of history in which an objective truth is seen as possible to achieve. The second vision, referred to as the *borrower* or *subjectivist* stance, can be characterised by a sceptic and sometimes relativistic approach, in which opinions and interpretations assume a key role. Last of all, people that adhere to the *criterialist* stance are expected to have a more nuanced vision of history, both in relation to its nature and to how knowledge is obtained and interpreted, building on the framework of Lee and Shemilt (2003).

Research indicates that epistemic beliefs in history are not only connected with an understanding about the nature of the discipline and the debate about objectivity, but also with the conception of evidence and interpretation in history (Miguel-Revilla, Calle-Carracedo, & Sánchez-Agustí, 2021). Due to the particular nature of history education, the notion of validity can be highlighted as one of the key elements that can shape the way students think and reflect about how historical knowledge is constructed. This, in turn, is connected to the way students believe evidence is used in history, and related to their beliefs about the role of subjectivity or objectivity in this discipline, elements that can play a fundamental role in historical interpretation. For instance, in line with the latter, authors such as Martens (2015) have proposed stages or levels of understanding regarding interpretation. In this categorisation, very similar to the framework developed by Lee and Shemilt (2003) and the one proposed by Maggioni et al. (2004), history can be seen as a picture of the past, as the historian's intention, as interpretation of the past or, finally, as a construct.

To sum up, research into epistemic cognition focuses on the way people think and reflect about the nature and process of knowledge, but this field is vast and has adopted multiple perspectives over time regarding knowledge. Epistemic beliefs have become one of the main research lines in this area, due to their conceptualisation "as an influence upon, and result of, cognitive processing" (Greene, Sandoval & Bråten, p. 5). As such, epistemic beliefs can be defined as or refer to "beliefs about knowledge and knowing" (Hofer, 2016, p. 22), and from the point of view of this particular discipline, epistemic beliefs reflect beliefs that take into consideration how history is constructed and interpreted, among other elements related to historical knowledge. In this regard, an examination of the way key historical concepts such as validity and interpretation are understood could provide an insight to the way students think about the construction of historical knowledge, and the way these notions are connected with epistemic beliefs.

Understanding the effects of epistemic beliefs in history education

Epistemic beliefs about history do not only describe the way students or educators simply think about knowledge in this particular field, but can also assume an important role in influencing the way they address history education. From the point of view of teachers, research indicates that aims of history are closely related to different epistemic stances, and that less reflective stances are usually related to traditional approaches that tend to focus on fostering national identities (Sakki & Pirttilä-Backman, 2019). Research also indicates that pre-service and in-service teachers' practices can be developed after specific interventions (VanSledright & Reddy, 2014), although Stoddard (2010) cautions that educators' epistemic stances do not always go beyond the conceptual sphere into actual teaching practices.

For students, an analysis of their epistemic beliefs about history can help identify potential shortfalls in historical understanding in order to propose solutions. While available research indicates that students usually show many difficulties and shortcomings when analysing historical evidence, using primary or secondary sources can help students become aware of how history is constructed or how to compare different or contrasting accounts (Chapman, 2011; Hicks et al., 2016; Pickles, 2010). Studies in this field indicate that many students tend to conceive historical evidence as a direct link to the past, and that they think that interpretation is not necessary, believing that sources provide direct information about what already happened (Barton, 2008).

Interventions that have focused on how to work with historical evidence in the classroom have found that it is possible to use a disciplinary approach (teaching students how to analyse sources and work like historians, for instance), and how it could help students assume a more nuanced epistemic stance (Nokes, 2014).

Specifically, some of these notions have also been a main focus of interest in the Spanish context, where the intervention described in this particular study took place. During the last decade, authors have examined Spanish prospective teachers and students' historical competences, including their ability to focus on causality, empathy, or their narrative discourse (Molina-Puche & Salmerón-Ayala, 2020; Sáiz-Serrano, Gómez-Carrasco & López-Facal, 2018), as well as how to interpret historical sources (Domínguez-Castillo et al., 2021), among other aspects. In connection, epistemological conceptions have also been the focus of specific studies with pre-service teachers (Gómez-Carrasco, Rodríguez-Pérez, & Mirete-Ruiz, 2018; Miguel-Revilla, Calle-Carracedo, & Sánchez-Agustí, 2021), something that has allowed the detection of predominant stances and conceptual roadblocks in this particular context.

Pedagogical approaches to make history relevant

At the same time, promoting a much more nuanced approach to history education can also provide a path for students to appreciate the relevance of history. Research indicates that secondary education students do not always feel this discipline is in connection with their interests and daily lives (Angvik & von Borries, 1997; Haydn & Harris, 2010), something that is also sometimes detected in undergraduate students (Berg, 2019). In this regard, adopting specific strategies such as using historical analogies, using a longitudinal approach, or addressing enduring human issues can help students perceive history as something closer to their interests (van Straaten, Wilschut, & Oostdam, 2018). These pedagogical approaches can also be useful in order for students to become aware of aspects related with interpretation in history, an important part of epistemic cognition in this discipline, and especially, to question themselves about the aims of history, something that has also been explored in Spain by focusing on both pre-service educators (González-Valencia, Santisteban-Fernández, & Pagès-Blanch, 2020) and secondary education students (Miguel-Revilla, 2022).

This last element can be put in close relation to the idea of historical consciousness, which has been a central idea in history education in the last decades (Seixas, 2017b; Thorp, 2014), with the objective of making students establish a connection between the past, the present and the future. For this reason, addressing controversial issues or historical periods in the classroom can provide a helpful opportunity to promote student engagement (Miguel-Revilla, Calle-Carracedo, & Sánchez-Agustí, 2021) while also allowing teachers to make students aware of the different ways history is used in our society (McCully & Kitson, 2005), and some of the aims of history education.

Purpose of the study and research questions

Taking into account the theoretical framework and studies that were reviewed in the previous section, this study aims to examine the results of an empirical intervention, and to closely examine students' epistemic beliefs in order to inform educational practices in history education. Taking into account this particular context, second-order concepts are not conceptualised in the Spanish curriculum, which mainly focuses on substantive content, and teacher practices that are promoted are not usually aimed at focusing on historical interpretation with historical sources. For that reason, the main aim of this research is to analyse the way Spanish secondary education students think about historical interpretation and about their conceptions regarding the aims of history, key aspects closely related to epistemic cognition about this discipline. The study intents to qualitatively examine students' ideas regarding these topics using a questionnaire and historical sources after learning about the Spanish transition to democracy, a historical period that took place between 1975 and 1982 and that is still influential in modern-day Spain due to its

controversial nature and connection to the present. The research questions guiding this study are the following:

1. How do secondary education students approach validity and interpretation in history? What are their ideas regarding objectivity and subjectivity in history, as well as about the use of evidence, to determine whether a testimony is believable or valid? How are some of these notions connected with participants' epistemic beliefs?
2. What are some of the key secondary education students' conceptions about the aims of history? In which ways do participants consider history useful?

Methods

The interpretative nature of history and history education, and the requirement to achieve an in-depth examination of secondary education students' responses to different and sometimes contradictory historical sources made it necessary to adopt a qualitative research design for this study (Creswell, 2014). This design was deemed appropriate to analyse and contrast participants' ideas and conceptions due to the fact that a qualitative approach can be considered interpretive, experiential and situational (Stake, 2010). Students' responses were codified using emerging categories.

Context and participants

A total of 107 fourth-year Spanish secondary education students aged between 15 and 16 (55 female and 52 male participants) were selected for this study. All students were enrolled in three public schools located in three different Spanish regions: 21 in Oviedo, 33 in Burgos and 53 in Laguna de Duero (Valladolid). Because teachers in charge of each group allowed access to the researcher in order to initiate an intervention and obtain data, the sampling approach can be described as non-probabilistic (Neuman, 2007). On the other hand, students were selected from three different Spanish regions allowing for the implementation of a purposive typical sampling strategy to obtain information from comparable groups and contexts (Wellington, 2015), as well as to allow the sample to be more representative of the nation as a whole.

An intervention with a digital learning environment designed for this purpose was implemented by the researcher for a total of three weeks in order to teach students about the Spanish transition to democracy (1975-1982). This implementation adopted an inquiry-based approach to make students reflect about some of the key historical thinking concepts, and about the connection between the past and the present (Miguel-Revilla & Sánchez-Agustí, 2018). During the intervention, the researcher, adopting the role of the teacher during that period of time, made use of the computer room of the schools, and organised the sessions in order to cover different key elements about the time period: from the political sphere to cultural, social and economic aspects of the era. The digital learning environment was used to provide students access to a selection of historical sources (videos, newspaper excepts, song lyrics, etc.) in each session, which were annotated, and which were used to design interactive learning activities that explicitly addressed second-order concepts, something that is not part of the Spanish curriculum, and that is not usually a main focus in traditional instruction.

Some of the tasks that students were asked to perform include identifying and contextualising a series of historical sources from the time period (such as representative music videos and photos), while making use of said sources to gain insight about a specific topic (for instance, the mentality of the period) by learning to ask relevant questions. Specific second-order concepts such as causality or change and continuity were also used as the basis of interactive activities in which participants were provided a task (such as ranking a series of potential causes of the Spanish transition to democracy) in order to later on reflect about the multiplicity of causes or about the relevance of events in the past. In most of these activities, students were made aware of

interpretation in history and about different and contrasting points of view, something that was intended to make them reflect about these issues.

The environment could also have allowed students to familiarise themselves with primary and secondary historical sources about the period while also applying an active teaching methodology, something that was well-received by the students and allowed them to become more engaged in the learning process (Miguel-Revilla, Calle-Carracedo, et al., 2021). After the intervention, once students were more familiar with the period, a questionnaire was used to inquire participants about their ideas regarding interpretation and the aims of history. Data was obtained with the informed consent of all students and with the help of the teachers in charge of every group.

Research instrument and data analysis

Due to the qualitative nature of the study, and in order to be able to allow participants to explain and justify their responses, information was obtained using a structured open-ended questionnaire. Two specific items were incorporated into this instrument with the objective of inquiring about interpretation and objectivity in history, as well about the aims of this discipline. In one of the items, students were provided with two newspaper fragments, both of them addressing the life of Santiago Carrillo, a former leader of the Communist Party in Spain and a controversial historical figure during the Spanish transition to democracy, who had passed away in 2012. The fragments included different interpretations provided by the historian Paul Preston in an in-depth interview published by the Spanish newspaper *La Vanguardia* on April 6, 2013, as well as diverse opinions from other politicians reflecting on his legacy, using an article published on the Spanish newspaper *ABC* on September 18, 2012. Students were asked to discuss the sort of information they were able to obtain from those articles, where a multiplicity of positions was presented in nearly equal terms, as well as to reflect about the existence of contradictory positions. In particular, the historical figure was presented in many different lights, and, occasionally, in diverse shades of grey. Finally, students were also asked to provide their ideas and opinions regarding the usefulness of studying history to determine participants' conceptions about the aims of this discipline.

The paper questionnaires were completed by the participants in person after the end of the intervention. All responses were transcribed, codified and qualitatively analysed with the ATLAS.ti software. Emerging categories were used following some of the principles of grounded theory methodology (Waring, 2017) in order to establish a connection between the different notions and ideas and systematically examine the concepts that were of interest for this study. The information was transcribed and coded by the author of this study, but no additional researchers took part in the analysis, limiting the ability to take intersubjectivity into account. The data were analysed using concepts regarding historical validity and interpretation, mainly connected to second-order concepts such as the use of evidence (Seixas, 2017a), but these ideas, which addressed notions such as objectivity or subjectivity in history were also used to analyse how these notions could be a reflection of participants' epistemic beliefs. For this reason, some of the categories related to epistemic cognition in history described by Maggioni et al. (2009) have been used in order to discuss and interpret the result. However, due to the fact that students do not categorically adhere to a specific epistemic stance, the *objectivist*, *subjectivist* and *criterialist* stances have been used to provide a discussion and gain insight by establishing some connection between categories. In order to offer a more accurate representation of participants' ideas, specific examples and discrepancies have been selected and provided when presenting the results, enhancing in this way the qualitative validity of the study (Gibbs, 2007).

Results

Students' ideas about historical validity and interpretation

The examination of the results focused, first of all, on the students' conceptions about historical validity and interpretation. As previously indicated, participants were presented with different documents in order for them to reflect about the legacy of Santiago Carrillo. Students' responses were analysed taking into account, first of all, participants' reflections about the diverse and contradictory information provided by a historian and by politicians in newspaper fragments after the death of Carrillo, and secondly, about their notions about objectivity and subjectivity in history.

When confronted with different testimonies and opinions about the actions and legacy of this controversial figure, students assumed diverse perspectives. One of the main issues detected was that a majority of the participants (a total of 60 mentions were found) explicitly indicated that they considered all testimonies equally valid when confronting different views about the period or about this particular historical figure. In the words of one of the participants, when discussing about two contrasting visions, *'both testimonies are valid because each person can have a different opinion and that is respectable'* (98.Female), while another student pointed out that *'all of us are free to let our opinions be heard and respected'* (53.F). This idea was also reiterated by other participants using similar or more nuanced arguments, like in the following example: *'testimonies are equally valid, because everyone can have a different opinion depending on their mentality and ideology'* (106.F).

In some occasions, participants seemed to have problems adequately grasping the concept of validity. For instance, one student stated that from her own point of view, *'each of us have different opinions, all of them equally valid even if they are not true'* (03.F), conceptualising the idea of validity in history as something not connected with a factual basis. In the very same line, another student stated that *'all opinions are valid as long as they are not insulting towards other people or ideology, and that is why they would be equally valid even if you do not share them'* (49.Male). This idea of equal validity that has been described in the last two paragraphs might be connected with a relativist perspective, in connection with a *subjectivist* or *borrower* epistemic stance, something that will be discussed later on.

Not all students agreed with the idea that all testimonies should necessarily be considered in the same way when examining historical documents. After analysing the responses, a total of 40 instances were detected of participants providing arguments where they tried to present a case about what they would consider as a criteria to establish the validity of the testimonies under examination. It is important to note that in 13 out of these 40 instances, students indicated that their own personal perceptions would be the key factor in determining this validity. In these particular cases, participants usually held themselves in high esteem, firmly believing that they would be able to discriminate between information. For instance, one of the participants pointed out that *'because they are only opinions, I would try to understand them, and that way obtain the information that interest me the most' (54.F), while another one specified that 'one would have to study more about the period and then draw their own conclusions'* (78.M).

Conversely, some students went beyond these type of arguments and tried to indicate an external factor that would help them differentiate between testimonies. In this case, participants highlighted the importance of the author of each text because *'it depends on the point of view and ideology of the one who is talking'* (66.M), as one student indicated, while another one wondered about *'how different a person could be depending on the one that is writing'* (102.M). Surprisingly, very few participants noticed in their responses that a professional historian (Paul Preston) was the one providing his point of view in one of the documents. A student pointed this out, indicating that *'in the second text there is an interview with a historian, and maybe that would make it more valuable than the other one'* (61.F).

Students addressed the notion of evidence in only 19 of these 40 instances that try to establish a criteria for the assessment of validity. On the one hand, participants used generic arguments in most of the cases, but interestingly, one of the students explicitly indicated that her opinion was shaped by the fact that in one of the documents *'I have the impression that it is not completely true, simply because they do not contrast ideas'* (82.F). Conversely, when discussing the interview with the historian she indicated that *'it is more faithful to me because he contraposes ideas, highlighting and verifying them, in a more objective manner'* (82.F). A similar idea was presented by another student, who argued that while some testimonies *'only present one side of the coin; in the second [document] they show the good things, but also his failures and mistakes'* (71.M).

On the other hand, the examination of the responses made it possible to observe additional ideas. For instance, one of the participants focused on the number of statements defending a particular position as a criteria, because from his point of view, one of the texts *'is more realistic, because it gathers the testimonies of other people, while there is only one on text B'* (95.M). Interestingly, some students implied that validity in history stems from taking a few key elements from each testimony: *'you can mix and create a description using those testimonies about [Santiago] Carrillo'* (58.M).

Finally, some of the spontaneous and implicit references to the notions of objectivity and subjectivity in history were also analysed due to their relevance in relation to epistemic beliefs in this discipline. While only the responses of a few students discussed or mentioned ideas related to these notions, the conception of objectivity was addressed comparatively much more frequently. The 12 participants that reflected about this issue in their responses when confronted with the different documents and testimonies usually included references to the necessity to be objective when examining evidence and that *'historians need to have an objective vision when examining the situation'* (28.F), in the words of one of the students.

Participants usually reflected about these notions when trying to make sense of divergent testimonies or contrasting information. For instance, one student stated that *'it is not possible that two contraposing opinions are equally valid. I believe that there is one that is true and other that is false'* (40.F). While this point of view was accepted by these participants, it was also possible to detect a deeper conception of history. In many of these cases, students also argued about the necessity to examine the past so *'you can see what truly happened'* (107.F) or *'what truly was'* (16.M), adopting an objectivist or copier epistemic stance characterised by a belief that history is static, and that knowledge about the past can be directly accessed. At the same time, some of the students adhering to this stance also seemed to have problems differentiating between the notion of history and the past as itself, with arguments such as that *'you have to accept history just as it is'* (48.M).

Conversely, only four students openly discussed the notion of subjectivity in history, and most of them simply mentioned that when contrasting testimonies *'all points of view should be considered, because they are subjective'* (105.M), or that *'depending on who is saying it, information and opinions are very subjective'* (59.M). When specifically discussing the documents that were provided, only one of the students explicitly adopted a relativistic point of view, in line with a subjectivist or borrower epistemic stance, indicating that all testimonies are *'equally subjective'* (72.M) when talking about the historical figure, and not considering a criteria that would be helpful when discriminating between testimonies, or between facts and opinions. While only a few students addressed this issue, it is important to remember that a large number of them implicitly supported this stance when they defended the identical validity of all testimonies in history. In any case, and while this will be discussed in the last section, it might be difficult to identify a coherent or firm epistemic stance in this regard due to the age of the participants.

Students' conceptions about the aims of history

In second place, those participants' responses that addressed the way they thought about the relevance of history were also analysed. The main objective, in this occasion, was to understand their conceptions about the aims and usefulness of history and history education in today's world, something connected with the different conceptions about the nature of history (Miguel-Revilla, 2022; Sakki, 2019), a key element that can also help understand and characterise students' beliefs about this discipline.

After the analysis, results indicate that students offered many different points of view when confronted with the question of whether learning about the past could be useful or important. Only three out of the 107 students that took part in this research explicitly stated in their responses that they did not consider history as something connected with their daily lives, with sceptical arguments such as the following, provided by one of the participants: *'I don't believe that by talking about something that already happened we will be able to understand something better in the present'* (46.F). Despite these outliers, the rest of the participants that referred to this specific issue were conscious of the link between the past and their current context, although different aspects were highlighted by each of them.

First of all, a total of 22 instances were found of students mentioning the idea that history should allow us to avoid some of the mistakes of the past. One of the students suggested that everybody *'should have the past as a lesson, and learn from the mistakes'* (04.F), while another one indicated in her response that *'we should learn to use the past, and become aware that what is happening now was already happening before, to anticipate and change things'* (62.F). In a step further, five students mentioned in their responses that history should ideally not only be a source of potential lessons, and claimed that it should be imitated whenever possible. In some of these answers it is possible to detect some hints of presentism, due to the fact that some of the students established a contrast between the current political climate and that of the Spanish transition to democracy, when reaching a consensus was the main aim of the period in order to avoid perpetuating the dictatorial regime. In the words of one of the students, *'I believe we should imitate the past, because if we do just that, today we would not have these problems with politics'* (63.M), echoing some of the perspectives also found in the mass media. In fact, in line with this idea, only one participant focused on a cyclic notion of history, and stated that *'the past repeats itself in the present, but it seems politicians do not know anything about history'* (05.M).

Many participants adopted a different perspective and did not show a perception of the past as something that should necessarily be imitated, focusing instead on other elements. A total of 39 students specifically mentioned the idea that history could be especially useful to understand the present. For one of the participants, *'thanks to the things that happened in the past we can understand some of the things that are happening now'* (59.M), an idea that was also reiterated by another student, who suggested that *'if we did not know their origin, we would not know the reason of why things happen'* (81.M). From this perspective, some of the students assumed a pragmatic vision about the utility of history, like in the following example, were a participant stated that *'I think we should not imitate the past, but study it to apply a solution based on the past with a vision for the future'* (107.F).

While showing an understanding that history is connected with the present, only 17 participants explicitly mentioned the necessity of contextualizing the past when learning about it. In the responses, the students argued against simply drawing lessons from the past before first examining the particular historical context. In some occasions, the arguments used showed a certain degree of scepticism or even disdain about the past, like the case of one student, who stated that *'in my opinion we should never go back to the past because if we changed it must have been for a reason; we should put it in context and leave it behind'* (74.M). While the majority of the responses were succinct and simple in nature, another participant very eloquently expanded on this idea: *'imitating the past leads to conservatism and a romanticisation of history, which doesn't bring anything good'* (47.F). This very same student indicated below that *'maintaining the past in its context could be more beneficial to understand it and learn from it, while also avoiding problems*

when taking it out of context' (47.M), adopting some ideas connected with a nuanced stance about the discipline of history.

Discussion and conclusions

After analysing the responses provided by the participants attending to the different categories, it is now time to discuss the results that were obtained in this study in order to provide an answer to the initial research questions. First of all, taking into account the students' ideas regarding interpretation in history, it is now possible to address some of the recurring notions regarding validity and evidence, as well as some conceptions about objectivity and subjectivity in this discipline, as a reflection of participants' epistemic beliefs about history.

Results indicate that only a minority of those students that took part in this research were able to adopt a completely coherent perspective in order to make sense of diverse and sometimes contradictory testimonies about a particular historical period and the legacy of a key historical political figure. Most of the responses did not try to delineate any sort of criteria that would help them establish a differentiation between the information available, or that would allow them to determine which testimony could be more believable, corroborating previous studies with secondary education students (Barca, 2005; Liceras Ruiz, 2000). In these cases, participants seemingly adopted a stance where they perceived all testimonies as equally valid, in line with a *subjectivist* or *borrower* epistemic stance. This vision was not necessarily completely coherent in nature, as some of the same participants also aimed to find *what really happened,* a conception linked to an *objectivist* or *copier* epistemic stance (Maggioni et al., 2009), described by the authors as a less sophisticated stance.

The results obtained in this study indicate that only few students were able to take evidential inquiry into account and to go beyond some of the most simplistic visions, something already found by Chapman (2011) in his study about historical interpretation with British students. In relation to the *subjectivist* stance, as seen in the responses, some students at this age were able to understand that the past cannot be accessed directly and that history is gradually constructed over time, a reason why they sometimes adopted a defeatist attitude and stated that history is simply a matter of interpretation. On the other hand, nuanced arguments were also sporadically found about the issue of selection in history, which contributes to the debate whether a *subjectivist* stance is necessarily less preferable than a *criterialist* one (Stoel et al., 2017), and which points to the relevance of always considering the criteria that was considered in order to arrive to a specific epistemic stance. In any case, the arguments provided by participants seem to imply that they lacked a completely coherent vision in the vast majority of the cases that were examined, something that has been previously indicated by those studies that have focused on some of the gaps and difficulties in students' reasoning about history and about the past (Barton, 2008).

Regarding the second category that was analysed, in this case in relation to students' ideas about the aims of history, it should be noted that only a minority of the participants' responses suggest that they did not find history relevant or connected with their lives, in partial contrast with previous research (Angvik & von Borries, 1997; Haydn & Harris, 2010). On the other hand, it is important to point out that selecting the Spanish transition to democracy as a topic to address for this study might have influenced students' responses due to the fact that it is a very recent historical period, something which might have helped them establish a clear connection between the past and the present.

Furthermore, the ideas that were examined indicate that some participants might have had the current Spanish political and social circumstances in mind when discussing the way in which learning about the past could help to avoid previous mistakes. The Spanish transition to democracy was characterised by the search for a political consensus and reconciliation, which some students understood as something that could be imitated in the present. Precisely, this link was deemed useful in the construction of the task, because the expectation was that it would allow students to understand how history can be dynamic, connected to, and reinterpreted from the

present, which in turn, from the point of view of epistemic cognition, might help them avoid a naïve objectivistic approach in which history is merely conceived as a picture of the past, using the terminology of Lee and Shemilt (2003), and Martens (2015). Despite this particular outcome, only a systematic approach over time would be able to deeply and meaningfully shape epistemic beliefs. Only a relatively reduced number of participants explicitly argued that each particular historical context should always be taken into account before drawing any lesson from the past, underscoring the need to contextualise all information and historical evidence in order to avoid simplistic connections, something that was expected, due to the fact that a *criterialist* stance is usually of a more reflective nature.

Implications, limitations and future directions

This study was conceived as a way of examining Spanish secondary education students' visions about historical interpretation and the aims of history, ideas that are closely underpinned by epistemic beliefs about history. The analysis has helped understand participants' reasoning regarding aspects such as validity and objectivity in history, usually linked to the idea of evidence, while also providing information about how students establish a relationship between what they study about the past and the present they live in, a key element of historical consciousness (Thorp, 2014).

Using historical documents and testimonies about a very specific topic has allowed students to reflect and provide valuable information about the way they think and how they perceive history as a discipline. By interpreting students' conceptions about the notions of objectivity, it has been possible to understand how they think about interpretation in history, because, as indicated by Ashby (2011), evidence is something that should be understood and not something that is practiced. By analysing how students interpret contradicting testimonies and interpretations, information was also obtained about their epistemic beliefs in relation to some key epistemic stances (Maggioni et al., 2009). Students were not strictly categorised using these stances, but their use allowed to understand how these notions are related to ideas clearly connected with historical thinking concepts. For instance, when participants reflected about how all different points of view could be equally valid when interpreting historical sources, it was possible to detect ideas connected with a *subjectivist* epistemic stance. Likewise, responses that showed problems establishing a differentiation between history and the past could be a reflection of an *objectivist* or *copier epistemic* stance. In most occasions, these associations were helpful in order to detect how some of these notions and ideas can be perceived as connected to each other, although further research is needed in order to gain further insight about these relations.

Among the limitations, it is always important to consider the effects of the questions or questionnaires used, as Chapman (2011) points out when discussing about epistemic beliefs and historical interpretation. In addition, and while participants from different Spanish regions took part in this study, it would be useful to establish additional comparisons in the future with other national contexts in order to further examine contrasts and similarities. It should be noted that, as previously discussed, the selection of the Spanish transition to democracy might have been a motivating topic for students (Miguel-Revilla, Calle-Carracedo, et al., 2021), but similar historical periods can be found regardless of the national context. From this point of view, addressing controversial issues or periods (as well as other potential topics and themes) could help students establish a connection between their interests and the aims of history education. Finally, the fact that this was a very specific intervention, and that only a limited number of historical sources could be used should also be taken into account, as there is always a risk that students were only able to rely on specific information.

An additional key aspect that could be highlighted is that the design of this particular study has helped bring to light some of the ideas and reflections of secondary education students, which were examined by attending to the participants' own words and responses. This made it possible to detect some of their preconceptions, which were of a very diverse nature. From this point of view, focusing on historical interpretation and the use of evidence was a strategy that allowed to

obtain information about epistemic beliefs in this field, which should be taken into account if we aspire to understand how students think about history and how to transform teaching practices in history education. Finally, it is important to remember that some of the conceptual shortfalls that were detected in secondary education students can be addressed by fostering historical thinking and understanding. By transforming traditional approaches by explicitly focusing on historical concepts, such as use of evidence, and by making use of a disciplinary approach with historical sources, it might be possible to connect students with the way history is produced and interpreted. Allowing students to work with sources and testimonies can help promote a more nuanced understanding about historical knowledge and its nature, which in turn can play a fundamental role in making them perceive history as a more interesting and relevant subject.

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Narrative competence and epistemological beliefs of German Swiss prospective history teachers: A situated relationship

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Abstract

Few history education studies have indicated that school students' epistemological beliefs affect their historical thinking and writing. Some research has suggested that history teaching could affect these aspects. Several history educators have assumed that (prospective) history teachers' epistemological beliefs are related to their ways of teaching and to their ability to think historically. Yet evidence underpinning these assumptions is rare. To address this gap, we investigated how prospective German Swiss history teachers' epistemological beliefs impacts their reading and writing abilities in terms of narrative competence. We therefore applied argumentative writing tasks to assess participants' narrative competence and surveyed their epistemological beliefs and further contextual covariates (e.g. situational interest, number of history courses attended at university). Results show small effects of participants' epistemological beliefs on their narrative competence, while their situational interest is more influential. Other contextual constructs (e.g. number of history courses attended at university) are also predictive. Overall, our results indicate that narrative competence and epistemological beliefs are correlated, yet situated in contextual aspects.

Keywords

Narrative competence, epistemological beliefs, situational interest, self-efficacy, history teacher training

Citation

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Introduction

One important way of knowing is the narrative mode. This helps people to construct meaningful knowledge about past human action in the form of historical narrations. Researchers long distinguished this mode from an analytical-scientific one that aims to construct descriptions, explanations, or argumentations based on cultural or natural realities (Bruner, 1986; Novick, 1988). However, Ricœur (1984) indicated that historians include these forms when they construct narrations. Rüsen (2017) defined the ability to do so as narrative competence. History educators have conceptualized the thinking process behind this capacity by applying several concepts, including "historical thinking" or "understanding" (e.g. Seixas, 2017). In order to foster this capacity in school students, it seems obvious that teacher training needs to develop it in prospective history teachers as part of their professional knowledge (e.g. Heuer, Resch, & Seidenfuß, 2017; Monte-Sano & Budano, 2013). Their epistemological beliefs also need to be supported as these could affect teachers' professional knowledge, their teaching, and student learning in class (see Lunn, Walker, & Mascadri, 2015).

Few history education studies have so far illumined teachers' professional knowledge in terms of narrative competence (e.g. Bohan & Davis, 1998; Borries, 2007), nor its relation with epistemological beliefs (e.g. Maggioni, 2010; Yeager & Davis, 1996). Hence, we conducted a study with 175 prospective German Swiss history teachers, and we asked how well-trained participants' narrative competence is and which epistemological beliefs they hold. We also explored whether participants' epistemological beliefs affect their narrative competence. Further, we investigated whether epistemological beliefs are most influential compared to several covariates (e.g. situational interest, number of history courses attended at university). We, therefore, applied two material-based writing tasks to assess participants' narrative competence. We also used survey methodology to analyze their epistemological beliefs and further covariates (e.g. situational interest, number of history courses attended at university). On this basis, our investigation contributes first statistical evidence to prior qualitative studies on the relation between the epistemological beliefs and narrative competence of prospective history teachers (e.g. Seixas, 1998; Yeager & Davis, 1996).

Theoretical background

Overall, no consensus exists on how to conceptualize history teachers' professional knowledge (e.g. Tuithof, Logtenberg, Bronkhorst, van Drie, Dorsman, & van Tartwijk, 2019; van Hover & Hicks, 2018). For instance, Baumert and Kunter (2013) adopted Shulman's (e.g. 1986) seminal work. They separated teachers' professional competence into pedagogical knowledge (PK), content knowledge (CK), pedagogical content knowledge (PCK), and subjective constructs such as values and beliefs. We have followed this approach in our prior work on prospective German Swiss history teachers' PCK (e.g. Waldis, Nitsche, & Wyss, 2019), CK (e.g. Waldis, Marti, & Nitsche, 2015), and beliefs (e.g. Nitsche, 2019).

Narrative competence

History teachers' CK might be defined as the declarative (e.g. curricular content) and procedural knowledge (e.g. analyzing sources and accounts) that teachers use to apply their narrative competence to teaching (e.g. Waldis, Nitsche, Marti, Hodel, & Wyss, 2014). To conceptualize participants' narrative competence, we adopted existing concepts on historical cognition. English-speaking authors have described this type of cognition variously, among others, as "historical thinking" (Wineburg, 1991a, 1991b, 1998), "historical reasoning" (van Boxtel & van Drie, 2018; van Drie & van Boxtel, 2008), or "historical understanding" (VanSledright, 2011, 2014). German-speaking authors have mostly defined the outcome of historical cognition in terms of competence (see Barricelli, Gautschi, & Körber, 2012). This refers to individuals' capacity to adopt knowledge, skills, and attitudes in order to solve problems in various situations (e.g. Weinert, 2001). To

theorize narrative competence, we adopted the four components of the "FUER model": (1) the competence to ask or identify historical questions; (2) the methodological competence to re-construct (i.e. synthesize) or de-construct (i.e. analyze) historical statements; (3) the orientation competence to relate historical information and judgments to present lives; and (4) the subject-matter competence ("Sachkompetenz") to apply, for example, conceptual (e.g. revolution, power) or methodological knowledge to historical thinking (e.g. Körber & Meyer-Hamme, 2015). We operationalized these aspects for empirical research by connecting them to the aforementioned concepts and prior research (Gollin & Nitsche, 2019; Nitsche & Waldis, 2016; Waldis, Marti, et al., 2015). We differentiated narrative competence into four segments and several interrelated activities (see FIGURE 1):

a) *Historical interest*: To solve problems with a temporal orientation (e.g. uncertainties of identity), or to react to institutional environments (e.g. school assignments, a controversial museum exhibition), people might focus on past aspects and transform their historical interest into *historical questions*, *claims*, or *hypotheses* (e.g. Körber & Meyer-Hamme, 2015; van Drie & van Boxtel, 2008; VanSledright, 2011).

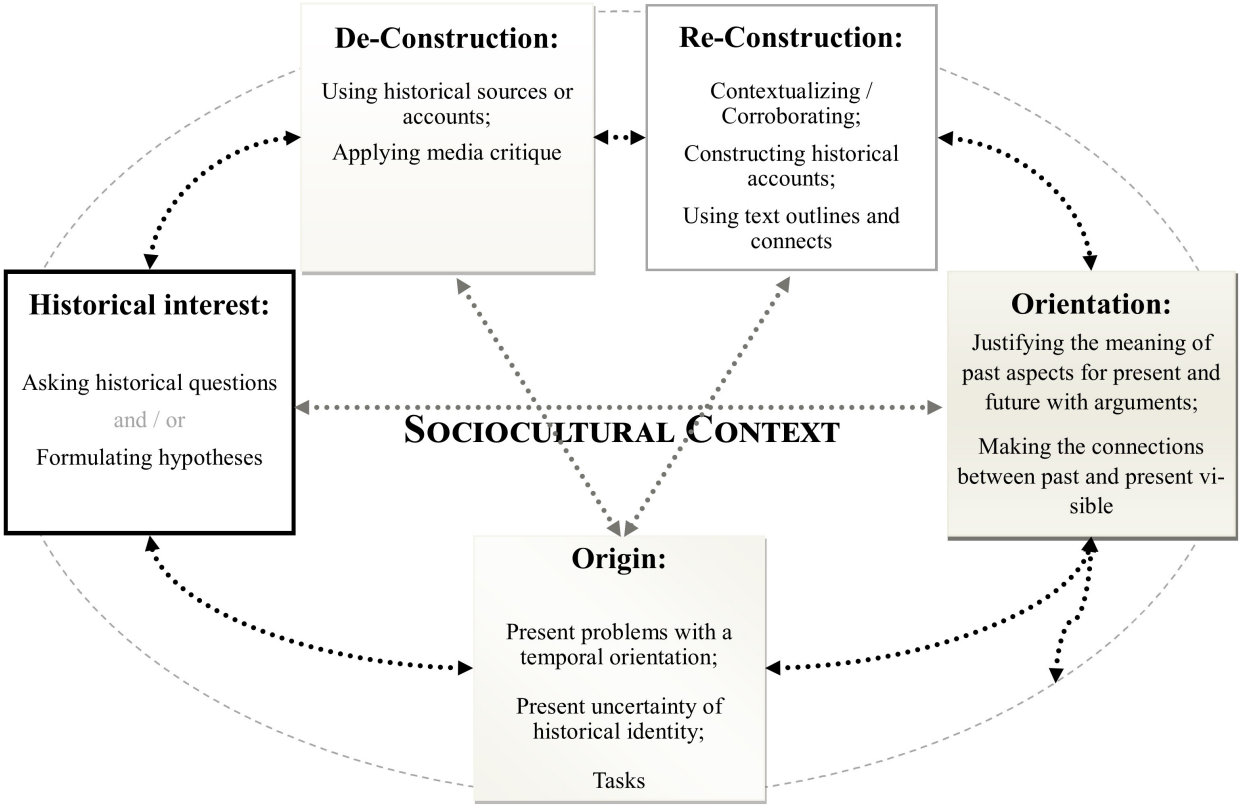
b) *De-Construction*: Based on these questions, claims, or hypotheses, people *use historical sources or accounts* and identify relevant information (e.g. Voss & Wiley, 1997; Waldis, Hodel, et al., 2015). They also apply *media criticism* to evaluate the reliability of media and their producers' intentions (e.g. van Drie & van Boxtel, 2008; Wineburg, 1991a, 1998).

c) *Re-Construction*: To develop historical statements, people *corroborate* or *contextualize media* (e.g. Schreiber et al., 2006; Wineburg, 1991a, 1998). To include media into historical knowledge as text, they *use text outlines* (e.g. Barricelli, 2011), *organize information in the form of narrative, explanatory, or argumentative accounts* (e.g. VanSledright, 2011), and *apply connects* (e.g. "led to," "it follows") to interrelate historical statements (e.g. McCarthy Young & Leinhardt, 1998).

d) Orientation: To orient themselves or to react to environments, people *justify the meaning* of past aspects for present and future with arguments (e.g. Rüsen, 2017). To *make the connections between past and present visible*, they reveal that their historical account is a human construct. They therefore visualize their authorship (e.g. "from my point of view") or claim that their account presents a selected (e.g. "for example") and fragmentary (e.g. "as far as we know") historical view (Waldis, Marti, et al., 2015).

In addition, distinct types of knowledge such as substantive (e.g. events, particular narratives) and metahistorical concepts (e.g. continuity and change, causes and consequences) seem to be involved (e.g. Körber & Meyer-Hamme, 2015; van Drie & van Boxtel, 2008; VanSledright, 2011). Studies on school students' historical reasoning have indicated that people's subjective constructs, such as their interest in history (e.g. their "willingness to study history") or their epistemological beliefs, might affect their narrative competence (van Boxtel & van Drie, 2018, p. 152). Overall, narrative competence can be defined as a capacity of historical thinking in which individuals use the aforementioned historical activities, knowledge, epistemological beliefs, and interest by dealing with historical sources or accounts to solve historical problems in various situations or to react to institutional environments.

FIGURE 1. Model of narrative competence
Modified from Gollin and Nitsche (2019, p. 221)



Epistemological beliefs

Adopting prior work from educational psychology (e.g. Hofer, 2016; Hofer & Pintrich, 1997), we defined prospective history teachers' epistemological beliefs as their subjective concepts of the nature of historical knowing and structure of historical knowledge (e.g. Nitsche, 2019). After reviewing the relevant literature in the philosophy of history (e.g. Lorenz, 2011; Rüsen, 2017), about historical concepts in history education (e.g. Evans, 1990; O'Neill, Guloy, & Sensoy, 2014), and about epistemological beliefs in history education (e.g. Maggioni, Alexander, & VanSledright, 2004, 2009; Maggioni, 2010; Stoel, Logtenberg, Wansink, Huijgen, van Boxtel, & van Drie, 2017), we differentiated epistemological beliefs into three positions consisting of six dimensions (see TABLE *1*). *Positivists* assume, for example, that history and past are identical, or that knowledge is directly accessible in sources and accounts. *Skeptics* believe, for example, that history reflects an individual understanding and that it is therefore an uncertain matter of opinion. *Narrative constructivists* assume, for example, that history only exists in the form of narratives about the past. These narratives might be justified by socially shared perspectives using argumentative reasoning in relation to sources, accounts, concepts, and values (Nitsche, 2016, 2017, 2019).

TABLE 1. Model of epistemological beliefs in history
Modified from Nitsche (2016, p. 177)

Domains & **Positions**, and *Dimensions* (e.g. Hofer & Pintrich, 1997)	Educational Psychology (Maggioni, 2010)		
	Copier	Borrower	Criterialist
	Theory of History (e.g. Lorenz, 2011; Rüsen, 2017)		
	Positivism	**Skepticism**	**Narrative Constructivism**
Concept of history	Past = history	History = present	Past ≠ history
Origin of knowledge	Directly in sources	Individual understanding of media	Reconstruction through individual and joint interpretation
Justification for knowing	Not needed	Matter of individual understanding	Matter of shared reasoning
Structure of knowledge	Picture of the past	Individual story	Historical narration
Certainty of knowledge	Objective	Uncertain	Socially controlled perspective
Application of knowledge	Explain how it has been through laws	Form individual opinions	Orientation in time

Teachers' narrative competence and their epistemological beliefs

Although the structure of (prospective) history teachers' epistemological beliefs has been variously explored (e.g. Hartmann, 2019; Miguel-Revilla, Carril-Merino, & Sánchez-Agustí, 2020; Nitsche, 2019; Voet & De Wever, 2016), few studies have considered the connection between such beliefs and narrative competence. Research from USA, Canada, and German-speaking countries has suggested that prospective history teachers struggle to apply sourcing or writing activities (Borries, 2007; Seixas, 1998; Waldis, Marti, et al., 2015). Some work has indicated that this might be explained by student teachers' naive view on historical epistemology (Seixas, 1998; Yeager & Davisz, 1996). In terms of beliefs, Maggioni's (2010) study on three US high school teachers found conflicting stances (e.g. subjectivist and criterialist), which were, however, not systematically related to their source interpretations. Gottlieb and Winburg (2012) showed that religious US historians switched between academic (e.g. plausibility) and religious beliefs (e.g. personal engagement) when investigating historical or religious sources while non-religious historians did not. This suggests that the connection between the analytical aspects of narrative competence and epistemological beliefs depends on contextual aspects (e.g. content of sources) and on additional beliefs (e.g. religion).

To date, only three studies with school or college students have provided statistical evidence for the connection between epistemological beliefs and aspects of historical cognition. Stoel et al. (2017) found that the criterialist beliefs (e.g. history as context-based interpretation) of Dutch school students correlated positively, yet merely moderately with their causal reasoning strategies. Mierwald (2020) suggested that the criterialist beliefs of German school students predicted the quality of their historical argumentations. Wiley et al. (2020) found, for example, that beliefs about the simplicity and certainty of historical explanations (e.g. historical explanation as unchanging over time) among US college and school students correlated slightly, yet negatively with the quality of their historical explanations. Overall, quantitative studies on the relation between student history teachers' epistemological beliefs and their narrative competence are still missing.

Methods

To address the gap identified in the previous section, we conducted a study with 175 prospective German Swiss history teachers, and we investigated participants' narrative competence and their epistemological beliefs. The main purpose was to analyze the connections between participants' positions of epistemological beliefs (e.g. positivist, skeptical) and their narrative competence in terms of analytical (i.e., De-Construction) and synthesizing (i.e., Re-Construction) aspects. Furthermore, we were interested in whether participants' narrative competence was situated within contextual aspects (e.g. no. of visited history courses at university).

Research questions

In detail, we raise four questions:

Q1 How well-trained is the narrative competence of prospective German Swiss history teachers?
Q2 Which position on epistemological beliefs (e.g. positivist, skeptical) do participants agree with?
Q3 Do participants' epistemological beliefs affect their narrative competence without and after adjusting for covariates (e.g. situational interest, age, sex, number of history courses attended at university)?
Q4 Are participants' epistemological beliefs more influential compared to contextual covariates (e.g. situational interest, number of history courses attended at university)?

Participants and setting

We used data from the "VisuHist" project on the professional competence of prospective German Swiss history teachers (e.g. Waldis et al., 2019). In Switzerland, history teacher training is organized by the cantons. Therefore, and to cover all trainee history teachers in German-speaking Switzerland, we asked all history teacher educators from all six German Swiss teacher training institutions delivering courses in history didactics for lower and upper secondary school to participate with their students. We analyzed data from the 2014–2016 cohort at the end of teacher training in history didactics. To recruit participants, we approached 197 students and received answers from 186 volunteers. The final data set consisted of 175 participants, after outliers were eliminated using boxplots for endogenous (narrative competence) and exogenous variables (e.g. age, epistemological beliefs). Participants were M = 27.05 (SD = 6.68) years old. Ninety-one students were female (55.2 %). One hundred and thirty-one participants (74.9%) were lower secondary school trainees from five institutions while 44 participants were enrolled in upper secondary teacher training at two institutions. The average number of semesters was 5.10 (SD = 2.73). They had visited an average of M = 5.98 (SD = 7.66) history courses at the university (see Appendix E for more details).[1] We investigated participants' narrative competence, beliefs, and additional covariates (e.g. age, situational interest) by giving them a writing task and several questionnaires during a 90-minute lecture in history didactics (paper & pencil).

Instruments

Narrative competence. Prior research has found that argumentative writing tasks more effectively foster historical thinking skills than narrative writing (e.g. Voss & Wiley, 1997; Waldis, 2016). Accordingly, and to answer Q1–Q4, we asked participants to write a historical argumentation. Prior work has indicated that writing tasks including controversial or commonly known topics encourage students to construct judgments without evidence-based reasoning (e.g. Waldis, Hodel, et al., 2015). To control for this, we provided both (1) a commonly discussed topic that is also part of the German Swiss school curriculum and (2) a topic that is more familiar to experts. We

randomly assigned (1) the topic "Cuba Crisis in the Cold War" to 81 participants (46.3 %) and (2) the topic "Swiss emigration to Brazil in the 19th century" to 94 participants. Both assignments were similarly structured (see Appendix A). Based on participants' answers (see Appendix B for an example), we evaluated their narrative competence along seven categories derived from our model of narrative competence (see Appendix C). Every category was applied using scores between 0 and 2 based on prior research (Nitsche & Waldis, 2016). Interrater reliability between the first author and a second rater was partly sufficient (TABLE 2). Therefore, they evaluated all texts independently and discussed differences until reaching consensus.

Confirmatory factor analysis (CFA) involving *diagonally weighted least squares estimation* (DWLS) in R-package "lavaan" (version 0.6-3) was applied to test construct validity (Rosseel, 2012). According to Kline (2016), the factor loadings (λ = .54–.77) and fit indices (n = 175, *CFI* = 0.99, *TLI* = 0.99, *RMSEA* (CI 90% [.00, .06]) = .03, *SRMR* = .04) indicated a two factorial model. Based on our model of narrative competence, we interpreted the first factor and its related two categories (e.g. "Media critique") as indicators of "De-Construction" (n = 175, α = .70) and the second factor and its related five categories (e.g. "Structure of argumentation") as indicators of "Re-Construction" (n = 175, α = .76). Aspects of "Orientation" (e.g. "Justification of historical meaning") had to be fixed to Re-Construction. Moreover, CFA found that De-Construction and Re-Construction correlate positively, yet only slightly (r = .36, p < .01). This indicates that neither is completely independent, but might be interpreted as subskills of narrative competence.

TABLE 2. Interrater reliability based on percentage agreement and corrected for chance (Cohen's Kappa (κ))

Segment of narrative competence & *category*	Percentage agreement [CI 95%]	Cohens' κ [CI 95%]
De-Construction		
Use of historical media	77.78 [0.69, 0.87]	0.49 [0.30, 0.69]
Media critique	73.33 [0.57, 0.90]	0.40 [0.03, 0.77]
Re-Construction		
Structure of argumentation	73.33 [0.57, 0.90]	0.40 [0.03, 0.77]
Text outline	60.00 [0.41, 0.79]	0.10 [-0.29, 0.49]
Connects	60.00 [0.41, 0.79]	0.10 [-0.29, 0.49]
Orientation		
Justification of historical meaning	73.33 [0.57, 0.90]	0.40 [0.03, 0.77]
Transparency of text construction	53.33 [0.34, 0.72]	-0.05 [-0.42, 0.32]

Note: The agreement was estimated based on texts (n = 10) selected at random. The agreement for each rubric was estimated based on 3 (no. achievable points) x 10 (no. of texts) decisions of raters.

Epistemological beliefs. To answer Q2–Q4, we used their answers to the "Epistemological Beliefs Questionnaire in History (EBQH)" (see *Appendix D*) from prior research (Nitsche, 2019). Based on the aforementioned theory, the EBHQ presents five adopted items from Maggioni (2010) and 19 new items on positivism, skepticism, and narrative constructivism. Participants were asked to answer the questionnaire on a 4-point scale (from *not true* to *true*). Four items each (see *Appendix E*) presented positivism (n = 164, α = .63), skepticism (n = 164, α = .72), and narrative constructivism (n = 164, α = .62).

Covariates. In order and to answer Q3–Q4 we collected several individual and contextual background variables. Prior work has indicated that people's *situational interest* and *self-efficacy* might affect their academic reading and writing. For example, Hidi et al. (2007, p. 203) found "that students' interest in specific writing topics and their self-efficacy for the writing task" influenced their performance. Alexander (2003) defined situational interest as a construct that consists of valuing the relevance and enjoyment of particular learning activities. Situational self-efficacy "refers to people's specific judgments and beliefs about their abilities like reading a book, [or] writing a poem" (Walker, 2003, p. 173). Hence, we asked participants after they had solved the

writing task to answer a 10-item questionnaire adopted from Trautwein et al. (2017). Participants were asked to answer the questionnaire on a 4-point scale (from *not true* to *true*). Statistical analyses indicated that three items (e.g. "I enjoyed the exploration of the materials") represented participants' situational interest (n = 164, α = .78). Situational self-efficacy (n = 164, α = .72) consisted of two items (e.g. "I have succeeded in extracting and presenting the important things from the given documents"). In addition, age was calculated as the difference between the survey date and participants' date of birth. Their sex was registered with a dichotomous variable (1 = *female*, 2 = *male*). To gain insights into their parents' socio-economic status (SES), we asked participants to indicate the number of books in their household (1= *0 to 10 books* to 6 = *more than 500 books*). They were also asked to mention their parents' highest level of education (1 = *no certification* to 10 = *PhD*). Based on participants' answers to these three items, parents' SES was estimated as a latent construct within *Structural Regression models* (SR-models). We also requested participants to indicate the average number of history lessons they had attended at school per week (1=*one lesson* to 5 = *more than 4 lessons*), as well as the number of history courses attended at university (open format). We recorded the teacher training program (0 = *upper secondary education*, 1 = *lower secondary education*) and the writing topics (0 = *Cuba Crisis*, 1 = *Swiss emigration to Brazil*) with dichotomous variables.

Statistical procedures

Descriptive statistics. To answer Q1 and Q2 (see above), we calculated the mean values for De-Construction, Re-Construction, and for the three positions on epistemological beliefs. To gain insights into the distribution within our sample, we summarized the percentages of both constructs.

Structural equation models. To answer Q3 and Q4, we estimated *CFA* and *SR-models* (Kline, 2016) by applying *maximum likelihood estimation with robust standard errors* (MLR) in R-package "lavaan." Two *CFA* were applied to give insights into the correlation between De-Construction and Re-Construction and between the various positions on epistemological beliefs. We analyzed three *SR-models* to investigate the predictions of participants' epistemological beliefs on De-Construction and Re-Construction. We adapted the *forward-selection approach* to linear regressions (Fahrmeir et al., 2009) to include the independent variables in three steps. First, participants' epistemological beliefs were included without adjusting for covariates. Second, situational interest and self-efficacy were included. Third, the aforementioned additional variables were included. To identify adequate models, we used the *R-squared-measures* and the model fit indices (e.g. CFI, TFI, RSMEA; Kline, 2016). We employed standardized coefficients to provide comparable effect sizes and interpreted the coefficients similar to *Cohen's* (1988) *d* (small = .2 - .5, medium = .5 - .8, large > .8).

Missing analyses. Missing data analyses indicated a small number of missing values (see *Appendix E*). Investigating the structure of missing data revealed no systematic picture. We thus assumed the *missing at random* (MAR) condition and hence used a *full information maximum likelihood approach* (FIML) to the *CFA* and *SR-models*.

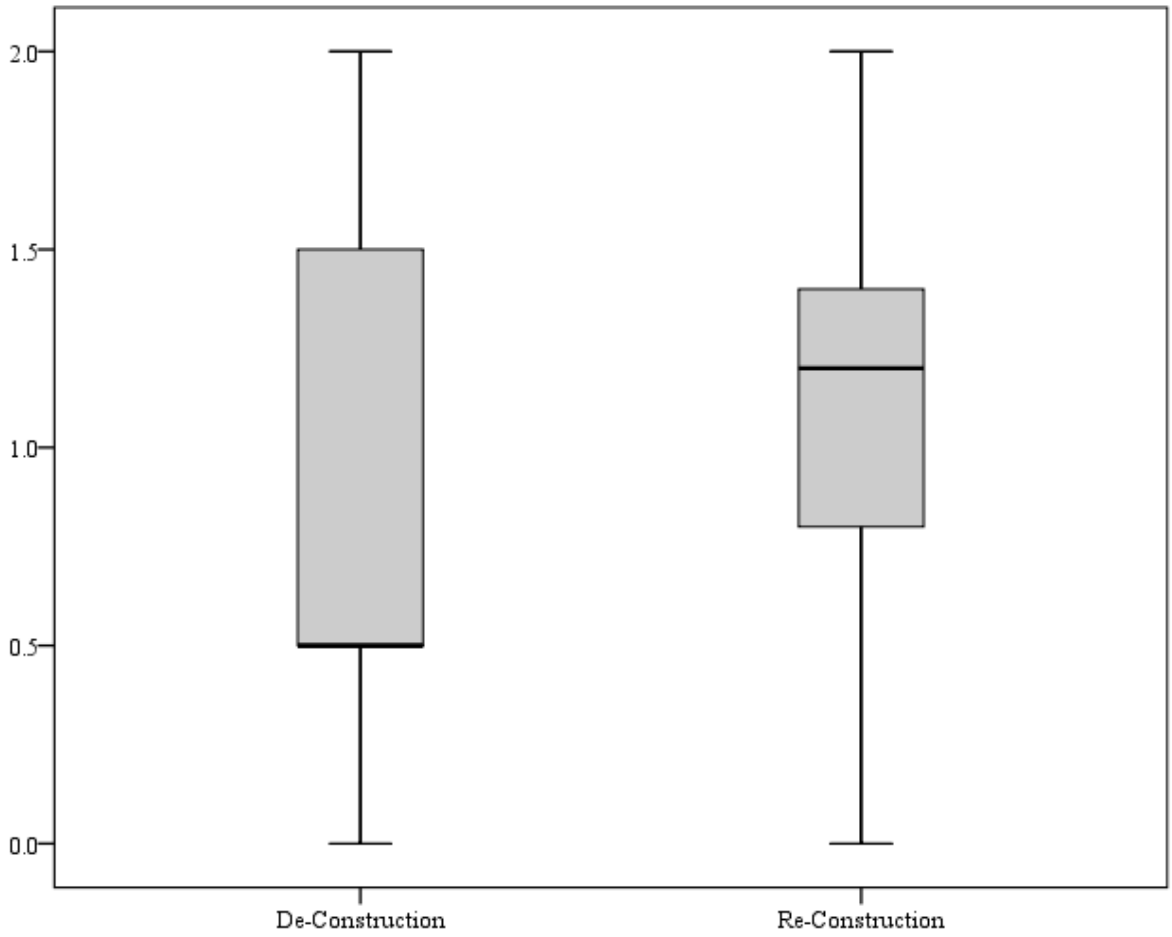
Results

Narrative competence

To answer Q1, we calculated the mean values. To provide insights into performance distribution within the sample, we analyzed mean differences and summarized percentages within (1) the lowest, (2) middle, and (3) highest performance group based on the 25% and 75% percentiles for De-Construction ($M_{(1)}$ = 0.00–0.50, $M_{(2)}$ = 1.00, $M_{(3)}$ = 1.50–2.00) and Re-Construction ($M_{(1)}$ = 0.00–0.80, M = 1.00–1.20, $M_{(3)}$ = 1.40–2.00), respectively.

On average, participants achieved *M* = 0.83 points (*SD* = 0.61, *Min* = 0, *Max* = 2) for De-Construction and *M* = 1.05 points (*SD* = 0.49, *Min* = 0, *Max* = 2) for Re-Construction. A one-sample t-test (*n* = 175, *t*(174) = -4.62, *p* < .001) indicated a significant difference. According to Cohen (1988), the effect size (*r* = .33) is moderate. Figure 2 illustrates the varying percentiles. For De-Construction, 95 (54.29%) participants were in the lowest, 33 (18.86%) in the middle, and 47 (26.86) in the highest group. For Re-Construction, 61 (34.86%) participants were in the lowest, 59 (33.71) in the middle, and 55 (31.43%) in the highest group. The results indicate that most participants belonged to the bottom group for De-Construction, yet not for Re-Construction. It seems that nearly half struggled to persuasively use historical media and media critique while they performed better in the synthetizing activities (e.g. establishing connects or justifying historical meaning).

FIGURE 2. Boxplots with percentiles for De-Construction and Re-Construction



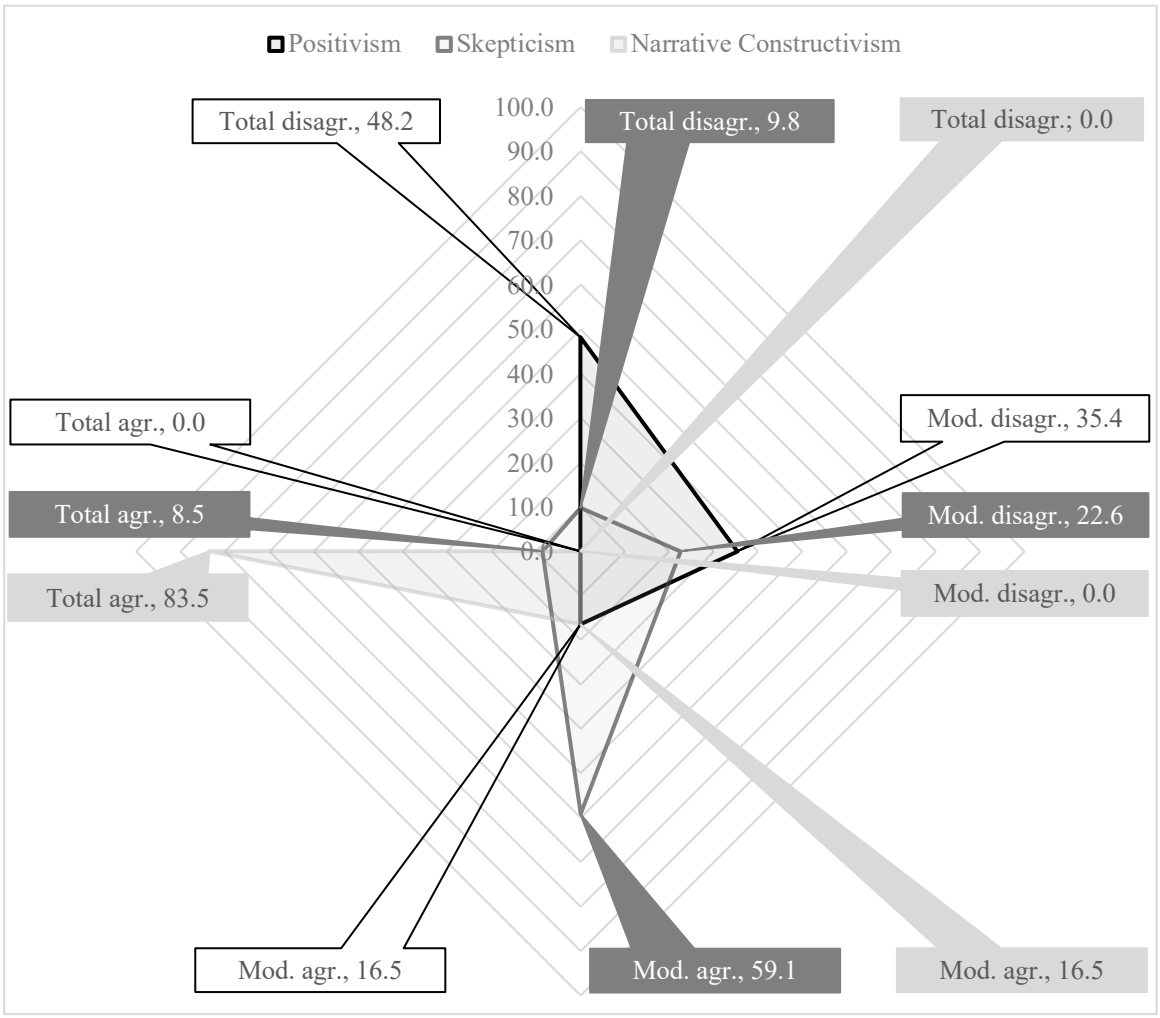
Epistemological beliefs

To answer Q2, we calculated the mean values and summarized percentages (*see* Figure 3) in terms of total (*M* = 1.00–1.50) to moderate disagreement (*M* = 1.51 – 2.00) and moderate (*M* = 2.01 – 3.00) to total agreement (*M* = 3.01 – 4.00). In addition, we estimated correlations based on *CFA*.

Results indicate that participants disagreed with positivist beliefs (*M* = 1.67, *SD* = 0.48, *Min* = 1.00, *Max* = 3.00), yet agreed with skeptical (*M* = 2.37, *SD* = 0.59, *Min* = 1.00, *Max* = 3.75) and narrative constructivist ones (*M* = 3.51, *SD* = 0.38, *Min* = 2.5, *Max* = 4.00). FIGURE *3* displays the percentages of agreements and disagreements. In total, 79 participants strongly disagreed, 58 moderately disagreed while only 27 moderately agreed with positivist beliefs. Sixteen students

strongly disagreed, 37 moderately disagreed while 97 participants moderately agreed and 14 strongly agreed with skeptical assumptions. In contrast, none of the participants disagreed with narrative constructivist beliefs while 27 moderately agreed and 137 strongly agreed with such beliefs. The results indicate that all participants tended to agree with the narrative constructivist perspective. Most of them also tended to agree with the skeptical view while only few tended to agree with positivist beliefs. The results also suggest that most participants tended to agree with more than one perspective, as illustrated by the overlapping spider shard (FIGURE 3). However, *CFA* (n = 175, *CFI* = 1.00, *TLI* = 1.02, *RMSEA* (CI 90% [.00, .04]) = .00, *SRMR* = .05) indicates only a small yet negative correlation between the positivist and narrative constructivist position (r = -.29, p < .05). Hence, no systematic picture for agreements or disagreements on all positions exists across participants. Nevertheless, this says nothing about the structure of individual beliefs.

FIGURE 3: Percentage distribution and overlapping of participants' agreements on epistemological beliefs (n = 164)



Note: Mod. = moderate; agr. = agreement; disagr. = disagreement.

Narrative competence and epistemological beliefs

To answer Q3 and Q4, SR–models were analyzed (see TABLE 3). The coefficients of the first model indicate that narrative constructivist epistemological beliefs are a significant and positive, yet minor predictor of participants' narrative competence in terms of both De-Construction and Re-Construction.

The results for the second model underscore the finding for the first model for De-Construction while they show a negative, yet small effect of positivist beliefs on Re-Construction. The results also illustrate that situational interest is a positive, yet minor predictor of Re-Construction. Its effect size is larger than that of positivist beliefs.

TABLE 3: Effects of epistemological beliefs and further aspects on Re-Construction and De-Construction

Model	**1**		**2**		**3**	
Variables	De-Co	Re-Co	De-Co	Re-Co	De-Co	Re-Co
Positivism	-.17	-.14	-.17	**-.26***	-.10	***-.19†***
Skepticism	.01	-.04	.02	-.03	.02	.02
Narrative constructivism	**.26***	***.21†***	**.26***	.10	.13	-.01
Situational interest			.01	**.43*****	.04	**.53*****
Situational self-efficacy			.26†	-.07	.20	-.19
Age					**-.29*****	-.04
Sex (male)					-.19*	-.00
Parents' SES					.09	***.16†***
No. of history lessons at school					***.19†***	***.12†***
No. of university history courses					.09	**.15****
Secondary school level (lower)					-.07	**-.22****
Writing topic (Emigration to Brazil)					.10	**.29*****
Model fit indices						
R^2	0.12	0.09	0.19	0.24	0.27	0.46
CFI	1.00		0.97		0.95	
TLI	1.00		0.97		0.94	
RMSEA (CI 90%)	.00 (.00, .04)		.02 (.00, .04)		.03 (.00, .04)	
SRMR	.06		.06		.07	

Notes: De-Co = De-Construction; Re-Co = Re-Construction; R^2 = explained variance; *CFI* = Comparative Fit Index; *RMSEA* = Root Mean Square Error of Approximation; CI = Confidence Intervall; *SRMR* = Standardized Root Mean Square Residual; † $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

The analysis of the third model found only small, yet negative effects of positivist beliefs on Re-Construction while no effects were found for epistemological beliefs on De-Construction. Once more, situational interest is a positive, yet moderate predictor of Re-Construction. Its size far exceeds the effect of positivist beliefs. The coefficients for additional covariates show that participants' age affects De-Construction negatively, yet only marginally. De-Construction is also positively, yet only slightly affected by the number of history classes attended at school. It also predicts Re-Construction positively, yet marginally. Re-Construction is also positively, yet marginally predicted by the number of history courses attended at university and by the writing topic (Emigration to Brazil). The lower secondary school teacher training program predicts Re-Construction negatively, yet only marginally. The effect sizes of the last model indicate the largest

effect for situational interest, followed by students' age, writing topic, lower secondary school teacher training, positivist epistemological beliefs, and other aspects (parents' SES, number of school history classes, number of university history courses).

Overall, the estimations suggest that prospective history teachers' epistemological beliefs predict their narrative competence. However, after adjusting for situational interest and further covariates only positivist beliefs affect Re-Construction in a small, yet negative manner. Most importantly, participants' situational interest is a stronger predictor than epistemological beliefs. Other contextual aspects are also more influential.

Discussion

To investigate prospective history teachers' narrative competence, their epistemological beliefs, and the connection between both aspects, we asked German Swiss student teachers to answer material-based writing tasks and several questionnaires (e.g. about epistemological beliefs). We first analyzed participants' performance in de-constructing (i.e. analyzing) historical media (sources, accounts) and in re-constructing (i.e. synthesizing) history as part of their narrative competence. Comparing the ratings of 175 participant texts indicated that participants were stronger at re-constructing than at de-constructing history. The result for De-Construction confirms qualitative research on teacher candidates' sourcing (analysis of sources and accounts) from Anglo-Saxon (e.g. Seixas, 1998; VanSledright & Afflerbach, 2000; Yeager & Davisz, 1996) and German-speaking contexts (e.g. Borries, 2007; Waldis, Marti, et al., 2015). The finding for Re-Construction is surprising because prior results from both contexts indicate that prospective history teachers struggle with writing activities (Bohan & Davis, 1998; Borries, 2007). The reason might be that we applied argumentative tasks. Prior studies have shown that such tasks more strongly impact students' historical thinking than others (Monte-Sano & De La Paz, 2012; Voss & Wiley, 1997; Waldis, 2016). Accordingly, our result is probably explained by the different writing tasks that were used in the previous studies. Nevertheless, it seems problematic that our study participants were not good at de-constructing history. If these results are confirmed in the future, this would suggest that trainee teachers candidates struggle to attain the goals of history education after taking their finals (e.g. Körber & Meyer-Hamme, 2015; VanSledright, 2011). Future studies should therefore investigate how teacher training might best support prospective history teachers' narrative competence.

Secondly, we inquired into participants' epistemological beliefs. We found that they tend to reject positivist beliefs (e.g. objective picture of the past) while moderately agreeing with skeptical beliefs (e.g. matter of understanding) and strongly agreeing with narrative constructivist ones (e.g. matter of plausibility). Results indicated that participants tend to hold more than one of these views. However, our correlation analysis revealed no systematic pattern for all positions. This is in line with prior work from different countries (Miguel-Revilla et al., 2020; Namamba & Rao, 2016; Nitsche, 2017; Voet & De Wever, 2016). For example, findings for prospective (VanSledright & Reddy, 2014) and experienced history teachers (Maggioni et al., 2004) indicate that they tend to hold more than one epistemic stance. Moreover, both groups of teachers tended to "wobble" between subjectivist and criterialist beliefs during professional development or while attending a university course in history education. This might be explained by Gottlieb and Wineburg's (2012) finding that historians attempt to coordinate their religious and epistemological beliefs when analyzing religious and non-religious sources. Thus, working with more than one assumption might help (prospective) history teachers to coordinate their more personal (e.g. about religion) and epistemological beliefs with particular contents of historical media. This would be congruent with present discussions in educational psychology on the situated nature of epistemological beliefs (see Hofer, 2016). Thus, future studies in history should investigate participants' epistemological beliefs by asking them to answer questionnaires that are related to specific historical content or to tasks that require historical thinking (e.g. Barzilai & Weinstock, 2015).

In seeking answers to our other questions, we also found evidence for the situated nature of epistemological beliefs. Q3 asked whether participants' epistemological beliefs affect their

narrative competence in terms of both De-Construction and Re-Construction. Without adjusting for covariates, we found small, yet positive effects of narrative constructivist beliefs on De-Construction and Re-Construction. We replicated this for De-Construction after adjusting for participants' situational interest and self-efficacy while finding small, yet negative effects of positivist beliefs on Re-Construction. After adjusting for additional characteristics (e.g. teacher training program), only positivist beliefs predicted Re-Construction in a small, yet negative manner.

On the one hand, this seems consistent with prior studies on school students that have found positive correlations between criterialist beliefs and certain aspects (e.g. causal reasoning, argumentative writing) of historical thinking (Mierwald, 2020; Stoel, van Drie, et al., 2017). On the other hand, the effects of epistemological beliefs are quite unsystematic. Three reasons might explain this. First, for statistical reasons, we had to exclude narrative constructivist items that stressed the need for narrating history (see *Appendix D, E*). The included items emphasized, for example, that historical perspectives must be compared. This might suggest that the content of the items was not fully coherent with the indicators we applied to assess narrative competence. Second, a dimensional view (e.g. on the sources or structure of historical knowledge) might be more appropriate for evaluating epistemological beliefs in action. For example, Wiley et al. (2020) found that US college students' epistemological beliefs about the simplicity and certainty of historical explanations (e.g. historical explanation as mono-causal) correlate marginally, yet negatively with the quality of historical explanations in participants' essays. This indicated that the assessment of epistemological beliefs should address particular situations required in history assignments. Future studies therefore should connect research perspectives on epistemological beliefs in terms of positions and dimensions (see Table 1) to a situational approach involving, among others, historical writing tasks. Finally, other aspects might simply be more influential than epistemological beliefs. Our results for Q4 point in this direction.

We investigated whether participants' epistemological beliefs are most influential compared to covariates (e.g. situational interest). Our results indicate that participants' situational interest is more effective than their epistemological beliefs. On the one hand, this seems surprising because the few existing results from science education suggest that both aspects might influence students' reasoning abilities in similar ways (e.g. Mason & Boscolo, 2004). One explanation is provided by prior work in social science education based on multiple sources regarding controversial topics (e.g. nuclear power), which shows that situational interest potentially mediates the effects of epistemological beliefs on learner achievement (e.g. Brandmo & Bråten, 2018; Mellat & Lavasani, 2011). Our results provide little evidence for this because they indicate a positive, yet very small correlation between narrative constructivist beliefs and situational interest (see *Appendix F*). Saying that, complex mediation analysis might provide evidence in this respect. However, our sample size was too small to perform such analysis, which therefore remains an open task for future research.

On the other hand, the strong impact of situational interest seems in line with the theories on historical cognition and empirical research, which argue for the situated nature of historical thinking (e.g. Mierwald, 2020; Stoel, van Drie, et al., 2017; van Boxtel & van Drie, 2018; VanSledright, 2011). The estimation of the last model also supported this argumentation. As has been shown for school students (Waldis, Hodel, et al., 2015), writing tasks affected our participants' narrative competence in terms of Re-Construction. Other influences include aspects of the teacher training program (lower secondary school teacher training, number of history courses attended at university), as well as participants' school experiences (number of history lessons attended at school) and sociocultural background (parents' socioeconomic status). In addition, older participants scored fewer points on De-Construction. Once more, this might be explained by the (school) context: German-speaking research on history teaching in the past has indicated that school students used to be asked to summarize rather than interpret sources (e.g. Borries, 2016).

Overall, our results show that both their epistemological beliefs and situational aspects (e.g. interest, topic, history classes attended at school and university) affect prospective German Swiss

history teachers' narrative competence. This suggests that a situational approach to assessing epistemological beliefs in action might be useful to understand the relation between epistemological beliefs and historical thinking.

Two methodological limitations need to be mentioned. First, we used consent coding to evaluate participant texts because interrater reliability was not sufficient for all categories. Second, to deal with missing data in *CFA* and *SR-models*, we applied the *FIML-approach* within *MLR-estimation. MLR-estimation* tends to underestimate factorial coefficients when using ordinal scaled variables as we did (e.g. epistemological beliefs). However, the method provides quite reasonable regression indices (Li, 2016) and seems to be the most efficient one with small sample sizes (Schwab & Helm, 2015). Therefore, and because our main findings are in line with the aforementioned theories and empirical studies, we believe that our results are valid.

Conclusion

Besides these limitations, our study adds first statistical evidence to the existing research on the relation between the epistemological beliefs and narrative competence based on a sample of prospective history teachers (Maggioni, 2010; Mierwald, 2020; Stoel, van Drie, et al., 2017; Wiley et al., 2020). One important finding is that participants' situational interest and contextual aspects (e.g. number of history classes attended at school and university) predicts their narrative competence partly more strongly than their epistemological beliefs. This might imply that both narrative competence and beliefs are situated. Future studies therefore should carefully develop methods for assessing epistemological beliefs that cohere more strongly with methods for assessing various aspects of historical thinking (e.g. historical writing tasks, and the analytical rubrics used to evaluate participants' texts) and that are related to specific historical content.

Further, we believe our results have implications for practice. History education aims to foster school students' historical thinking, for example, in terms of narrative competence. Hence, we have argued for conceptualizing narrative competence as part of history teachers' CK and professional competence because after graduation trainee teachers are tasked with developing narrative competence in school students. Although our participants were about to graduate in history didactics, our results confirm previous English- and German-speaking findings that prospective history teachers struggle to de-construct and –– to a somewhat lesser extent –– re-construct history. We therefore maintain that future history teacher training in Switzerland and beyond should build student teachers' narrative competence much more strongly than it does currently.

Our study also suggests how this goal might be achieved. Given that epistemological beliefs and previous history education (at school and university) impact narrative competence, history teacher training should make epistemological beliefs more explicit during history and history education courses. One way of achieving this would be to adopt Stoel et al.'s (2017) explicit teaching strategy. Their approach promotes the ability of school students to perform epistemological shifts by setting assignments that require them to make their implicit epistemological thoughts explicit and to reflect epistemologically on why they used particular practices when asked to write historical explanations. Furthermore, the impact of situational interests and writing topics suggests that asking student teachers about their topical interests before devising a history teacher training program might be a fruitful way of supporting their narrative competence. Finally, and in light of the results of historical writing interventions at schools (Nokes & De La Paz, 2018), historians and educators teaching future history teachers should endeavor even more strongly to show and train their students how to apply analytical and synthetizing activities. Otherwise, what is perhaps the most important goal of history education will be missed: fostering people's ability to use the narrative mode of knowing.

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Appendix A: Argumentative writing tasks

Topic	Cuba Crisis in the Cold War	Swiss emigration to Brazil in the 19th century
Prompt	"Use the historical account below and your prior knowledge to contextualize the sources. On this basis, develop a critical and reasonable position on the claim presented below. Please ensure you write a coherent text. You can take about 45 minutes for your answer."	
Claim	"The two text sources use the Cuba Crisis as an example of how two superpowers deal with a third country. Similar constellations can also be found today."	"The two text sources show aspects of the phenomenon of migration that can also be found today."
Account	Extract from Holstein, K.-H. et al. (2008). *Schweizer Geschichtsbuch, Band 4: Zeitgeschichte seit 1945* [Swiss history textbook, volume 4: Contemporary history since 1945]. Berlin: Cornelsen.	Extract from Ziegler, B. (1985). *Schweizer statt Sklaven. Schweizerische Auswanderer in den Kaffee-Plantagen von Sao Paulo (1852-1866)* [Swiss instead of slaves. Swiss emigrants in the coffee plantations of Sao Paulo (1852-1866)]. Stuttgart: Steiner.
First source	Extract from the letter of Nikita Khrushchev to John F. Kennedy, October 27, 1962. Retrieved May 15, 2015, from: http://www.peterhall.de/cuba62/docs/doc16.html.	Extract from unknown author (1883). Bericht, die Kolonisation in Brasilien betreffend [Report concerning the colonization in Brazil]. *Der Colonist* [The Colonist], 30. Retrieved May 15, 2015, from: http://kbaargau.visual-library.de/periodical/pageview/9590.
Second source	Extract from the letter of Fidel Castro to Nikita Khrushchev, October, 31, 1962. Retrieved May 15, 2015, from: http://www.peterhall.de/cuba62/docs/doc23.html.	Extract from Davatz, T. (1858). *Die Behandlung der Kolonisten in der Provinz St. Paulo in Brasilien und deren Erhebung gegen ihre Bedrücker* [The treatment of the colonists in the Province of St. Paulo in Brazil and their revolt against their oppressors]. Chur: Hitz.

Appendix B: Example of text rating based on the task about "Swiss emigration to Brazil in the 19th century"

Argumentation of participant AJS17	Rubrics (rating points)
"The sources are situated in the 19th century when many people in Europe were in a bad way. One reason for emigration was poverty at home. Hope for a better life was obtained through emigration, *where* –– in the case of Brazil –– land was apparently obtained directly for cultivation. *The sources were written by two different authors. The first one promotes emigration, so to speak, and lists some advantages of it* (the source is an emigration magazine). *The* second source from Mr. Davatz*, on the other hand, is written by an affected person who has experienced what it means to live there. While the first source talks about an improvement in living conditions, the second source compares life in Brazil with slavery. Thus,* **two completely different views are presented.** *In the second text, the author feels obliged to point out the living situation, where the colonists seem to be completely at the mercy of the "Vergueiro"-society.* Thesis: The reason for emigration in the case of Switzerland in the 19th century **was mainly** material and financial poverty. There are certainly people who flee because of this also in the present (possibly economic refugees). ***However,*** today we also find refugees whose emigration is based on war or conflicts in the home country, or persecution and religious views. One thinks ***here*** probably of the momentary situation in the Near East. The second source speaks about the disappointed hope of the emigrants. One could call ***this*** probably a phenomenon of the migration that humans in the emigration country work and hope for future. People also want to earn money to support their family in the home country. ***However,*** often they are disappointed or must realize that ***this*** is not as easy as imagined. (e.g. one does not find a job or is not allowed to work). A third aspect is addressed with the company "Vegueiro". If ***such*** organization is compared with traffickers of today, the similarity is found that there are again people who profit from the migration and the misery of other people. With the emigrant magazine is advertised. Possibly today's media are also –– probably unconsciously –– advertising platforms for people from other countries, who see that other countries are obviously better off and have more wealth and prosperity. This is then probably a pull factor. The thesis can probably be confirmed."	*Visible media critique* (2 points) Visible use of historical media (2 points) **Visible transparency of text construction: perspectivity, partiality (2 points)** Controversial structure of argumentation (2 points) *Functional connects (2 points)* Visible text outline (2 points based on the whole text) Justified historical meaning (2 points based on the whole argumentation)

Note: Translated from German; bold, italic, and underlined words etc. for single rubrics.

Appendix C: Rubrics for assessing narrative competence

Points	**0**	**1**	**2**
De-Construction			
Use of historical media found in single phrases or partial sentences.	*Not visible* No implicit or explicit reference to the provided media.	*Implicit* References to historical statements are provided (e.g. "the article").	*Visible* One or more references to explicit evidence were used (e.g. "the article from 'The Colonist'").
Media critique found in single phrases or (partial) sentences.	*Not visible* No consideration of media reliability.	*Partly* Statements on the reliability or perspective for one source or account are plausible.	*Visible* Statements on reliability or perspective for more than one source or account are plausible.
Re-Construction			
Structure of argumentation to be evaluated based on the whole text.	*Unstructured* Existing statements or arguments are not connected.	*Without opposing ideas* The text consists of: *arguments or counterarguments* that refer to a *claim*.	*Controversially* The text consists of: *pro arguments and counterarguments* that refer to *a claim*.
Text outline to be evaluated based on the whole text.	*Unstructured* No *introduction* and *final part* are visible.	*Partly* An *introduction* or a *final part* are visible.	*Visible* An *introduction* and a *final part* are visible.
Connects found in single phrases between partial sentences.	*Non functional* Connectors (e.g. "led to," "it follows") barely interlink the different parts of the text.	*Partly* Connectors interlink parts of the text in less than half of the cases.	*Functional* Connectors interlink parts of the text in more than half of the cases.
Orientation			
Justification of historical meaning found in partial sentences or multiple sentences.	*Not visible* Statements on the meaning of past aspects for the present or future are not visible.	*Not justified* At *least one statement* on the meaning of past aspects exists. However, it is not justified with evidence or arguments.	*Justified* At *least one statement* on the meaning of past aspects. It is justified with evidence or arguments.
Transparency of text construction found in single phrases or partial sentences.	*Not visible* It is not mentioned that the text is retrospective (e.g. "present"), constructed (e.g. "from my point of view"), or selective (e.g. "among others," "for example")	*Partly* *One aspect* is mentioned (e.g. authored construction, partiality, retrospectivity).	*Visible* *More than one aspect* is mentioned (e.g. authored construction, partiality, retrospectivity).

Appendix D: Epistemological Beliefs Questionnaire in History (EBQH)

	Please tick as appropriate (one box only).	Not true	Rather not true	Rather true	True
1.	History says something about the past and the time in which it is told.	☐	☐	☐	☐
2.	History and the past are the same.	☐	☐	☐	☐
3.	History says nothing about the past, only something about the time in which it is told.	☐	☐	☐	☐
4.	Historical statements are taken from a source as it best meets the individual's needs.	☐	☐	☐	☐
5.	For historical research, it is important to compare the perspectives of sources and to become aware of one's own point of view.	☐	☐	☐	☐
6.	Historical statements are accessed directly via sources.	☐	☐	☐	☐
7.	Everyone understands the statements made by sources and accounts as it suits them.	☐	☐	☐	☐
8.	Comparing the perspective of the sources used and clarifying one's own point of view are key to historical research.	☐	☐	☐	☐
9.	People individually justify their view of the past.	☐	☐	☐	☐
10.	History is a reasonable reconstruction of past events based on available sources and accounts.	☐	☐	☐	☐
11.	History is an individually justified interpretation of the past.	☐	☐	☐	☐
12.	History clearly explains how events happened.	☐	☐	☐	☐
13.	History pictures the past as it really was.	☐	☐	☐	☐
14.	History consists mainly of fictional elements.	☐	☐	☐	☐
15.	History is a historical narration about excerpts from the past based on contemporary questions.	☐	☐	☐	☐
16.	No method exists for guaranteeing the certainty of historical knowledge.	☐	☐	☐	☐
17.	Even if sources and views contradict one another, history can still be written.	☐	☐	☐	☐
18.	History is generally neutral and objective.	☐	☐	☐	☐
19.	History can be written although sources and views are contradictory.	☐	☐	☐	☐
20.	The main purpose of history is to present the narrators' viewpoints.	☐	☐	☐	☐
21.	The main purpose of history is to show how things really were.	☐	☐	☐	☐
22.	The main purpose of history is to provide an orientation from the past for individuals and societies.	☐	☐	☐	☐

Note: Translation from German (Nitsche, 2019, p. 321-322).

Appendix E: Scales and variables (manifest values, *n* = 175)

Scales & Variables (Item no. in the questionnaires)	Missing	*M*	*SD*
De-Construction	0	0.83	*(0.61)*
Use of media	0	1.08	*(0.63)*
Media critique	0	0.59	*(0.76)*
Re-Construction	0	1.05	*(0.49)*
Text outline	0	1.06	*(0.73)*
Connects	0	1.32	*(0.69)*
Justification of historical meaning	0	0.99	*(0.45)*
Structure of argumentation	0	0.84	*(0.79)*
Transparency of construction	0	1.03	*(0.73)*
Positivism	6.29%	1.67	*(0.48)*
Picture of the past (13)	6.29%	1.64	*(0.77)*
Explain causes (12)	6.29%	1.76	*(0.73)*
Show how things really were (21)	7.43%	2.33	*(0.84)*
Neutral and objective (18)	6.29%	1.81	*(0.8)*
Skepticism	6.29%	2.37	*(0.59)*
Individual understanding (7)	8.00%	2.2	*(0.85)*
Individual use (4)	7.43%	2.3	*(0.84)*
Individual interpretation (11)	8.00%	2.18	*(0.79)*
Individual justification (9)	6.86%	2.83	*(0.68)*
Narrative constructivism	6.29%	3.51	*(0.38)*
History despite contradictory perspectives (17)	8.00%	3.43	*(0.55)*
Integration of contradictory perspectives (19)	6.29%	3.34	*(0.56)*
Comparison of perspectives is essential (8)	6.86%	3.73	*(0.5)*
Reconstruction through interpretation (10)	7.43%	3.52	*(0.57)*
Situational interest	6.29%	3.18	*(0.59)*
Interesting topic (2)	7.43%	3.24	*(0.67)*
Enjoyment of task solving (1)	6.29%	2.76	*(0.8)*
Important topic (3)	8.00%	3.55	*(0.64)*
Situational self-efficacy	6.29%	2.48	*(0.70)*
Writing was easy (5)	6.29%	2.41	*(0.86)*
Succeeded in extracting important things (8)	8.57%	2.54	*(0.71)*
Age	5.71%	27.05	*(6.68)*
Sex (female)	5.71%	55.20%	
Number of books	5.71%	4.19	*(1.27)*
Father's level of education	10.86%	6.12	*(2.27)*
Mother's level of education	9.14%	5.36	*(2.04)*
Number of history lessons at school per week	12.57%	2.24	*(0.61)*
Number of history courses attended at university	7.43%	5.98	*(7.66)*
Secondary school level (lower)	0	74.86%	
Writing topic (Emigration to Brazil)	0	53.71%	

Appendix F: Correlations between De-Construction, Re-Construction, epistemological beliefs, situational interest, and self-efficacy (n = 164–175)

	1	2	3	4	5	6	7
(1) De-Construction	1						
(2) Re-Construction	**.26*****	1					
(3) Positivism	**-.17***	-.13	1				
(4) Skepticism	-.03	-.06	.04	1			
(5) Narr. constructivism	**.21****	**.23****	**-.26****	-.09	1		
(6) Sit. interest	.08	**.30*****	.09	-.04	**.19***	1	
(7) Sit. self-efficacy	**.19***	.13	-.06	-.04	.06	**.34*****	1

Note: * $p < .05$; ** $p < .01$; $p < .001$; Narr. = narrative; Sit. = situational.

Endnotes

[1] The sequence of courses at German Swiss universities with teacher training is rarely mandatory. Therefore, the number of semesters and courses varies.

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Epistemic beliefs and written historical reasoning: Exploring their relationship

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Abstract

In this descriptive study, we investigated undergraduate students' epistemic beliefs in history and examined the relationship between students' beliefs and their performance in written historical reasoning in the context of a historical reasoning course. We measured students' expressed epistemic beliefs in history through a discipline-specific survey, which we compared with students' performance when writing a source-based historical argument. A subset of students also participated in a task-based interview to investigate more tacit epistemic beliefs related to the second-order concept, account. We found a significant correlation between students' performance in source-based argumentative writing and their epistemic beliefs regarding historical methodology. Most students' interview answers corresponded to their epistemic beliefs as indicated in the survey, but there was less correspondence between students' interviews and writing. This study demonstrates the usefulness of the epistemic beliefs survey and provides evidence that students' conceptions of the second-order concept, account, may be related to their epistemic beliefs.

Keywords

Writing, higher education, epistemic beliefs, historical reasoning

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Introduction

There is growing interest in epistemic beliefs and how these relate to learning in different domains. Muis, Bendixen, and Haerle (2006) have concluded that epistemic beliefs, or beliefs about knowledge and knowing, have both domain-general and domain-specific aspects. In the discipline of history, the focus of this study, this domain-specificity has been studied in different ways, including how students respond to discrepant, or conflicting, accounts of an event or topic (Barzilai & Weinstock, 2015).

One important reason to study epistemic beliefs in history is because of their potential role in how students engage in historical reasoning and source-based writing. Students' beliefs may affect how they view the construction of knowledge (Maggioni, Fox, & Alexander, 2010) and their intellectual performance (Kuhn, 2001). Without more nuanced beliefs, this could influence how students use heuristics such as sourcing when reasoning historically or how they approach a historical writing task. In a study comparing history professors and university students' approach to writing tasks in history, the professors approached the tasks from an interpretative lens that was missing from many of the students, particularly in report writing (Greene, 1994). A relationship between epistemic beliefs and written historical reasoning could help explain such findings.

Frameworks in history education have proposed that a connection between epistemic beliefs and historical reasoning may exist (Havekes, Coppen, Luttenberg, & van Boxtel, 2012; van Drie & van Boxtel, 2008; VanSledright, 2014; Wineburg, 2001). Initial findings from both qualitative and quantitative studies also provide evidence of such a relationship (Stoel, van Drie, & van Boxtel, 2017; Ioannou & Iordanou, 2020; Lee & Shemilt, 2003). Some studies have questioned the role of epistemic beliefs on historical reasoning, but have been unable to draw conclusions without a direct measure of epistemic beliefs (Monte-Sano, 2008; Reisman, 2012). These findings demonstrate that there is a need to further explore how epistemic beliefs are reflected in the way that students reason about history. Because of the difficulty of measuring epistemic beliefs, this presents a major methodological challenge. In this study, we investigate the relationship between students' epistemic beliefs in history and their written historical reasoning.

Theoretical framework

The role of epistemic beliefs in history

Epistemic beliefs have been described from multiple perspective, including developmental models (e.g. Kuhn, 2001) and independent dimensions (e.g. Hofer & Pintrich, 1997). In this study we build upon the developmental model of Kuhn and colleagues (Kuhn, 2001; Kuhn, Cheney, & Weinstock, 2000; Kuhn & Weinstock, 2002). In this model, the primary difference between the levels of beliefs is how the person reconciles objective versus subjective aspects of knowledge. At the lowest level, *realists* see claims as a copy of an objective reality, rendering critical thinking unnecessary. Those with *absolutist* beliefs hold that knowledge is objective and is generated outside of the person. Critical thinking can be utilized to determine truth. *Multiplist* believe that knowledge is an opinion constructed by the knower, and that there are not methods for determining whether one opinion is better. At the highest level are *evaluativists,* who can coordinate these objective and subjective positions. At this level, a person can use criteria to evaluate the status of knowledge.

In history, domain-specific epistemic beliefs may play a role in how students utilize second order concepts, such as evidence and historical accounts. Maggioni, VanSledright, and Alexander (2009) explored this idea when they mapped progression in the second order concept of evidence onto models of developmental domain-general epistemic beliefs. They concluded that there were similarities between Lee and Shemilt's (2003) progression model of evidence and the models of epistemic beliefs of Kuhn and Weinstock (2002) and King and Kitchener (2002). Lee and Ashby's

(2000) accounts progression model may also be linked to students' history-specific epistemic beliefs.

In the domain of history, people make judgements about claims in rival accounts. Lee and Ashby's (2000) accounts progression model describes how students move from understanding these accounts as factual representations of the past to judgements made by authors. This, in turn, affects how students discriminate between discrepant accounts. In levels one through three of their model, students see historical accounts as direct representations of the past. At level one students equate accounts with the past, similar to a *realist* in Kuhn and Weinstock's (2002) model. At level three, students allow for differences between accounts, but attribute them to "gaps in information or mistakes" (Lee & Ashby, 2000, p. 212). Level three, "*the past as determining stories*," closely resemble the *absolutist* in Kuhn and Weinstock's (2002) model since these students hold that accounts are fixed and certain. Based on Kuhn and Weinstock's (2002) model, it would be reasonable to expect students at this level in Lee and Ashby's (2000) model to use critical thinking in the discipline of history (historical methodology) as a means of verifying truth.

In levels four through six in Lee and Ashby's (2000) model, students transition to viewing the author as taking an active role in creating the account. Students at level four begin to see the authorial role in accounts, but view them as "reported in a more or less biased way" (Lee & Ashby, 2000, p. 212). This could be interpreted as conforming partly to the *multiplist* stance, as students view the author as a creator of knowledge, but flawed by authorial distortion. The accounts progression model does not go so far as to claim that students define accounts as opinions only. At level six, the highest level, students view accounts as judgements "(re-) constructed in answer to questions in accordance with criteria" (Lee & Ashby, 2000, p. 212). This closely resembles the *evaluativist* position as the student reconciles the objective and subjective dimensions of the historical account. Based on Kuhn and Weinstock's (2002) model, students may use historical methodology as a means to discriminate between rival accounts. Given these similarities, there does seem to be a link between students' domain-specific epistemic beliefs and the second order concept, account. Measuring students' epistemic beliefs and performance when using accounts may provide further evidence of the possible role of epistemic beliefs in evaluating accounts.

Measuring epistemic beliefs

Measurement is a challenge in research on epistemic beliefs. One challenge is that within a discipline, and potentially within a task, epistemic beliefs (and stances such as relativism) may be situated and contextual (Chinn, Buckland, & Samarapungavan, 2011; Chinn, Rinehart, & Buckland, 2014; Sandoval, 2014). Another challenge is that unstated, or tacit beliefs may be difficult to measure (Chinn, Buckland, & Samarapungavan, 2011; Sandoval, 2005). One method of exploring epistemic beliefs in the discipline of history may be to examine the relationship between expressed and tacit epistemic beliefs, as well as academic performance. Mixed-methods studies have been proposed as an appropriate way of examining the complex and context-specific nature of epistemic beliefs (Chinn et al., 2011; Mason, 2016).

Likert scale surveys have been used as a cost-effective method of identifying expressed epistemic beliefs since they can be administered to large groups of participants relatively easily. Such surveys have taken the form of both domain-general (Schommer, 1990) and domain-specific epistemic beliefs (Maggioni, VanSledright, & Alexander, 2009; Stoel, Logtenberg, Wansink, Huijgen, van Boxtel, & van Drie 2017). The use of Likert scale surveys has been questioned (Greene & Yu, 2014; Hofer, 2016). Hofer (2016) concludes that such scales may be appropriate for measuring very naïve beliefs, but that it may be difficult to distinguish between multiplist and evaluativist beliefs.

In this study, we administered a three-scale survey to measure expressed epistemic beliefs in history (Stoel, Logtenberg, et al., 2017). This survey was based on the model developed by Kuhn Cheney, & Weinstock (2000) and Maggion's (2010) Beliefs About History Questionnaire. First, the *nature of knowing-objective* subscale measures whether students believe that the past cannot be known because it is gone and therefor claims cannot be tested, for example, "When eyewitnesses

do not agree with each other, it is impossible to know what happened." Here, history can only be known through "true" unbiased sources. The second scale, *nature of knowledge-objective*, contains items that correspond to beliefs that history is certain and is a representation of history as it occurred (as opposed to an interpretation of the past). Students rated statements including, "When something is written in your textbook, you can be nearly certain it is true." A third scale, *historical methodology*, measures the extent to which students believe that there are criteria and procedures that can be used in history to produce knowledge. One item stated, "In history you must learn to deal with conflicting evidence." Due to issues surrounding epistemic beliefs surveys, additional measures may be useful in triangulating the data. Tasks that capture epistemic beliefs in action, such as measurements of the second order concept account, may be one option.

The evaluation of students' source-based historical writing may be an appropriate measure of academic performance to compare to their epistemic beliefs. Maggioni, Fox, & Alexander (2010) conclude that students' epistemic beliefs align with how well they are able to approach and comprehend multiple texts. Similarly, Barzilai and Eshet-Alkalai (2015) found that epistemic beliefs affected comprehension of the author's viewpoint, and in turn the use of multiple sources in a written argumentative task. Epistemic beliefs did not seem to directly affect the use of multiple sources. Therefore, it may be valuable to explore how students perform in different aspects of written historical reasoning. The heuristic sourcing, for example, may be employed for different reasons by students with a more objective versus subjective stance. Greene and Yu (2014) found that history students who prized declarative knowledge justified knowledge claims based on the veracity of that knowledge. Therefore, students with more naïve epistemic beliefs may use sourcing to determine truth, while those at higher levels may use the same heuristic to contextualize an author.

This study explores epistemic beliefs in a historical reasoning course with L2 undergraduate students. We combine a survey of students' expressed epistemic beliefs in history, a discrepant accounts task that examines tacit epistemic beliefs, and students' performance in written historical reasoning.

Research questions

In this study, we address the following research question: How do students with different epistemic beliefs, as measured by the epistemic beliefs survey and the discrepant accounts task, reason historically when writing a historical argument? Based on the theoretical framework, we would expect that students with more nuanced epistemic beliefs would display more advanced historical reasoning in their writing than those with naïve beliefs since epistemic beliefs may influence the construction of knowledge (Maggioni, Fox, & Alexander, 2010) and intellectual performance (Kuhn, 2001). From a methodological perspective, we would be interested in investigating whether there is a stronger relationship between the performance on the discrepant accounts interview and the writing than the survey and the writing because of the situated nature of the discrepant accounts and writing tasks.

Methodology

Participants

This study's data is a subset of a larger study on historical writing in English as an L2. 62 undergraduate students at a small private English-medium university in Istanbul, Turkey participated during the fall 2017 semester. See Appendix A for demographics. All students were enrolled in a Content and Language Integrated Learning (CLIL) historical reasoning course as a part of a pre-university intensive English program. Participants were non-native English speakers at the B2 level according to the Common European Framework of Reference for Languages. Students are in general 18 to 19 years old during the program.

Historical reasoning course

Students participated in a seven-week course (four hours weekly, 28 hours total) that introduced historical reasoning and argumentation using a cognitive apprenticeship model (Collins, Brown, & Holum, 1991). In the course, historical reasoning focused on argumentation (claim and evidence), historical contextualization and the heuristics source evaluation and corroboration (van Drie & van Boxtel, 2008; Wineburg, 1991). In this model, students were first introduced to a component of historical reasoning through an expert performance. Afterwards, students completed scaffolded activities before independent performance. When learning about source evaluation, for example, students first viewed an expert analysis of a primary source while taking notes using a graphic organizer. Later, students worked together to similarly analyze other primary sources with instructor support. Finally, small groups of students independently analyzed primary sources. A similar pattern was used for each aspect of historical reasoning. Students studied gladiators in the late Roman Republic and early Empire partly because it would be studied in a subsequent required history course.

During each unit students read primary and secondary sources to answer a central historical question (Monte-Sano, 2010). To facilitate reading comprehension, sources were excerpted, simplified, and presented based on recommendation by Wineburg and Martin (2009). Students used graphic organizers and guiding questions that targeted the historical reasoning concept evidence, and the heuristics, source evaluation and corroboration. Prior to reading a primary source, students identified relevant aspects of the author's background, such as the purpose in writing. Based on their notes and the central historical question, the students discussed potential ways these aspects may have influenced the author's account. While reading, students used guiding questions to address the central historical question. After reading, students considered previously read primary sources, and the extent to which the sources corroborated in answering the question.

Students wrote four *document-based question* (DBQ) essays during the course using each unit's primary and secondary sources. All questions were expositions, a one-sided argument (Coffin, 2006), and each was closely aligned with one of the central historical questions. To promote written historical reasoning in an L2, students studied aspects of language common to historical writing, such as hedging. Students used sentence stems for aspects of historical reasoning, such as source evaluation.

Throughout the course, students were challenged to integrate what they had learned about history as a discipline focused on the interpretation of the past with methodological components of historical reasoning. For example, in the first lesson, students discussed who writes about history, their varying purposes, along with the different types of available sources. By introducing students to the concept of history as interpretation and the limits of the historical record, we hoped to problematize the idea of history as truth, a commonly articulated position among our students. As a part of this lesson, we introduced methodological aspects of historical reasoning used by historians.

The course was designed by the first author and taught by twelve English language instructors using highly scripted lesson plans. Instructors had zero to six semesters experience teaching the course. Before beginning, instructors participated in a training introducing the curriculum. Extensive support material, including grading rubrics, sample essays and activity keys were provided. The course coordinator tracked lesson completion and helped ensure standardized instruction and grading. All lessons were carried out according to plan.

Data sources and analysis

There were three data sources for this study: 1) a survey of students' epistemological beliefs, 2) students' document-based question (DBQ) essays, and 3) a discrepant accounts interview.

Epistemological beliefs survey

Participants completed the epistemological beliefs survey developed by the Stoel, Logtenberg, et al. (2017). The survey had 16 questions measured on a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The three subscales are described above.

The survey was electronically administered following the last lesson under the supervision of an instructor or research assistant. The survey was presented in simplified English and students could consult a Turkish translation. Survey administrators could clarify vocabulary, but not help students choose an answer.

The original English version of the survey was first simplified by the first author in consultation with one of the survey's authors and another postdoctoral researcher in history proficient in Dutch, English and Turkish. Two native Turkish-speaking English language instructors translated the survey into Turkish. Each translation was discussed with the same survey author to ensure fidelity to the original meaning.

Cronbach's alpha for the nature of historical knowing-objective scale was .64. The nature of historical knowledge-objective scale had an alpha of .63. Historical methodology was .92. A Kolmogorov-Smirnov test showed that the scores for the nature of knowing-objective Scale $D(62) = .14$, $p < .05$ and the historical methodology Scale $D(62) = .22$, $p < .05$, were significantly non-normal. The nature of knowledge-objective Scale $D(62) = .10$, $p = .10$, and the DBQ total score, $D(62) = .09$, $p = .20$ were normally distributed. Therefore, we conducted the non-parametric Spearman's correlation coefficient.

Document-based question

During the course, students wrote four DBQs, as described above. We analyzed the final DBQ, which was completed after instruction finished. Students answered the following question: "It is believed that many gladiators were volunteers. To what extent would it be desirable and/or undesirable for a free man to volunteer to become a gladiator?" Students had 50 minutes plus a required 10-minute planning time to write the essay using the primary and secondary sources studied in the course. The word limit was 250-300 words.

These essays were scored by the first and second author on a five-point analytical rubric (Sendur et al., 2020) and in Appendix B. This rubric was designed to assess the aspects of historical reasoning taught in the course. Cohen's Kappa from the larger dataset (This subset is 44% of the entire dataset) ranged from .66 to .82 with the claim and source evaluation categories receiving the lowest and highest scores, respectively.

Discrepant accounts interview

Following the course, students were invited to participate in interviews to further investigate their epistemic beliefs in history. Ten students (five female, five male) who volunteered and gave consent participated. See Table 1 below for participant details. Interviews were conducted by the first author and trained research assistants in English or Turkish, based on the student's preference. Interviews were audio recorded, transcribed and translated, if necessary.

In the interview, the students completed a task from Project Chata in which they read two competing accounts of the end of the Roman Empire (Lee, 2001; Lee & Ashby, 2000). All students were familiar with the topic since it is in their high school curriculum. After reading the accounts, interviewers first confirmed students' accurate comprehension of both accounts. Students then

answered the questions from the Project Chata task. See Appendix C for the questions and sample student answers. The concept of accounts was chosen because it is likely to have an epistemic aspect, as described in the theoretical framework.

Lee's (2001) description of his framework for the task contains eight subcategories subsumed into three main approaches to the task. The three major categories include: 1) students who approach the task from a *factual-based* perspective, 2) students who approach the task from the perspective that there are *multiple (factual-based) pasts*, and 3) students who used a *criterial* approach. The unit of analysis was the answer to the five questions as a whole.

The first and second author independently coded all student answers using the eight-subcategory framework. We report students' placement into one of the three main categories. Initial agreement was 60%, and all differences were resolved through discussion. As a result, each student's answer was placed into one category. The category the student was placed into was the student's predominant stance since most student displayed evidence of more than one stance within an interview (Barzilai & Eshet-Alkalai, 2015; King & Kitchener, 2002).

Results

In this section we first describe students' epistemic beliefs as measured by the survey after completing the historical reasoning course and DBQ. Next, we investigate correlations between students' beliefs and written historical reasoning. Finally, we explore the beliefs of a subset of students in the discrepant accounts interview in comparison to their survey results and written historical reasoning.

Epistemological beliefs survey

Students (N=62) scored a mean of 3.85(SD=.80) in the nature of knowing-objective scale, indicating that they partly disagreed to partly agreed that it is only possible to know about the past through unbiased sources, and a mean of 3.08(SD=.80) in the nature of knowledge-objective, indicating that they partly disagreed that knowledge in history is certain and fixed. Students scored a mean of 5.18(SD=.99) on the historical methodology scale, which indicates that most students agreed that knowledge in history is bound by disciplinary methods and criteria.

Document-based questions

Students scored a mean of 12.26(SD=3.10) on the DBQ out of 20. See Appendix A for subscores. This mean score indicates that students demonstrated an emerging level of proficiency in written historical reasoning.

Next, we investigated whether there was a correlation between students' written historical reasoning as measured by the DBQ and their epistemic beliefs as measured by the epistemic beliefs survey by calculating a Spearman's correlation coefficient. There was not a significant correlation between students' epistemic beliefs in the nature of knowing-objective scale and the DBQ score, $r_s(60) = .09$ $p > .05$ or between the nature of historical knowledge-objective scale and the DBQ score, $r_s(60) = -.04$ $p > .05$. There was a significant positive correlation between students' beliefs in the historical methodology scale and the DBQ score, $r_s(60) = .46$, $p < .01$. We also examined DBQ subscores for the historical methodology scale and found significant positive correlations for the subscores evidence, $r_s(60) = .39$, $p < .01$, source evaluation, $r_s(60) = .33$, $p < .01$, and corroboration, $r_s(60) = .29$, $p < .05$. We concluded that students' epistemic beliefs regarding historical methodology, as measured by the survey correlate with their written historical reasoning, as measured by the DBQ.

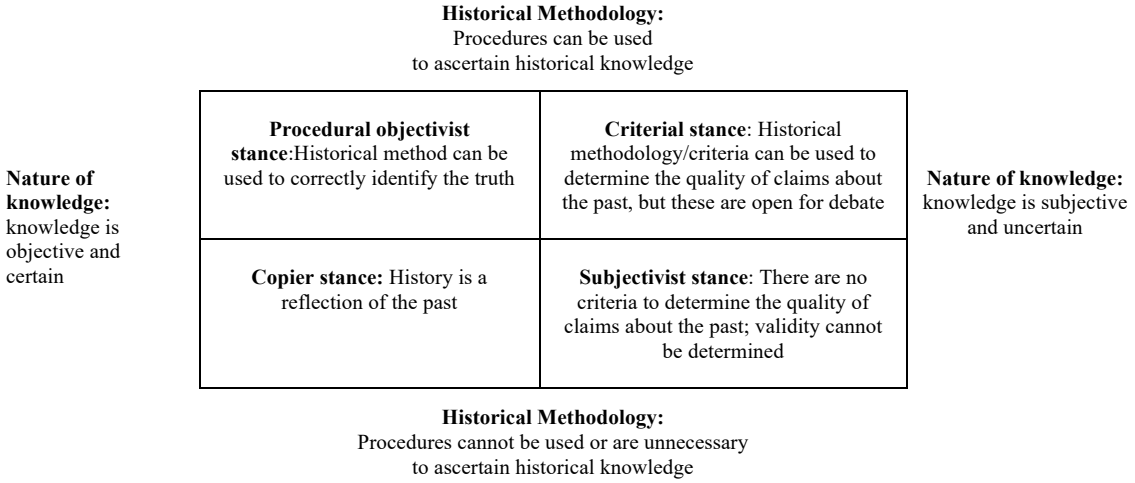
Discrepant accounts interview

An analysis of the ten students who participated in the discrepant accounts interview showed that three were classified as using a factual approach to the task, as shown in Table 1 (column Discrepant Accounts Approach), below. These students used historical methodology to assess the veracity of the accounts. Seven students used a criterial approach to determine the fall of the Roman Empire.

Triangulating data: Epistemic stance and interview

In this section we explore ten students' epistemic beliefs by triangulating their performance in the discrepant accounts interview, the epistemic beliefs survey and the DBQ. Based on the nature of knowledge-objective and historical methodology survey scales, we identified four potential epistemic stances corresponding to the level of agreement with these two scales. We did not include the nature of knowing-objective scale when identifying stances since it did not add substantially to the analysis and the stances identified in the literature correspond well to the two utilized scales (Maggioni et al., 2009; Stoel, Logtenberg, et al., 2017). We tentatively placed students into an epistemic stance corresponding to their survey responses, as shown in Figure 1. Students who completed the discrepant accounts interview fell into two stances: criterial and procedural objectivist.

FIGURE 1: Epistemic stances based on the nature of knowledge-objective and historical methodology scales from the epistemic beliefs survey



We categorized six students who had high agreement with the historical methodology scale and low agreement with the nature of knowledge-objective scale as criterial, in line with Lee's (2001) terminology. We expected these students to approach the discrepant accounts interview using historical methodology and/or criteria to determine the quality of claims about the past, but consider these claims as uncertain, similar to an evaluativist (Kuhn & Weinstock, 2002). We thus expected that they would use a criterial approach in the interview.

The second group of four students indicated strong agreement with both the historical methodology and nature of knowledge-objective scales. We classified these students as procedural objectivists. Similar to the criterial group, we expected these students to value the use of historical methods. Unlike the criterial stance, however, we expected these students to believe that historical methodology could be used to determine an objective truth, similar to an absolutist (Kuhn & Weinstock, 2002). Because of their epistemic beliefs, we expected these students to use a factual approach in the discrepant accounts interview.

TABLE 1: Scores for the epistemological beliefs survey, discrepant accounts interview and DBQ for a subset of students (n=10)

Student	Epistemological Beliefs Survey		Epistemic Stance	Discrepant Accounts Approach	DBQ Total Score
	Nature of knowledge-objective	Historical methodology			
S1	2.20	5.50	Criterial	Criterial	10
S2	3.60	5.83	Procedural objectivist	Criterial	14
S3	4.20	6.00	Procedural objectivist	Factual	17
S4	3.20	5.83	Criterial	Criterial	16
S5	4.00	5.33	Procedural objectivist	Factual	10
S6	3.20	6.00	Criterial	Criterial	14
S7	2.20	5.67	Criterial	Criterial	11
S8	3.60	5.50	Procedural objectivist	Factual	13
S9	1.80	4.50	Criterial	Criterial	15
S10	2.60	6.00	Criterial	Criterial	9

Note: DBQ scores can range from 0 to 20.

There appears to be a positive relationship between the epistemic stance as determined by the survey results and the discrepant accounts interview approach. With the exception of one student, S2, students' discrepant accounts interview approach aligned with our expectations based on the survey results. S2 was classified as a procedural objectivist based on the survey, but used a criterial approach in the interview.

Students categorized as criterial by the survey scored highly on the interview and used both interpretive criteria, such as their definition of the concept of an empire, and historical methodology, like source evaluation, to analyze the discrepant accounts. S4, for example, noted the interpretive criteria used by the authors of the accounts and the possibility of additional interpretive criteria:

> Both of them looked from different perspectives. One of them looked from more economic perspective. One of them looked from more military perspective. This question is about that every issue can be interpreted from different perspectives. (S4, interview excerpt).

These students also noted the importance of historical methodology. While some students simply noted that "historians have their own methods" (S9, interview excerpt), others explained the way they used historical methodology and interpretive decisions together:

> We can find sources that would support these two stories and we can make a comparison among those sources. We need to judge these sources in terms of their authors, contents for reliability. Then we need to research whether we can take Byzantium as the Roman Empire. That is how we can decide (S6, interview excerpt).

In contrast, students (except S2) categorized as procedural objectivists focused on historical methodology. When asked to decide how the Empire ended, these students used historical methodology as the sole criteria for determining the fall, as in this excerpt:

> We can look to writer's life story and the time period he lived. (So) we can decide it's wrong or right. (Based on) his relationships, purpose and perspective. And time period. Maybe he saw this event. And he might lived it (S3, interview excerpt).

This focus is possibly because they saw the accounts themselves as the source of knowledge and sought to evaluate the veracity of the accounts using this methodology, similar to the students in Greene and Yu's (2014) study.

Triangulating data: Epistemic stance and writing

Here we present four cases illustrating how students with differing epistemic stances perform on the DBQ. In the first two cases, the student's epistemic stance aligns with their expected performance on the DBQ, while in the second two cases it does not.

S4's criterial stance aligns with his strong DBQ performance. In his interview, he focused on how historians can approach a historical question from multiple perspectives (see above). He also connected these perspectives to historical methodology:

> Since we cannot observe the history directly, we search issues from historical sources. The sources that we use, people that we consult, our way of thinking, how we reconcile the ideas and the reliability of sources would influence the outcome. (interview excerpt)

S4 approaches his DBQ similarly. He first considers the evidence of inherent danger and social penalties for gladiators. However, in the following excerpt he ultimately reconciles this evidence with multiple sources advocating for advantageous aspects of becoming a gladiator to argue that it was a reasonable risk for those in lower (but not upper) socioeconomic classes.

> According to Kyle, gladiators' life conditions were harsh but better than poor Romans considering housing, medical attention and food opportunities. This is supported by Dunkle who agrees a career as a gladiator would attract free men because of the chance gladiators might become famous and wealthy which would buy their freedom (Dunkle 2002). Use of this evidence demonstrates that being a gladiator is a reasonable risk to get a better life for a free man. (DBQ excerpt)

S4's use of historical methodology, such as corroboration, combined with his argumentative approach result in a high score on his DBQ.

Next, we examine the case of S3, a student classified as a procedural objectivist, whose DBQ performance and epistemic stance also align. S3 received the highest DBQ score among the interviewed students. In her interview, S3 focused on the methodology of historical reasoning, as expected given her stance. When determining the date for the fall of Rome she mentioned both source evaluation and corroboration, noting "And if a two or three, four, texts are the same, dates are the same, I think it's might be true. But we can't decide, we can't decide just by looking at one." Unlike students classified as criterial, however, her use of historical methodology was to find the objective truth.

This student, in turn, wrote a DBQ demonstrating good control of the methodology of historical reasoning including well-formulated source evaluation, evidence from multiple sources, historical contextualization, and a claim. One aspect of her essay that was striking was that she included all of the evidence. This is evident in her expansive (but not entirely accurate) claim:

> Volunteering for being a gladiator is desirable because they will have citizen rights, will live better than many people and will be an object of female adoration. Also volunteering is undesirable for the reasons that gladiators will be unhealthy and people from the upper class see them in the group of shames and they separate them (DBQ excerpt).

The lack of selection in her claim and evidence may point to a lack of criteria, which is unsurprising given her epistemic stance.

The case of S1, categorized as a criterial stance, demonstrates that in some cases, the epistemic beliefs of the student do not result in a DBQ with high quality written historical reasoning. In his interview, S1 focused on his criteria for defining an empire, which he explained as "when I think

the concept of the empire, the thing that comes my mind is that people from various nations live all together." He uses this criteria as a means of evaluating his level of agreement with the two accounts. In his answer, however, he is troubled by the uncertainty of history, which he attributes partially to the reliability of his sources, concluding, "but in the end of the day the history may change in accordance with new resources. The thing that we know as true may be disproved. That's why we can't be precise."

Unlike the criterial approach in his interview, S1's DBQ reads more as a compilation of evidence than an interpretation. Notably, S1's DBQ does not indicate the use of any criteria to guide his answer. S1 does carry one feature of his interview to his DBQ: his concern about the reliability of his sources. This is visible in the extensive source evaluations he includes for each of his sources, one of which follows:

> A similar point is made by Cicero, who was a rich politician in the Roman Republic…Cicero witnessed the gladiator games and lived at the end of Republic. However, he probably sponsored the games so he might exaggerated the bravery of gladiators. Probably he was a partly reliable source (DBQ excerpt).

The end result is a DBQ that demonstrates some emerging markers of written historical reasoning, but does not match the criterial stance of his survey or discrepant accounts interview.

Finally, we profile S5, a student classified as a procedural objectivist who performed poorly on the DBQ. In her interview, S5 argued that there is a single objective history, but that it is difficult or impossible to ascertain because sources can be "made up" to fulfill a purpose. While distrustful of the sources, she still maintained that the best way to find the truth was "maybe from people who lived in those times could tell the real story like they could call eye witnesses."

Similar to S1, S5's DBQ read as a compilation of evidence and poorly formulated methodological aspects of historical reasoning that did not come together to form a coherent argument, and was in fact, at some points at odds with the available evidence. The strongest aspect of the essay was her use of source evaluation:

> Suetonius was useful as a source for gladiators' importance because he could have accessed to information that Emperor Augusts wrote and was in charge of Roman libraries which makes him a reliable source (DBQ excerpt).

Her use of sourcing, while reasonable, was offset from the evidence she used from the same source, rendering it less effective. The resulting DBQ made poor use of historical methodology, which is at odds with her epistemic stance.

Discussion and conclusions

In this study, we investigated how students with different epistemic beliefs, as measured by a domain-specific survey and a discrepant accounts interview reason historically when writing a historical argument.

In the epistemic beliefs survey, students indicated that they partly disagreed to partly agreed that it is only possible to know about the past through unbiased sources. They partly disagreed that history is fixed and certain, and agreed that knowledge in history is bound by disciplinary methods and criteria. These expressed beliefs demonstrate a somewhat nuanced view of history as a discipline. Since there is evidence of a relationship between epistemic beliefs and intellectual performance in general (Kuhn, 2001) and how students approach multiple sources in history specifically (Maggioni et al., 2010), we would expect that students' beliefs in this study would also show a similar relationship. This hypothesis was partially confirmed. Students' DBQ scores were positively correlated with the belief that history is bound by disciplinary methods and criteria, but not with the other scales. Since writing was assessed for the application of historical reasoning (i.e., disciplinary methods and criteria), this relationship is not unexpected.

A subset of students participated in a discrepant accounts interview, which explored their tacit epistemic beliefs about the second order concept account. Students' epistemic stance, as identified by the survey, largely corresponded to their approach in the discrepant accounts interview. We compared these students' epistemic stance with their DBQ performance, expecting a relationship between the two. Illustrations of students whose DBQ performance did and did not align with their epistemic stance demonstrate that this expectation is partially confirmed. Two potential reasons that students' beliefs and DBQ performance might not consistently align may be that these students view the DBQ task as non-argumentative (Greene, 1994) or that these L2 students have difficulty when writing from sources (Cumming, Lai, & Cho, 2016). Another possible reason is that the epistemic stance and the discrepant accounts interview provide information about whether students believe that there are procedures and criteria that can be used to determine the quality of claims, but do not provide information about the extent to which students are able to apply those procedures and criteria.

This study is limited by the small number of students who participated in interviews and the low reliability of two of the survey scales. Studies with a larger population and using a fully validated version of the simplified survey are needed. A more recent DBQ topic could also be used to investigate if the topic plays a role in students' written historical reasoning. While it is possible that students' knowledge of historical methodology influenced their performance, the relationship between the interview and the survey indicate that this study has likely captured aspects of students' epistemic beliefs and their influence on written historical reasoning.

This study makes a contribution towards the difficult task of measuring epistemic beliefs. Triangulating a survey of epistemic beliefs, a discrepant account interview, and written historical reasoning allowed for a richer picture of students' epistemic beliefs and supports the idea that the survey is a reasonable measure of students' epistemic beliefs in history. This is an important contribution since the use of surveys to measure epistemic beliefs is seen as problematic (Hofer, 2016). It also provides evidence that beliefs about the second order concept account described by Lee and Ashby (2000) are associated with epistemic beliefs, similar to findings related to the second order concept evidence (Maggioni et al., 2010; Maggioni et al., 2009). Future research may explore more efficient ways of using these concepts to examine epistemic beliefs to benefit from data triangulation.

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Appendix A: Additional Tables

Table A1
Student Gender and Intended Area of Study (N=62)

Gender		Intended Area of Study		
Male	Female	Arts and Social Sciences	Science and Engineering	Management
32	30	4	52	6

Table A2
Descriptive statistics for the DBQ subscales (N=62)

	Mean (SD)
Claim	2.23 (1.12)
Evidence	2.58 (.93)
Source Evaluation	2.32 (1.24)
Historical Contextualization	2.44 (1.24)
Corroboration	2.69 (1.30)
Total Score	12.26 (3.10)

Note: Subscores could range between 0-4, while the total score could range between 0-20.

Appendix B: Historical Reasoning Rubric

	Claim	Use of Evidence	Source Evaluation	Historical Contextualization	Corroboration
4	Presents a clear and accurate claim that adequately addresses the question.	The evidence is accurate, relevant and sufficient to support the claim & the evidence is accurately explained at least once & explicitly linked to the claim at least once.	Refers to at least 1 author by name or title & notes relevant feature(s) of the primary source (PS). Indicates potential effect of the feature on the information &/or explains the effect &/or uses the feature to further the argument. (at least 2/3)	Provides accurate and relevant historical context (HC) (temporal, spatial or social features) as support for the claim, evidence or source. The HC is elaborate and used to situate and/or further the claim or the HC is less elaborate & explicitly used to situate and/or further the claim.	Uses multiple sources to support the same point at least once & explicitly indicates an appropriate link between the sources & explains the link by noting how they are similar
3	Presents a clear and accurate claim that partially addresses the question.	The evidence is accurate, relevant and sufficient to support the claim. The evidence may be accurately explained at least once or explicitly linked to the claim at least once.	Refers to at least 1 author by name or title & notes relevant feature(s) of the PS. Indicates potential effect of the feature on the information or explains the effect or uses the feature to further the argument. (1/3)	Provides accurate and relevant historical context It may be used to implicitly situate &/or further the argument.	Uses multiple sources to support the same point at least once & explicitly indicates an appropriate link between the sources & notes that they are similar
2	Accurately restates the question or topic without directly stating a claim. May contain minor errors.	The evidence is insufficient and may contain irrelevant or inaccurate information. The evidence is explained &/or explicitly linked to the main idea at least once. The explanation or link may be inaccurate.	Refers to at least 1 author by name or title & notes relevant feature(s) of the PS. There may be an attempt to note the effect or use it to further the argument. If included, the interpretation undermines the argument or has errors.	Provides historical context that is of limited support for the argument &/or has minor inaccuracies. It is not used to situate &/or further the argument/argument &/or there are errors.	Uses multiple sources to support the same point at least once & explicitly indicates an inappropriate or unclear link between the sources
1	The main idea is difficult to discern, implied or marginally addresses the questions &/or is inconsistent with the evidence in the sources &/or the language makes the intended meaning somewhat unclear	The evidence is insufficient and may contain irrelevant or inaccurate information. The evidence is not explained & not explicitly linked to the claim &/or the evidence is primarily copy-pasted.	Refers to at least 1 author by name or title & notes irrelevant or inaccurate feature(s) of the PS. There may be an attempt to note the effect or use it to further the argument. The interpretation may have errors.	Provides historical context that is historically inaccurate &/or largely irrelevant.	Uses multiple sources to support the same point at least once & treats sources separately without explicit corroboration (can look list-like).

Appendix C

The questions from the Project Chata task (Lee, 2001; Lee & Ashby, 2000) include: 1) You just read two different explanations of why the Roman Empire fell. What might this difference mean? a) No one knows when it ended, b) It's just a matter of opinion when it ended, c) There was no one single time when it ended, and d) One of the stories must be wrong about when it ended. They were also asked: 2) Is your choice what you really thought? 3) How could we decide when the Empire ended? 4) Are these two dates the only possible times for the end of the Empire? And 5) Do the differences between the stories matter?

TABLE C1. Main categories, subcategories and sample student answers for the Fall of Rome task

Main Category	**Subcategory**	**Student Answers (excerpt)**
Factual	1. Semantics only	No participants in this study took this approach.
	2. One story is wrong, the end is known	No participants in this study took this approach.
	3. The end is unknowable	No participants in this study took this approach.
	4. The end is knowable, but contingently unknown	I am not sure about how can we decide (which account is right) because maybe two of them are wrong. Maybe one is true but maybe from people who lived in those times could tell the real story like they could call eye witnesses maybe but I don't think we can be 100% sure about the story (S5).
Multiple Past	5. The end is multiple	No participants in this study took this approach.
Criterial	6. The end is criterial (implicit criterion)	I don't think there is another option (for an ending date). We should examine it actually…(We could find out because) historians have their own methods. It can be looked whether different historians say different things. It was exist in the establishment of Ottoman Empire. Some was saying it is 1299. One historians I don't remember the name was saying it is 1302. But, only he says that. According to what he says it I don't know. I don't know the topic that much, so I don't know (S9).
	7. The end is criterial (one explicit criterion)	When I think the concept of the empire, the thing that comes my mind is that people from various nations live all together. In the first story the West ended. The Roman Empire was shown as it ended but many people from different nations and different cultures remain living together in Eastern Empire. That's why I thought the idea of living together with different nations should be disappeared to talk about the collapse of an empire (S1).
	8. The end is criterial (alternative criteria)	So, in my opinion, I think when the capital was captured with when the people of the Empire...Not the Emperor, because the people of the Empire… they… when you capture the city, the nation's when it ended… not the emperor because the nation can improve the culture, and continue, and can teach the subsequent generations to live on. Because you can take the emperor, but the nation will keep going, nation will choose another emperor, it can change… but if you change the nation, it's another empire...(S7).

Note: Main category and subcategory titles are from Lee (2001) and Lee and Ashby (2000). Student answers are from this study's participants.

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Aims in the practice of historiography: An interview study with Finnish historians

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ABSTRACT

Many recent approaches to history education—such as those related to historical thinking, historical reasoning, or inquiry-based learning—have brought the practice of historiography (i.e. historical research and writing) to the center of learning about history. Students are to learn about how historical knowledge is constructed, and this is often pursued by instructional methods such as modeling or simulating expert historians' practices in classrooms. In this paper, we approach historiography primarily as an epistemic practice that is shaped in part by (historians') aims or goals. Understanding those aims can contribute significantly to our understanding of the historical inquiries that ensue. Yet education has not made these aims a central focus of research or instruction. Therefore, we explored academic historians' aims in their practices of historiography. We interviewed 26 Finnish historians about their ongoing research endeavors. Our results display a range of aims in academic historiography, including general epistemological concepts (e.g. knowledge), dialogical aims (e.g., questioning existing ideas), textual products, dissemination (e.g., popularizing), bringing about societal change (e.g., influencing a sense of possibilities), connection to present, and emotions. These findings improve our understanding of the diversity of historiography as an intentional practice, and thus provide a better ground for developing the kind of history education that builds on historians' practices.

KEYWORDS

Epistemic practices, epistemic aims, expertise in history, historiography, history education

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Introduction

> It is not so much the study of the past itself that assures against its repetition but how you study it, to what aim, interest, or purpose. (White, 1982, p. 137)

Like other fields of education, history education has focused increasingly on engaging students in disciplinary (i.e., historians') epistemic practices. During recent decades, this focus has become popular under rubrics such as historical thinking, historical reasoning, reading and thinking like historians, and inquiry-based learning (Boadu, 2020; Fitzgerald, 1983; Leinhardt et al., 1994; Levstik & Barton, 2015; Luís & Rapanta, 2020; Reisman, 2012; Retz, 2016; Seixas, 2000, 2017; van Boxtel & van Drie, 2018; Thorp & Persson, 2020; VanSledright, 2011; Voet & De Wever, 2017; Wineburg, 2001).[1] Epistemic practices (including those of historians) are shaped in part by (historians') aims or goals (Chinn et al., 2011; Chinn & Sandoval, 2018; Kainulainen et al., 2019; Peels, 2018; Sandoval, 2018). Understanding these goals can contribute significantly to our understanding of the practices that ensue. Yet education has not made these aims a central focus of research or instruction (Barzilai & Chinn, 2018; Chinn et al., 2011).

To be sure, both educational scholars and historians have written much about the aims of history education (Berg, 2019; Carretero & Bermudez, 2012; Donnelly, 1999; Fitzgerald, 1983; Sakki & Pirttilä-Backman, 2019; Stearns, 1998; von Borries, 2000). Still, there remains another set of aims that have received less attention—the aims of historians themselves. History education now includes a focus on the practice of historiography (i.e., historical research and writing)[2], and students learn about this practice through instructional methods such as modeling, simulating, or even just scrutinizing historical writings. Because a significant part of history education targets students' understanding of how historians go about their work, researchers and educators need to comprehend what historians aim to achieve through their work. Recently, Mathis and Parkes (2020) argued that history teachers and educational researchers should reflect upon and investigate "the perceived purpose of history" (p. 205). One might ask, however: exactly *whose* (e.g., citizens', experts', educators', students', producers', or consumers') perceived purpose of *which history* (e.g., the school subject, the movement in time, the discipline, the research practice, the past itself, a single study, or the whole of the produced literary output) ought to be considered? While their proposal leaves room for multiple interpretations, we find that empirical knowledge about the aims of historiography is one important way to answer this call. In short, we seek to address the relative lack of attention to historians' aims.

Barzilai and Chinn (2018) proposed three lines of scholarship as especially relevant for informing epistemic education (i.e., education directed at enhancing epistemic cognition, or ways of knowing): philosophical analyses, studies of lay practices, and studies of expert practices. In the current study, we seek to contribute to an understanding of the aims of historical practice through a study of expert thinking. More specifically, we present an interview study with academic historians about their aims for their current historical investigations. Through exploring historians' aims as part of their situated epistemic practice, we hope to contribute towards an empirical basis of knowledge regarding the practice of historiography for educational and other uses. In the following, we elaborate on the key theoretical ideas and previous scholarship we build upon. Then we present an empirical study of the aims of academic historians in their research projects and beyond. Finally, we discuss the implications of these findings for future research on historians and for history education in both K-12 and higher education settings.

We build especially on research on epistemic cognition. *Epistemic cognition* broadly refers to "how people acquire, understand, justify, change, and use knowledge in formal and informal contexts" (Greene et al., 2016, p. 1). Much of the work analyzing epistemic cognition—especially the early and the psychologically oriented studies—have studied mainly individuals' beliefs regarding the nature and justification of knowledge. More recent lines of research building on an interdisciplinary scholarship (including philosophy and sociology as well as psychology and education) have promulgated new approaches to epistemic cognition (Chinn et al. 2011; Elby & Hammer, 2000; Sandoval, 2005). Regarding the current study, a key extension is to focus on the

actual practices of developing and justifying knowledge, while attending carefully to the situations or contexts in which those practices take place (e.g., Alexander, 2016; Chinn & Sandoval, 2018; Sandoval, 2018).

Chinn and colleagues (Chinn et al., 2014; Chinn & Rinehart 2016) developed the AIR model, which is a heuristic framework for analyzing situated epistemic practices. The acronym refers to three components: epistemic **A**ims and value (i.e., the epistemic goals set by actors and the perceived importance of those goals); epistemic **I**deals (i.e., the criteria or standards used to evaluate whether aims have been achieved); and **R**eliable processes for producing epistemic products (i.e., those strategies and methods that have a good likelihood of success). All components are seen as tightly connected parts of epistemic practice. Our overall project investigates them both individually and together. However, for the purposes of this study, we limit our attention only to the first component, epistemic aims and their value.

Dewey (1930) raised two important points regarding aims. First, Dewey defined aims (or ends, ends-in-view, objectives) as "those foreseen consequences which influence present deliberation and which finally bring it to rest by furnishing an adequate stimulus to overt action. Consequently, ends arise and function within action" (p. 223). Thus, an aim is not merely a final signpost "lying beyond activity" but instead, "a *means* in present action" (p. 226, italics in original). Dewey's second point is a moral one: because aims do not necessarily represent all important—or even the most important—consequences of an act, it is necessary to hold oneself and others accountable across all kinds of consequences of acts. In literary theory and philosophy of language, parallel points have been argued in critiques of logocentrism and of the semantic autonomy of texts, i.e., the "fixedness" of meaning in texts (e.g., Jackson, 1989; Lüdemann, 2014). Therefore, while in this paper we address aims specifically, it is crucial to keep in mind that aims are not entirely separate from actions (or processes, in terms of the AIR model), and that they do not constituted the full accountable consequences of a practice (such as historiography).

Among aims, we focus our current investigation primarily but not exclusively on epistemic aims. One debate among epistemologists and philosophers of science revolves around questions related to epistemic goals: What exactly counts as epistemic? Is there one or several primary epistemic goal(s), and if so, which might it/they be? Truth? Knowledge? Understanding? (e.g., Potochnik, 2015; Steup et al., 2014). Likewise, similar questions have been discussed regarding the purpose of historiography and history more generally. What does historians' intellectual output consist of? White (1973) characterized historiography as an attempt to mediate between the past, the historical record, other historical accounts, and an audience through works that combine chronicle, story, emplotment, argument, and ideological implication. However, it is uncertain to what extent White considered these as conscious and intentional parts of historians' output (Gunn, 2006, p. 34). Following Dewey, Kuukkanen (2015) defined historiography as a practice aiming to construct rationally warranted conclusions. For Maza (2017) the historian's task is twofold: "to explain the unfolding of change in the past, and to make the people and places of the time come alive for their readers" (p. 4). There are many proposals for historians' aims, and the epistemic demarcation of these is often not a clear one. We approach historiography as an essentially epistemic pursuit that involves other dimensions—for example, emotional, aesthetic, or political (e.g. Pihlainen, 2017) —that are embedded in its practice. Further, we do not aim to settle the questions about the best characterization of the epistemic aims of history, but opt for a pluralistic stance (see Coliva & Pedersen, 2017; Grajner & Schmechtig, 2016) that is open to many kinds of aims (Chinn & Rinehart, 2016). Ultimately, we wanted to understand how historians view their own aims, however they might be characterized.

Within philosophy of historiography, the pioneering work of Martin (1989) emphasized the need for empirical research on the objectives historians pursue and the ways historians try to achieve them. For Martin this involved examining historians' products to reveal their objectives. But there are limitations to this approach. First, Paul (2011) argued that philosophy of history has studied almost exclusively the published output of historians, thereby ignoring the broader practice of historical scholarship. Second, a focus on a selected few "best" works may not provide a good representation of the field at large. Third, historians' aims may change during the course

of a study, and thus may not be so easily grasped from research publications. Therefore, we contend that empirical investigations of historians' aims should also use diverse research methods to investigate a range of historians' work-in-progress.

In this paper, we explore academic historians' perceived aims in their practices of historiography, and ask: what kind of aims do academic historians have in historiography and why do they consider these aims valuable? Finally, we discuss how this empirical knowledge could help us think about the practices of history education.

Methodology

Participants and Data collection

The first author conducted interviews with 26 Finnish historians. All participants held doctorate degrees and had at least authored several publications. Sixteen participants had the title of docent (adjunct professor). All were affiliated (through adjunct professorship, grant, employment, or status of emeritus/emerita) to a Finnish university. Overall, most participants were affiliated with one of three universities in Finland. Participating historians represented many different departments and sub-disciplines of history. Often individual historians also identified with several different sub-disciplines, such as cultural history, social history, political history, European and World history, global history, Finnish history, Nordic history, business history, and the history of ideas. As it comes to the institutionalized sub-disciplines in the Finnish academic context, some notable fields of historical study missing from our sample include art history, legal history, and religious history (e.g., church history).

According to latest figures by Karonen (2019), there were 56 history professors and 56 history lecturers working in Finnish universities in 2015. Our interviews were conducted a year later. Thus, our sample includes about 11% of both history professors (six professors) and lecturers (six lecturers) in Finland. In addition to these, there were also one professor who worked abroad, two professors emeriti, as well as several post-doc and senior researchers.

All interviews were conducted by the first author in Finnish. The lengths of the semi-structured interviews ranged from 45 minutes to nearly 3 hours, averaging about 1.5 hours. Individual interviews did not always follow the planned protocol word-for-word. Instead, they proceeded on the basis of content and meaning. This allowed for a more relaxed and personal atmosphere and made it easier to temporarily veer deeper into emerging topics of interest. Conducted in such manner, the interviews are understood as active meaning-making and construction of knowledge in collaboration (Holstein & Gubrium, 2003). Overall, the format of the questions can be placed at the intersection of an expert interview and a professional biographical interview (see Meuser & Nagel, 2009); the questions targeted many aspects of being and becoming a historian, including the aims of their research projects as well as historical research and history writing in general.

To situate the interview in actual work, historians were first asked to describe an ongoing or recently finished study. Later, many questions specifically connected to the described project. Regarding the focus of this paper, some questions prompted historians' aims generally, specifically epistemic aims, the value of these aims, and the aims of historical research and writing in general. The questions included "What goals do you have in the mentioned project, and how did you decide on them?", "What are the most important goals of historical research and historical writing in general?", "From an epistemic standpoint, various ideas about the goals of history include knowledge, narrative, understanding, truth, explanation etc. What do you think about the goals of your project from this perspective?"

All interviewees participated voluntarily and signed an informed consent form. To protect the confidentiality of our participants, we have omitted the following details from our data extracts: participants and their close colleagues' names, department and university names, as well as any revealing details of their research topics. We proposed that the interviews remained confidential so that our participants would have less pressure to protect their professional identity and feel

more comfortable in discussing also issues that are uncertain or relate to emotions such as anxiety or sadness. Even though this meant that we had to withhold the deserved public credit of our participants from the products of their reflection, we feel that this was to some extent a successful decision: many historians ended up discussing sensitive issues that may not have been raised without the protection of anonymity.

Analysis

All interviews were transcribed, anonymized as needed, and then analyzed through qualitative content analysis (Schreier, 2012). Our analysis involved data-driven development of codes and clusters through a collaborative and iterative process. To avoid inferences that were not clearly warranted, we endeavored to keep our interpretation close to the manifest expressed level of the responses. Thus, our coding procedure relied mainly on initial, descriptive, and in vivo coding (Saldaña, 2016). Our unit of analysis was at the level of (complete) ideas or thoughts. In the coding software used (NVivo), codes were assigned to either full responses or parts of them, depending on the length of the response. Some of the responses included many aims, and thus some sections were coded multiple times.

Our authorial team consists of two researchers who are native Finnish speakers and one researcher who does not speak Finnish and whose native language is English. Thus, in order to work with a shared language during the analysis, a number of short and some longer interview extracts were translated from Finnish to English. Likewise, the codes and clusters were also developed in English, while the majority of the data remained in Finnish.

We started coding a sub-sample of extracts selected to represent different historians and different parts of the interview protocol. All three authors processed the set of extracts individually through open coding, after which all the coding and reasoning was shared and negotiated. We repeated this process with a new, different subset of data. The codes were then collected together, and the first author categorized them into clusters. These clusters were then discussed collaboratively, revised, and an early draft of a codebook was developed. This codebook included general coding rules as well as examples, descriptions, clusters, and boundary cases for codes. This codebook guided the further analysis, conducted by the first author, but also continued to be refined throughout the analysis (e.g., by adding, removing, or merging codes). The full authorial team continued to hold collaborative review meetings that sometimes also included colleagues external to this study. Thus, the coding scheme was a team-developed analytic tool, which we then used, tested, and further developed during the analysis.

Rather than narrowing the coding down to a small number of broad codes, we wanted to remain sensitive to a possibly broad variety of aims. We sought to capture a full range of aims expressed by the historians, while also targeting a consistent, dependable, and confirmable analysis (see Cho & Trent, 2014; Schreier, 2012). In addition to the above-mentioned procedures, these criteria were considered in a research phase where the second author reviewed all of the coding and proposed some changes and clarifications.

Results

In this section, we present the main findings. Table 1 summarizes the final coding scheme of our analyses, including the frequencies for each code. At the very end of the analysis, we eliminated several codes that were used for only a single interviewee.[3] We classified the various specific aims into categories. Below, we discuss seven principal categories using quotations from our data.[4] Quotations are marked with numeric codes referring to different historians and parts in their interviews (e.g. H1.1).

TABLE 1. Categories of codes, their descriptions, and example quotes from the interview data for codes used for at least two historians.

Cat.	Code	Description and example quote	f(H)[a]	f(U)[b]
General (more or less) epistemological concepts	Understanding	Gaining and/or providing understanding. *H18.98:"Making the world understandable, making being a human understandable."*	18	37
	Knowledge	Gaining and/or providing knowledge. *H1.96: "... producing knowledge of this phenomenon…."*	10	19
	Narrative	Forming and/or presenting a narrative. *H9.77: "... narrative is probably also important because people need a kind of more comprehensive narrative in order to understand the functionality of world and their own existence in relation to others."*	9	10
	Explanation	Providing explanations for things, processes, phenomena etc. *H4.10: "And then history, for me, turned into this knowledge with which one can explain society and politics..."*	9	10
	Description	Gaining and/or providing a description, depiction, or an "image". *H7.76: "I try to describe something that has existed, some development that has occurred."*	5	6
	Interpretation	Forming and/or presenting an interpretation *H15.85: "I think that the among the most important tasks of historical research are precisely this kind of understanding of the past, knowledge, new knowledge, also making new interpretations, and also challenging old interpretations."*	3	3
	Truth	Getting at a truth or something truthful. (Note: this can also be an unachievable aim) *H13.81: "And here we return to the concept of truth. [...] it is not truth, but aims at being truthful."*	2	2
Dialogical aims	Question or critique existing ideas	Challenging previous beliefs and knowledge, deconstructing, dispelling prejudices, debunking. *H6.52: "... the question is of course about putting existing conceptions of history under question..."*	13	25
	Widen interpretations	Broadening interpretations or thinking regarding some topics, and/or contributing to a "multiplicity of interpretations" *H18.96:"... diversifying that contemporary image. […] it is somehow a value in itself that we diversify views of something. … Emphasizing many-voicedness is somehow deeper, if we think about a kind of deeper goal of my project."*	11	20
	New ideas	A general code for newness, i.e., for offering new ideas, interpretations, perspectives, knowledge etc. *H16.83: "... To give others some possibly new knowledge of it"*	10	14
	Discussion and interaction	A general code for contributing to and participating in public or collegial discussion or interaction. *H13.99: "…it provides many different points of view also for different public discussions."*	6	8
	Prompt others to discuss	Evoke, or inspire others to discuss, ask questions, and/or offer critique. *H24.56: "... to inspire ... that they would question, and then to get discussions, and that also means more knowledge."*	3	4
	Historicize new people or things	Doing historiography about topics (people[s], things, or phenomena) that are not so often considered as part of history. *H20.74:"So I've tried to bring history for the kind of groups of people that have not had it previously..."*	3	4

TABLE 1. Continued (2/3)

Cat.	Code	Description and example quote	f(H)[a]	f(U)[b]
Textual products	Publication specific	A specified type of research publication. *H11.43: "... we got the book done with an international publisher, where there was one chapter from me. That was our main aim..."*	9	10
	Publication general	An unspecified research publication. *H2.46: "I want now to write a book about this."*	8	11
	Other digital objects	Other types of digital output. *H13.63: "So the end result would be that those websites would be good..."*	3	3
Dissemination	Lectures and presentations	A general code for talks of various sorts for either expert or lay audiences, or both. *H10.40: "..of course also to lecture, present in conferences, and in that way to kind of verify that knowledge...."*	9	13
	Popularize	Transforming findings into—or communicating about them in—a more accessible format or for a wider audience. *H2.46 : "As an extra goal, […] not only to do scientific work, but at the same time you have to popularize"*	9	9
	Interaction with society	A general code for interacting with society. Especially relevant in reference to the so-called "third task" of universities. *H6.16: "Another aim is […] to be available if and when there is need for expertise in history, Finnish language, ethnology, or art history, so to be in this so called societal interaction ..."*	8	9
	Spread consciousness or knowledge	Spreading knowledge, understanding, and understanding of issues. Implies one-directional communication, and can also relate to history itself. *H19.75: "I guess spreading correct [or right] knowledge is one of the most important tasks."*	4	6
Societal change	Societal change (general)	A general code for promoting change in society. *H10.46: "... potentially what I do can change the world. It is at the same time political, the choice of research topics, and especially this kind of research topics."*	4	8
	Influence identities	Influencing identities and conceptions of them. *H4.62: "...this concept of what it is to be Finnish [...] in my research I would like to open up this concept."*	2	2
	Empathy, tolerance, and belonging	Bringing about tolerance or a sense of belonging. *H18.98: "... the task […] is to increase understanding, and through that, tolerance and a sense of togetherness."*	2	2
	Influence sense of possibilities	Influencing the appearance of the possibility of things, either making things appear less or more possible. *H10.90: "I see that an image of the past must increase our understanding of what is possible for humans and increase our understanding of what should not be done again."*	2	3

TABLE 1. Continued (3/3)

Cat.	Code	Description and example quote	f(H)[a]	f(U)[b]
Connection to present	Value for present interests	The value of historical knowledge is for understanding some present phenomena or for other present interests. *H1.98: "... producing knowledge about the action of past humans might in the best case increase our understanding of our own action. So in a way history is not something that is gone, but history is kind of a dimension of the present."*	24	50
	Irrelevance for present interests	Pursuing aims that appear irrelevant to present interests. *H13.99: "... I think is great if someone studies something that has nothing to do with this day."*	2	2
Emotions	Having fun	Having fun and/or enjoying the work. *H8.47: "Well the aim was just that I and COLLEAQUE have some fun (laughing)"*	4	4
	Insight and surprise	Bringing about surprises or insight for oneself or others. *H24.56: "... publish something that someone wants to read, that would give them an aha-experience or an insight..."*	3	3
	Interesting	Being interested or getting excited. *H4.56: "It is a kind of dimension, 'time', forwards and backwards. And taking it seriously makes one's life less banal. It is more exciting."*	2	2
Other aims	NOT truth	Disavowing the aim of truth in full or in part. *H8.94: "Everything else but not truth because truth does not exist. It is interpretation."*	11	13
	Epistemic competences	Personal development of epistemic competence or a reflection on such competence. *H10.40: "...to gain myself a new kind of expertise again, to get to see new groups of sources."*	8	11
	Aim & value combination	An aim is valuable in itself or is otherwise inseparable from value. *H1.98: "... an equally good aim is to produce good depictions of the past society. And it is a value in itself."*	3	3
	Gather together people or form a network	Gathering together people with similar interests, or with interests that contribute to shared aims. *H7.32: "I had as an aim there to bring about a broader network..."*	3	3

[a] Freq. of historians mentioning the aim; max = 26
[b] Freq. of utterances the code was used for

Although we list the frequencies of all codes in Table 1, we wish to highlight that the differences in the frequencies were in part a consequence of the interview scheme. For example, in the case of general epistemological concepts (see Table 1), some of the high frequencies of codes in this category are explained by the fact that some of the concepts (such as the concepts of knowledge, understanding, and explanation) were specifically queried in the interview scheme; when the interviewees then discussed these concepts specifically, this resulted in high frequencies for these codes. In some other cases, frequencies varied due to the specificity or generality of the code; codes with more specific characteristics tended to be used less than ones that were defined in a more general way. However, even with these limitations, it is probable that some of the frequencies also represent the prevalence of certain points or statements in (Finnish academic) historians' discourse.

General (more or less) epistemological concepts

Philosophers of science and humanities have entertained several general concepts as aims of inquiry, such as knowledge, understanding, and explanation (e.g., Potochnik, 2015; Peels, 2018). The historians we interviewed also articulated these and similar general aims. Our questions targeted aims broadly, and in cases where historians did not spontaneously consider (explicitly) epistemological aims, we also inquired about these aims specifically by referring to the concepts of knowledge, narrative, information, understanding, truth, and explanation. While our intention was only to use these as an example of possibilities, most historians responded to the follow-up question by treating it as a checklist. Commonly, truth was rejected while one or several of the others were preferred:

> I would immediately cross out truth. […] Truth no, but realities yes. Because I do not believe in truth. Not in the way it is presented here. (H26.83–84)

> It is a kind of depiction and explanation. And it is also a narrative. But I do not myself think it is any truth, but instead, a single well organized thought construction that has strong enough empirical justification. (H23.92)

Some did not reject truth outright but considered it an unachievable aim, alongside other achievable ones:

> Among all, I think the concept of understanding is for me the central one. And the increasing of understanding about those cultural processes that make this world turn. It is the central aim. I do not think we get to truth, because I think truth is a very tricky concept from the perspective of philosophy of history. Still, I do not believe in pure relativism. I am not so dumb. I think there are better truths and worse truths. (H10.86)

Other common abstractions included descriptions, depictions, images[5], and interpretations:

> In a way, I think that increasing of self-understanding is probably the most important aim. Of course, one can say that an equally good aim is to produce good descriptions of the past society, and that is a value in itself. (H1.98)

Some of the common abstractions were also considered with specific characteristics, such as "intentional explanation" or the kind of knowledge "that is hard to abuse" (see excerpts below). The latter indicates a concern with how epistemic products might be used by others.

> Well, earlier I was even fanatically of the opinion that we should prefer this human-centered explanation, explanation of events and phenomena. This Aristotelian […] intentional explanation. So to go into that level of the historical agent and concentrate on what they were after and what they considered necessary to achieve that goal, what needs to be done. (H4.32)

> So there the responsibility is just that I do not create any new knowledge that can be abused. So that I at least don't aim for something like that, that I try to avoid that kind of material, or that kind of writing. (H3.86)

The different kinds of abstractions varied, both between historians and within individual historians' projects. For example, in some work, narrative can be considered a more or less important goal than in other work.

> Narrative, yes, at times I also want to narrate. But in this research project it does not come off so strong. Perhaps in other types [of projects] […] it has been more the case that I want to write a story that is, not that it would be entertaining or widely readable, but maybe an exciting narrative, and a maybe a bit courageous, even polemical, that somehow also brings a new perspective, or that somehow awakens one to look at the thing from another perspective. Then the narrative grip, and telling a good story—if this is what we here understand by the concept of narrative, then it is a way to get people thinking or reading or [doing] something that could bring about discussion. But in this project it is more […] understanding about how history in this field should be studied, if we think about public policy, or something like that. (H24.56)

Dialogical aims

The second category draws on the notion of dialogicality, as applied to history and collective memory by Wertsch (1998, 2002). Building on ideas from literary theory and semiology, Wertsch proposed that narratives have both a referential function and a dialogic function. Regarding the latter, Wertsch (2002) proposed that "the key to understanding the meaning and form of one narrative is how it provides a dialogic response to previous narratives or anticipates subsequent ones. And the nature of the response can range from hostile retort to friendly elaboration, from a studied attempt to ignore another narrative to its celebration" (p. 60). The current category *dialogical aims* extends this idea beyond narratives. In our interviews, many of the historians' aims—narrative and other—can be considered to exist in dialogic relationships with a broad range of previous accounts and beliefs, including myths, popular beliefs, public discussion, collective memory, and previous scholarly interpretations and understanding.

> I am trying to widen this […] context related to the research object, regarding to what it tells not only about the past, but what it tells much more about today's society, and what are the perspectives to the future. So I see here a Koselleckian approach in that past, present, and future are strongly connected together. (H2.44)

The nature of the dialogical relation varied. In some statements, historians found it important to contribute to a multitude of interpretations regarding a given topic of investigations, proposing their version alongside some previous one(s). In others, historians aimed to renounce and/or replace previous versions through myth-busting, debunking ideas, dispelling prejudices, or deconstruction.

> What I find interesting is not this truthfulness or objectivity, but precisely this multiplicity of interpretations […] That we sort of let new voices have a look at existing truths and commonalities. […] the question is, of course, about putting existing conceptions of history under question and offering something different in their place. (H6.52)

> But if I think about that from the larger perspective of my work, from those research themes that I have done, they have all been of the sort that have involved very big societal oppositionalities and even political confrontations and so on. And then the task of the historian is precisely to try to bring into them a dimension that […] inspects that intense societal discussion […] from another perspective so that different parties get a fair treatment as part of that process. (H5.78)

Some historians distinguished between 'basic research' and other, more specialized or applied research.[6] For them, basic research contributes to forming an understanding of the context for further investigations. It locates a relatively major lack of knowledge (missing dialogical reference point in the past) and anticipates more detailed inquiry (possible dialogical point of reference in the future).

> I have a kind of aim regarding a data set that is collected, and from which some basic research has already been done, but so little. So from that Finnish data set I could […] produce some new knowledge (H17.38)

> [T]his theme that we are studying is in its early stages, so there is need for basic research, this kind of mapping of the phenomenon […] (H9.50)

Thus, one can assume the dialogical character of historians aims to differ depending on whether they are engaging in basic research or more specialized investigations. While highly appreciating basic research, one historian viewed it as nearly impossible to conduct in contemporary academia. Similar to the notion of basic research, the value of some aims arose out of some relatively major gaps in previous works of historiography. This was most apparent when historians aimed to historicize new groups of people, things or phenomena, i.e., to bring something or someone (a)new into the sphere of history and historiography.

> So I've tried to bring history for the kind of groups of people that have not had it previously […] Also children, and women in general, people living in the margins of society, that they are also historically significant, that they also have history, and that they also have historical value […] (H20.74)

Textual products

The next category of aims is various textual products. When asked about the aims of their ongoing investigations, historians commonly stated publications of various kinds, most commonly monographs and journal articles in domestic and international outlets. Some targeted very specific outlets even early on:

> [B]ut in these other projects the aims have been similar, that is, JUFO-3 level [the highest level in the Finnish ranking of academic journals] international publications. […] the goal is of course [to publish in] Palgrave Macmillan and from there upwards. Others will not be discussed. (H8.47)

For others, their publication aims were more general.

> And I have articles as an aim, or a book, depending on how much time I have for it amidst other work. (H23.42)

Historians occasionally specified other kinds of textual outputs such as blog posts and newspaper columns. Such texts were planned for both popularizing one's research as well as discussing matters—such as methodological reflections—for which there was not enough space in formal publications. Some projects also aimed specifically to produce websites and databases.

> [O]ur tasks are research, teaching and then this societal interaction, so […] I have been a columnist in a paper, but am not anymore, so probably I will now blog or write something about this […] (H12.38)

Overall, historians' investigations were not only in search of understanding or knowledge more generally; publications—often specific ones—were also involved. While there is something obvious about this, a less obvious aspect is that choosing a specific outlet is likely to lead one's overall research practice in a certain direction. It is well known that some publications have strict rules and formats for writing, whereas others encourage experimental forms of writing. Regarding philosophical inquiry, Lysaker (2018) has eloquently explored how literary forms

influence, enable, and constrain different kinds of thought. Likewise, historians' aims regarding publishing in specific styles or outlets might be considered an epistemically relevant part of historiography.

Dissemination

Closely related—and in many cases tightly connected—to both textual products and dialogical aims is the category of dissemination, or the various ways of communicating about one's research. Commonly, a textual product of some sort stands as a core output of historian's work, which is then further communicated to various audiences through lectures, media appearances, popularized texts, and so on.

> And in a way the passing forward of that knowledge […] participating in discussions outside the field of history in a multidisciplinary way regarding themes to which history or past cases also somehow contribute in its own way (H15.85)

> As an extra goal there's always of course that, not only to do scientific work, but at the same time you have to popularize. […] And in that context I always create each time some kind of series of lectures. So in that way I have this societal part, or the kind of third goal set by the university world, that is, research, teaching, and societal interaction. (H2.46)

A bit over a decade ago, MacMillan (2010) observed a trend in professional historians' interest in public discussion, finding it "unfortunate that just as history is becoming more important in our public discussions, professional historians have largely been abandoning the field to amateurs. The historical profession has turned inward in the last couple of decades, with the result that much historical study today is self-referential" (p. 35). In the context of our study, this trend does not appear so unidirectional, but instead both aims appeared common for these historians: contributing to public discussion and selecting dialogical aims based on it; but also speaking to the specialist community and reflecting on the methods and theories they are using.

Societal change

In addition to challenging and adding to various communities' understandings and participating in public discussions, many historians also articulated goals of somehow bringing about societal change. In their articulations, this focused on aspects such as influencing ideas about (national) identities, promoting a sense of belonging together, and influencing decision-making regarding socio-scientific issues.

> [T]hrough successful historiography and research and writing, one can make historical presentations, and by introducing oneself to them, others than historians learn empathy, they understand better the history of other kinds of humans, the history of other cultures, and hopefully it changes their conception of human and their worldviews towards more tolerant. The task of historical research is to increase understanding, and through that, tolerance and a sense of togetherness. (H18.98)

> Well, the aim is kind of societal. I would like that this conception about what it is to be Finnish, that it would be an open one, and well, dialogical. So that it would have room for people who are not necessary part of this hegemonic basic group that speaks in the name of Finnishness […] in many of my studies I would like to liberate this concept. (H4.62)

> There the question is more about what ways climate change influences—and comes to influence […] living conditions, and we are part of that discussion. If we do nothing, things will definitely go awry. But if even a small change occurs, it will have huge consequences. (H8.76)

Some historians also directly highlighted the political nature of their scholarly endeavors.

> Because it is an important question: Why are people poor? […] It is a political question. (H8.69)

> Potentially, what I do can change the world. It is at the same time political, the choice of research topics, and especially this kind of research topics. In the same way, if I study TOPIC, the question is of course about me wanting to make sure that certain things do not happen again. (H10.64)

In sum, these accounts speak of a historiography that is not a neutral, view-from-nowhere kind of investigation aiming at accumulating findings and steadily filling self-evident gaps in common knowledge. Instead, this category suggests that historiography as a practice is itself embedded in historical processes and discussions, and thus there exists a place for societal—even political—agency regarding the kinds of topics, perspectives and questions to consider worth taking up in studies. This, in turn, requires openness regarding one's motives and aims. To this end, many historians also spoke of being attentive towards the possible (ab)uses of history in society—a popular topic during the time of the interviews especially due to the then-recent organization *Historians Without Borders* in Finland (Blåfield, 2016; see also, MacMillan, 2010).

Connection to present

A common response related to the value of the interviewees' aims—and also of historiography more broadly—was their relevance for various present concerns, such as understanding some contemporary phenomena better through its points of origin or some contingent turns of events (see e.g. Simon, 2019).

> That it [a work of historiography] produces the kind of knowledge through which the present can be understood better. So many things that exist currently are based on something earlier, and that might in an amazing way enlighten that birth process of how it has been formed, and about how we should relate to it. (H16.106)

> [H]istory is important so that we would see that things do not have to be the way they are now. So a kind of existentialist contingency (laughing) … that everything kind of happens to be the way it is for certain reasons, but it could very well be in some other way, and very much depends on what people choose, what choices people make and how they behave and so forth. In that way, I think […] that history is kind of emancipatory, that it shows us the extent of human freedom, but it also shows its limitations. (H14.81)

Yet some historians also challenged the idea of the value of historiography being necessarily determined on the basis of its relevance for known present interests.

> Well, the standard answer is what I already gave, that it [a work of historiography] has some touching points to the present. […] But I also think that—this is a kind of answer of an old generation humanist about research—it is really great that someone studies a kind of thing that has nothing (laughing) to do with today […] that someone can commit to it, and have knowledge of it, and I think that it is kind of good that in this country also we have the kind of people who have very different points of interest and who do their things passionately. (H13.99)

Emotions

Historians also referred to affect or emotions as either one of the aims of their project or reasons for regarding the work worthwhile. The mentioned emotions were either their own or others', and included enthusiasm, insight, surprise, aha-experiences, and having fun.

> It is intellectually a very fascinating topic. (H14.59)
>
> [T]o publish something that someone would like to read, and that would give them an aha-experience or an insight, and maybe inspire them. (H24.56)

Currently, emotions are an acknowledged and important part of historiography in many ways. They are both an aspect of the past that is specifically investigated (Matt & Stearns, 2014) as well as an aspect of historians' practice in many kinds of investigations (Barclay, 2018; Rossi & Aarnio, 2012; Rüsen, 2008). Emotions are recognized as a relevant part of many cognitive activities, such as reasoning and problem-solving (e.g., Muis et al., 2018; Thagard, 2008). As Morton (2013) writes, "[e]motions directed at a topic will drive imagination of associated facts, possibilities, and actions." (p. 14). Our findings also support the idea of considering emotions or affect as part of historians' epistemic practice—specifically as aims. Emotions are thus not only emerging phenomena to reflect upon but also something aimed at.

Discussion

Stearns (1998) noted that "[t]here is no reason not to prod historians to articulate what their purposes are, but the fact is that the exercise will often be somewhat unfamiliar" (p. 283). Having taken up this bid, we noticed that—at least in our semi-structured interview in a Finnish context—this exercise was not so unfamiliar to contemporary historians as one might assume from Stearns' statement more than two decades ago. We analyzed a set of interviews with historians about the (epistemic) aims of their work. Our results show that historians express a range of aims that can vary considerably depending on the different kinds of investigations the historians are involved in. These aims also extend beyond knowing and understanding phenomena to publishing and disseminating findings, as well as bringing about changes in society through their work.

From the perspective of educational researchers who wish to understand the practice of historiography, these findings about historians may be conceptualized as one part of a broad set of aims of agents, communities, and cultures of history. In addition to these expressed aims, there is likely a range of aims that remained unexpressed. We might also further differentiate the aims of history educators (Sakki & Pirttilä-Backman, 2019) and the aims of various kinds of learners, users, consumers, and critics of historiographical output (see, e.g., de Certeau, 1984; Pihlainen, 2017). Even within the practice of historiography, aims can be approached through various analytical levels, ranging from macro to micro aims. The former level focuses on institutions, systems, or the profession of historiography in a broad manner (e.g., Torstendahl, 2015), whereas the latter level focuses on some detailed processes or actions that are part of individual scholars' (and their collaborators') everyday research work (e.g., Korkeamäki & Kumpulainen; 2019). At times, our analysis touches the macro level, but since our analysis targeted especially historians' (and their collaborators') research projects, it locates mainly between these two—on what could be termed a meso level of analysis. Differentiating such levels is important because certain aims may appear mainly—or even only—in fine-grained situations, whereas others find relevance in the system or community level (see Longino, 1990).

As outlined in the introduction, current approaches to history education are tightly linked to (knowledge about) the practice of historiography. Thus, the educational implications of our findings about historians' aims are also manifold. First, they contribute to a basis of empirical knowledge about the epistemic aims of actual historiography that is needed for a continuing reflection on the legitimacy of educational practices that are justified through notions of acting "like historians" (see also Kainulainen et al., 2019). In this regard, our results indicate parts of the practice of historiography that are not so commonly regarded as part of historiography in educational models. For example, apart from empathy (see Endacott & Brooks, 2018; Lévesque & Clark, 2018), emotions are rarely considered as part of historical thinking and reasoning in educational models. However, in both science education and history education, some educational researchers have argued for including emotions experienced within inquiries as an important part

of what students should learn when engaging in practices of science or historiography (Goldberg & Schwarz, 2016; Jaber & Hammer, 2016). Our findings also provide support for this direction.

Second, having a broader range of aims to draw upon, our findings can be used to (re)design history classes—and especially their inquiry-based activities. In K–12 contexts the educational goal is usually to grasp some core aspects of the practice of historiography. Quite often, the goals of inquiry are given to students ready-made rather than as something to actually reflect and decide upon. In Voet and De Wever's (2017) synthesis of different models of inquiry-based learning in history, all models begin with evaluating (the nature, origin, biases, and reliability) of sources. Thus, an obvious possibility of expanding inquiry-based learning would be to grant inquirers themselves some agency regarding what the activities aim to achieve and why. Having a range of aims to build upon also provides a possibility for making history classes more engaging. Historians themselves have a variety of aims that motivate them to keep going; we should certainly not expect students to motivate themselves with a much-more-restricted range of aims. More specifically, student agency regarding dialogical aims could allow inquiries a stronger connection to contemporary events, arguments, debates, concepts, and phenomena. This, in turn, would likely make inquiries more meaningful for students. Knowledge about historians' aims—such as those provided in this paper—could then be used as a grounding point for reflecting and evaluating students' inquiry aims and the ways they relate to those of historians.

Further along the trajectory towards domain-specific expertise, students of history in higher education often aim at actually becoming historians—or at least developing the capabilities required for it. Practice-oriented teaching, historical thinking, and inquiry-based learning are relevant to higher education as well. Nye and colleagues (2011) have highlighted the importance of student agency in this regard. Designing courses in a way that allows students both a say and support for making choices regarding the inquiry aims of activities would appear a relevant part of promoting student agency. And indeed, some inquiry-based approaches in the humanities have done so when students have selected the kind of issues or questions they wish to address (Feldt & Petersen, 2020; Watts, 2014) and when instructional approaches have considered writing and publishing in different formats as possible aims (Bihrer et al., 2019). Alleviating the difficulties in the transition to university and history studies through such courses has been a long-standing goal for many educational scholars and historians (Booth, 2001; Díaz et al., 2008; Neumann, 2015). Because the practice of historiography is—or at least should be—at the core of history departments, reflecting on its aims might thus prove a useful activity not only in inquiry settings, but also in introductory courses to historical studies.

As mentioned earlier, the AIR model of epistemic cognition (Chinn et al., 2014; Chinn & Rinehart 2016) conceptualizes epistemic practices as situative composites of aims and value, ideals, and reliable processes. Therefore, it is crucial to recognize the limitation of this study: we have here only focused on one of these aspects, and have done so by exploring the range of historians' aims and their value. While our overall research project also investigates these other aspects (Kainulainen et al., 2019), in this paper we have not reported findings about how these aims come together with ideals and processes. Still, it is worthwhile to keep these other aspects in mind when considering the implications of our study. When new kinds of aims are taken up for inquiries, students and teachers will also need to consider new ways of reaching those aims. For example, affectively or dialogically oriented aims will likely require ways of dealing with emotions or managing the intersections of current/past events and phenomena.

In sum, we believe our results might find best use as a ground for critical and reflective discussions at many educational levels. Such discussions might ask questions, such as: Which aims are most valuable in historiography? How much can the aims differ across different kinds of studies? Which aims should be incorporated into inquiry in history education at different age levels? How should one account for the aims that arise more from institutional demands than curiosity or societal need? What kind of unpronounced aims might historians have? In what ways—if any—should the aims of historians matter for readers of their work?

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Endnotes

[1] As Reisman (2012) and Retz (2016) make clear, such approaches also have a much longer history.

[2] We rely here on a definition derived from philosophy of historiography (Kuukkanen, 2015; Tucker, 2009), in which *historiography* refers to writing about history (past events, processes, phenomena, etc.), usually in forms that centralize results of inquiries. In order to refer clearly to the thinking, activities, and work of historians in conducting and producing historiography, we use the term *practice of historiography*.

[3] Remaining categories with only one code were merged under "Other aims". A full and more detailed list of codes can be requested from the first author.

[4] Because of to the probabilistic nature of open-ended interviews, these findings are best not considered as an exhaustive list of the aims of any individual interviewee or of historians in general. Likewise, we are wary of generalizing from what is *not* presented here because historians also discussed many other things important to their practice that just did not happen to be given as responses to questions about aims or through the kind of intentional utterances that we focused on.

[5] The translation of some epistemological or inquiry-related concepts from Finnish to English is tricky. For example, the Finnish word *tieto* is commonly used to refer to both *knowledge* and *information*. Also, the Finnish words *kuvaus* and *kuvailu* are commonly used to refer to *description*. However, these words have the word *kuva* (image) as their basis, and thus also have a visual side to them. In many cases, all three words (kuvaus, kuvailu, and kuva) can be used interchangeably, and the interviewed historians used all of these in explicating their aims. Therefore, it is not always easy to infer whether they refer to a visual concept or not.

[6] It was not always clear precisely how the notion of "basic research" was used in different situations: sometimes it was used simply to refer to work with sources in archives, and at other times it appears to refer more specifically to the kind of early stage research from a given topic or set of data that is less theory-driven, more empirical, and that establishes some core facts and chronologies. Still, overall, there was a sense of relative "preliminariness" that paved way for something.

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History teachers and historical knowledge in Quebec and Sweden: Epistemic beliefs in distinguishing the past from history and its teaching

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ABSTRACT

This article looks at upper secondary school history teachers' understandings of how historical knowledge is constructed and at the impact this might have on their classroom practice. The article has two objectives: (1) to examine how teachers view the relationship between *the past* and *history* – as a basic entry point peek into their epistemic thinking; and (2) to explore their reflexiveness regarding epistemic issues and what their view might mean for their perspectives and their teaching of history, and by extension, whether they see themselves as being political in the process or not. As part of an international, comparative study on history teachers and their epistemic positioning in the teaching of rival histories, we use a mixed-methods approach to present empirical data from Quebec and Sweden. Forming a cross-cultural dialogue, this comparative focus permits us to identify and discuss nuances that emerge in teachers' thinking in two completely different societies that nevertheless share similar democratic and political outlooks when it comes to the teaching of school history. In discussing the relationship between the past and history, it appears that teachers have different understandings of what historical knowledge is, how it is constructed, and the implications these meanings have for their practice. The findings demonstrate that there is a main difference and an important similarity between both sites. The difference is one where Swedish teachers are more inclined to make a clear distinction between the past and history, than their Quebecois counterparts who tend to be less prone to making this distinction clear. The similarity, in turn, refers to a majority of participants who are located in between these two extremities – objectivist and critical – and who demonstrate a case of epistemic "wobbling". In describing the reasons for this difference, namely Quebec's overt quest for nation-building among its various historical communities, the political nature of history teaching comes to light. In digging deeper in this difference to better qualify the emergent wobbling, the results furthermore illustrate a strong connection between criticality and reflexivity in teachers' thinking and practice. More specifically, those who clearly distinguish between the past and history demonstrate an ability to account for history's subjectiveness and are therefore more attuned to questioning their own role in the whole teaching process.

KEYWORDS

Epistemic beliefs, history teachers, Quebec, Sweden, upper secondary school, mixed methods

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Introduction

Historians have been engaged in debates over the relationship between the past and history for a long time. These debates have been about methods, language, the nature of reality, and the construction of knowledge (see e.g. Bernheim, 1894; White, 1973; Novick, 1988; Jenkins & Munslow, 2004; Torstendahl, 2015). Lately they have also impacted the development of secondary school curricula. The acknowledgment of an important difference between the past and history has – together with ideas of intercultural understanding – given the notion of multi-perspectivity a prominent place in history teaching over the last three to four decades (see e.g. Elmersjö, 2021; Ammert, 2013; Cannadine, Keating, & Sheldon, 2011). Multi-perspectivity can be seen as a recognition of history's subjectivity to the extent that it contains multiple coexisting viewpoints of the same events rather than a blind embrace of one closed narrative believed to be objectively true.

One fundamental aspect of multi-perspectivity that results in history's subjectiveness is the whole meaning-making process that specifically differentiates between the past itself, as everything that has happened, and the history about that past, providing a melody out of the noise of all past happenstances (McCrum, 2013; Mathis & Parkes, 2020). Or, in the words of Bruce VanSledright:

> The past, of course, is all those events and incidents that have gone on in the world of human experience before this moment. The scope of the past is mind-bending. It is complex, unwieldy, and resists full comprehension. […] History [in turn] emerges as distinct from the past in that it is the name we give to our efforts to interpret the past, to tell stories about what it means. It cannot be isomorphic with the past. It is particularistic, selective, laced with perspective. […] The word history more aptly describes a practice of interpreting the past. (VanSledright, 2014, pp. 26-27)

Irrespective of how evidence, prior knowledge, and accepted scholarship are employed, the subjective meaning-making process of historical endeavours constitutes an important starting point for epistemologically separating all that has happened before the present ("the past") from what we choose to remember and attribute meaning ("history"). This relationship between the past and history is one of the most fundamental aspects of understanding historical knowledge and its inherent incompleteness, its interpretational aspect, and its particularity and selectiveness. In school history, however, given the predominance of core master narratives that promote a particular vision of the nation, the distinct relationship between the past and history is often only acknowledged in some parts of curricula, while other parts – where historical events of vast cultural significance are discussed – lack this acknowledgment, leaving teachers and students with a subject that both tries to objectively (re)construct the past and subjectively deconstruct history

at the same time (see e.g. Stradling, 2003; Grever, 2012; Elmersjö, Clark, & Vinterek, 2017; Wansink, Akkerman, Zuiker, & Wubbels, 2018).

It could be argued that, because of this ambiguity, history teachers may come to view the teaching of their subject matter as a political act, in the sense that it always makes "something" visible while simultaneously hiding "something" else (see Rancière, 2001), where teachers make decisions about whether or not and how to question and transmit officially sanctioned information. Some teachers may consciously turn students' attention to how specific and subjectively selected parts of the past are brought to the fore in any history. Others, by establishing a common cultural reference, may instead turn students' attention to some of those subjectively selected parts of the past, teaching them – seemingly apolitically – as objectively closed narratives. Others yet, may find themselves somewhere in between these two extremities. What is of particular interest here is the extent to which teachers are reflexive in their thinking and teaching when navigating history curricula, and whether or not they engage in discussions regarding the processes involved in the construction of historical knowledge and its social and political uses. Doing this may provide some kind of barometer enabling them to assess where they stand and why.

This leads to the very important issue of how teachers think about the nature of their subject, especially in regard to the relationship between the past and history, and whether or not they see history teaching as a political act. This article looks at Quebecois and Swedish secondary school history teachers' understandings of the relationship between the historical knowledge they teach and the past itself. More specifically, the article has two objectives: (1) to examine how upper secondary school history teachers discuss the relationship between *the past* and *history* – as a basic entry point peek into their epistemic thinking; and (2) to explore their reflexiveness regarding epistemic issues and what their view might mean for their perspectives and their teaching of history, and by extension, whether they see themselves as being political in the process or not.

Epistemic beliefs and the relationship between the past and history

As a point of departure, we subscribe to the notion that teachers need to have knowledge of the epistemology of history as a discipline in order to teach history according to the historical thinking model innate in history syllabi in many countries (see e.g. Mathis & Parkes, 2020; Elmersjö et al., 2017). We also see the ability to reflect upon epistemic issues as an important competence for teachers of history to possess (see e.g. Brownlee, Ferguson, & Ryan, 2017).

There are different ways of interpreting how teachers talk about epistemic beliefs in history. One way of doing so is to assess their way of conceptualising historical knowledge with regard to the concept of evidence and how they reason about the relationship between narratives about the past and the evidence left behind from that past. A three-stage model has been proposed based in more generic research regarding epistemic beliefs (King & Kitchner, 1994; Kuhn & Weinstock, 2002; Hofer, 2016): objectivist beliefs, subjectivist beliefs and criterialist beliefs (see also Maggioni, 2010; VanSledright & Maggioni, 2016; Stoel, Logtenberg, Wansink, Huijgen, van Boxtel, & van Drie, 2017). The objectivist belief is one where knowledge emanating from what are considered authoritative sources is considered to be true, a direct copy-paste of reality. The subjectivist belief could be described as a "give in" to the notion that there are multiple accounts, and that history is therefore ultimately subjective and knowledge creation is relative. Criterialist beliefs introduce judgements regarding the interpretation of history, and these judgements could be considered better or worse, emphasising historical thinking skills as a way of making sense of and assessing the plausibility of different accounts about past reality (VanSledright & Maggioni, 2016; Voet & De Wever, 2016; Stoel et al., 2017).

While these analytical tools are very important for understanding different ways of conceptualising how historical knowledge is constructed, we believe that attention to the relationship between the past and the history of that past has been somewhat downplayed in

earlier research. Our specific attention to this relationship could be considered an important contribution to better understanding the nuance that Hofer (2016) makes regarding epistemic beliefs and the preconceived conceptions of the disciplines they deal with (i.e., how we understand history when comparing it to other disciplines as well as in relation to our pregiven understandings of what constitutes history).

After all, even if a person holding objectivist beliefs clearly sees no difference between the past and history, the criterialist might not really differentiate between the past and history at the epistemic level either. The criterialist might hold the belief that history, when done right, actually takes you to the past itself. They might still see a very direct – even though not simple – relationship between the past itself and the history about that past. Few studies on epistemic beliefs focus directly on how teachers or student teachers view the relationship between the past and history, even if there are recent notable exceptions (Miguel-Revilla, Carril-Merino, & Sánchez-Agustí, 2021). Our attention to the relationship between the past and history produces two distinct epistemic stances. The first is an objectivist stance that identifies the relationship between the past and history as being straightforward, e.g. "history can tell us the truth about the past". The second is a critical stance that identifies the same relationship as being complex and perhaps even impossible to resolve in any meaningful way; the past itself and the history about that past are not epistemically congruent.

There is also a shortage of research that compares epistemic beliefs in different countries, especially regarding the relationship between the past and history. A recent study of the aims of history teachers in ten European countries shows that "learning critical thinking" seems to be the most valued goal of history teaching in Europe, and this aim also correlates with history teachers' more nuanced, or criterialist, epistemic beliefs. At the same time, they also found a correlation between more objectivistic epistemic beliefs and less common aims relating to nation-building (Sakki & Pirttilä-Backman, 2019). While this sheds light on the beneficial workings of the three types of epistemic beliefs for empirical research and for understanding teachers' practice in general, it still doesn't provide insight into whether or not and how teachers differentiate between the past and history. Could such understandings actually be camouflaged by what is described as critical thinking? If so, it is not clear whether teachers are moreover reflexive in their approach.

There are a few reasons why comparing Quebec and Sweden is interesting when it comes to history teaching. For one, they are similar in a lot of ways, especially when it comes to their socio-economic development and schooling in a general sense. Moreover, the history syllabi in both Quebec and Sweden have corresponding foci on the transmission of cultural heritage and historical thinking skills. There are also interesting differences, mainly when it comes to language and cultural politics connected to Quebec being a majority French-speaking province in a mainly English-speaking country. One of the more important variations in the history program for upper secondary schools is the Swedish attention to teaching students about different "uses of history", which could be said to highlight history's multi-perspectivity, by bringing its uses in different social and political contexts, both past and present, to the fore. This competency is lacking in the Quebec history curriculum, and begs the question of whether teachers, given the similarities and differences between the two contexts, are consciously political and reflexive in their approach or seemingly apolitical and non-reflexive.

History teaching may also – as described above – be seen as a political act. This emerges by virtue of the information teachers raise and the questions they ask, both of which are done selectively. As these questions result from differentiating the past from history, they also relate to teachers' perspectives on the construction and use of historical knowledge, which consequently, as an expression of their historical sense-making, are closely intertwined with their enactments of historical culture (Zanazanian, 2019). The manifestation of their historical consciousness thus has a political dimension, especially when it comes to trying to make sense of what is the right and wrong way of producing and transmitting historical knowledge (Rüsen, 2002; 2017; Mårdh, 2019; Zanazanian, 2019). As curricula intertwine knowledge and culture, this sense-making forms the basis for negotiating how to teach *officially sanctioned history*; history deemed important and

common-sense in a given society at a given time (cf. *official knowledge*: Apple, 2000; Apple & Christian-Smith, 1991).

No matter how they teach history, the way teachers make sense of the past is always political. How and if teachers view this political aspect as something separate from ideology, might shed some more light onto the issue of how the past can be separated and made distinct (or not) from history. Two questions come to mind; questions we will explore more in the following sections: Do teachers see themselves as performing a political act when teaching? How does this relate to their view of the relationship between the past and history?

Method

As part of an international, comparative study on history teachers and their epistemic positioning in the teaching of national history, we use a mixed-methods approach to present empirical data from both Quebec and Sweden. We explore and compare the two sites quantitatively, while also analysing teachers' deeper thoughts qualitatively as they surface (Creswell, 2003). First, we utilised a questionnaire trying to see how teachers in upper secondary schools in Quebec and Sweden reason about the relationship between the past and history. Forming a cross-cultural dialogue, this comparative focus permitted to identify and discuss nuances that emerge in teachers' thinking in two completely different societies that nevertheless share similar democratic and political outlooks when it comes to the teaching of school history.

The part of the questionnaire we mainly consider in this article relates to four statements regarding the relationship between the past and history. Participating teachers' answers were on a 4-point Likert-scale: "totally agree", "strongly agree", "somewhat agree" and "do not agree at all". The statements were the same in both countries, translated into English and French for the Quebecois teachers and into Swedish for the Swedish teachers. 375 history teachers responded to the Swedish survey, while 106 history teachers participated in the Quebec one – 58 teachers who teach in French in French-language schools and 48 who teach in English in English-language schools. For the Swedish questionnaire, a database with all teachers in Sweden under the control of Sweden Statistics (*Statistiska centralbyrån*, SCB) was utilised and the questionnaire was sent directly to the teachers.[1] In Quebec, teachers were approached through social media and at annual meetings of professional teacher associations and encouraged to fill out the questionnaire virtually, on-line.

The questionnaire did not include a specific definition of *the past* or of *history*, since doing so would have been very difficult without inadvertently giving the teachers a "right answer". However, the statements identified the past and history as two *potentially* different concepts and there was also a specific question that urged the teachers to distinguish between them in their own way, and to estimate their view of the complexity involved in distinguishing them from each other. One problem with this approach is that there were some potential differences in how teachers defined these words (past and history). However, we were not particularly interested in their definition of the words, but rather in their view of the epistemological relationship between *the concepts* of "past reality" and "things we write about past reality". The statements themselves (for example, "History can tell us the truth about the past"), the questions about the estimation of complexity and the way all questions in the questionnaire were formulated, contributed to a more-or-less clear definition of the concepts involved. We also tested the questionnaire in a pilot study in order to make sure respondents understood the concepts at hand and to maximise the reliability and validity of our measuring instrument, we moreover compared our initial results across both research sites. However, the questionnaire was also mostly utilised for a qualitative purpose; to facilitate categorisation and the follow-up interview component of our study. Regarding the sample, Table 1 indicates some differences between the teachers who answered the Quebecois questionnaire and the teachers who answered the Swedish questionnaire, where the Quebecois teachers were younger on average. The distribution of males/females in the Swedish questionnaire was 59/41 (%) while it was 40/60 (%) in the Quebecois questionnaire.

TABLE 1: Gender, age and amount of history education in the sample of teachers (absolute numbers)

	Gender		Age			History education			
	Male	Female	22–39	40–49	50–68	Less	BA	More	N/A
Quebecois teachers	42	64	64	29	12	16	60	28	2
Swedish teachers	220	155	118	141	116	39	305	28	3

Note: Education in history is reported as BA with history as a major (or equivalent) as a baseline, and the two categories "less" (which mean less history education than a BA) and "more" (which mean more history education than a BA).

The concerns that were raised from this questionnaire gave rise to ideas for the study's smaller, qualitative interviews in an effort to dig deeper into the perspectives that teachers held regarding the production of historical knowledge. In this article we present results from the first set of these interviews in Quebec in which five English-speaking teachers participated. All of them indicated an interest in wanting to take part in our follow-up interviews through the questionnaire, and the five were randomly chosen out of ten English speaking teachers who answered the questionnaire and volunteered to be interviewed. Because the Swedish questionnaire was distributed from an official state register and thus was not under our control (the SCB database of Swedish teachers), we could not conduct this follow-up with the Swedish teachers. This is why we only focus on our teacher participants from Quebec in the present article.

The interviews were semi-structured, and they centered on a series of questions and short activities that sought to mainly examine participants' understandings of the relationship between the past and history, which correlated with but went beyond those similarly themed questions and statements in the questionnaire. To ensure the reliability of these participants' perspectives, questions with similar ideas were asked more than once with a different wording to expressly see if they would answer in the same way or not. Although, at times, the questions may have seemed redundant to attentive participants, this permitted us to engage more deeply with them about their ideas and to have them think beyond what they are usually used to in their professional setting.

It is important to keep in mind that the interviews do not form part of our study's quantitative component and thus should not be understood quantitatively. Instead, comprising the qualitative component of our mixed-methods approach, they are to be viewed as supplementary, allowing us to see examples of what the teachers who answered the questionnaire might have meant, or how they might have been thinking when differentiating the past and history. Proceeding in this manner opens up the opportunity to better understand the results from the questionnaire, and provides examples of ways of thinking about the nature of historical knowledge in a deeper sense.

Inconsistencies, age-related and culturally related differences – results from the questionnaire

The categorisation of the teachers (Table, 2) was based on the combined responses to the statements "The past can be truly known"; "History can tell us the truth about the past"; and "The past has a meaning that we can hope to discover", as well as their answer to the question "How would you define the relationship between the past and history". Teachers who answered "totally/strongly agree" for all three statements, while indicating a straightforward relationship between the concepts, are categorised as having a "consistent objectivist" view while teachers who answered "somewhat agree" or "do not agree at all" for all three statements, while indicating a complex relationship between the concepts, are categorised as critically consistent. Teachers who answered strongly agree for one or two of the statements while answering somewhat agree for one or two of the others are categorised as "middle ground-semi consistent". All other teachers are categorised as "inconsistent", i.e., "wobbling", that is, epistemic inconsistencies about the relationship between the past and history.

The categorisation provided results that point to one major difference between the teachers from Quebec and the teachers from Sweden, as well as one important similarity. The difference between the two sites lies in how Swedish teachers tend to recognise history's complexity and to nuance their approach when distinguishing the past from history more so than their Quebecois counterparts who, in turn tend to see a more straightforward relationship between the two, i.e., critical and objectivist, as defined above. The similarity, in turn, refers to a majority of participants who are located in between these two extremities – objectivist and critical – in both sites. On this latter point, our participants' answers revealed a lot of "wobbling".

TABLE, 2: Categorisation of respondents' epistemic beliefs, Sweden and Quebec (absolute numbers, percentage in parentheses)

Nationality	Consistent objectivist	Consistent critical	Middle ground - semi consistent	Inconsistent	Total
Swedish	77 (21)	86 (23)	109 (29)	103 (27)	375 (100)
Quebecois	39 (37)	9 (9)	27 (25)	31 (29)	106 (100)
Total	116 (24)	95 (20)	136 (28)	134 (28)	481 (100)

As evident from Table, 2, only 44 percent of teachers in the survey responded consistently (either positively or negatively) to the statements. Out of this 44 percent, almost half (20 percent of the total) clearly identified a complex relationship between the past and history (identified in Table, 2 as consistent-critical). In previous research on prospective history teachers this figure has often been much higher. For example, in one Spanish study more than 50 percent of students studying to be teachers in secondary schools, identified a similar complex relationship (Miguel-Revilla et al., 2021). While this Spanish study was not conducted in the same way as ours, the discrepancies are still noteworthy. Part of this variation could be explained by the age difference between prospective teachers, who are often young, and a random sample of working teachers, which entails teachers of all ages (see Table 1, especially regarding the larger Swedish sample). In our study, there was a notable difference between older and younger teachers, with older teachers being more objectivistic than their younger counterparts. In considering the teachers in our study younger than 40, the percentage of critical teachers rises from, 20 to, 26 percent (see also Elmersjö, 2021), thereby suggesting a potential generational difference.

A potential problem with this categorisation is the high percentage of inconsistent teachers. This points to the problems of identifying epistemic beliefs in a reliable way, perhaps due to teachers' didactical, rather than epistemic, approach to matters regarding their teaching subject (see Elmersjö, 2021). However, the standard for consistency in the teachers' answers needs to be set high for a confident separation between the objectivist and critical teachers to be made. The difficulties in attributing the teachers a specific stance, also shows something that has been prominent in earlier research as well; teachers are "wobbling"/switching between different positions (Miguel-Revilla et al., 2021; Wansink et al., 2018; VanSledright & Maggioni, 2016; VanSledright & Reddy, 2014, McCrum, 2013). It is also not possible, given the methodology utilised here, to assess whether the teachers are inconsistent as a consequence of not being able to articulate a consistent epistemological stance, or if it is a consequence of a conscious changing of epistemological criteria to align with specific allegiances in relation to specific events in history, or to differing thought processes when thinking as a teacher or as an historian (see Gottlieb & Wineburg, 2012).

In comparing the Swedish teachers to their Quebecois counterparts, both contexts seem to approximately have the same ratio of consistent teachers (around 45%). However, while the distribution between objectivist teachers (who see the relationship between history and the past as straightforward, e.g. "history can tell us the truth about the past") and critical teachers (who see a complex relationship between the past and history) are almost even in the Swedish sample (21% and, 23% respectively), it is highly skewed towards the objectivist stance in Quebec (37% and 9%). This difference could relate to some nation-building aspect, as previous studies have shown a correlation between teachers with objectivist beliefs, and teachers viewing nation

building as an important part of history teaching (Lanoix,, 2017; Éthier et al,, 2017; Zanazanian & Moisan, 2012; Zanazanian,, 2017; Sakki & Pirttilä-Backman, 2019). It is also possible that this difference relates to the Swedish upper secondary school history program focusing on "uses of history", as mentioned earlier. Obligated to teach this concept, we thought Swedish teachers, who were specifically asked about this, would thus be more inclined to possessing a critical approach. But, given how they answered questions about their attitude in its teaching, where no correlation emerges between their ability to teach the concept and their acknowledgement of a clear difference between the concepts of past and history, this does not seem to be the case.

Since the questionnaire was distributed in different languages, translation could also have affected the objectivist outcome for Quebec. There was an important variation in the answers to one of the statements – "the past has a meaning that we can hope to discover" – when comparing the Swedish teachers to their Quebecois counterparts who answered the French version of the questionnaire (of the 106 Quebecois participants 58 answered the questionnaire in French). This led us to believe that a certain nuance was lost, thereby skewing the reliability between both research settings, but only to a matter of degree.[2] In disregarding this statement, a difference between the two sample populations nonetheless still arises, with a larger percentage of Swedish teachers being categorised as critical. Despite a consequently smaller variation, this suggests that language only plays a minor role and that the difference between Quebec and Sweden still stands.

When comparing the Quebecois and Swedish teachers, we have so far described the results from our study in terms of a dichotomy regarding teachers' inclination to differentiate between the past and history. However, 56 percent of the teachers, in both Quebec and Sweden, display inconsistencies in this regard. There seems to be something hidden in between the objectivist and critical approaches, where these teachers' inconsistencies are perhaps due to their struggles in dealing with history's subjectiveness as well as with the ambiguity in its teaching in terms of what they are comfortable in transmitting and how. This leads us to the political issue discussed above, which also relates to teachers' reflexivity. This raises new questions that we need to analyse more deeply, which we do next in qualitative terms.

History teaching as a political act – results from the interviews

Combining the questionnaire with interviews from English-speaking teachers who teach in English-language schools in the greater Montreal region made it possible to look further into how teachers might differentiate between the past and history and describe their struggles with subjectivity and the political aspect of history teaching, with input on their degree of reflexivity. This should be viewed as both an attempt to present a plausible discussion about the results extracted from the questionnaire, as well as an attempt to answer the second question addressed in this article: Do teachers see their role in making the past meaningful to students as a political act? Or do they instead see themselves as merely observers of a given past that they transmit, with a meaning that *is* and has always *been there,* objectively innate in the events themselves? This is where distinctions made between the past and history become insightful, where it is possible to discern what an acknowledgement of such a distinction actually signifies for how history is taught. Given that only five teachers were interviewed we do not claim to be able to *explain* the thought process of all the teachers who answered the questionnaire, but we present a discussion about how teachers *might* think about issues of historical knowledge and what that might mean for their teaching, in more depth. All five teachers who were interviewed made some sort of distinction between the past and history, but the way they did so was very different, especially with regard to what they considered to be political in the teaching of history.

One of the younger teachers interviewed, a, 27-year-old female (categorised in the questionnaire as consistent critical), had a strong opinion on the relationship between the past and history, and the subsequent political dimension of history teaching, responding to the question "How would you define the relationship between the past itself, and history?":

> I definitely see them [past and history] as two very, very different things. Specifically, when we are talking about history and the context of how it's taught in Quebec, it is a very deliberate construction of what we want our students to be understanding. So, if we think of the past as things that happened before us and we look at history, history is a deliberate retelling of this past, retelling [a] very specific… perspective with a very specific goal at the end of it, …and that obviously changes depending on who is determining what that goal is, where that history is being constructed, so where the past is something that occurred, the history is the malleable interpretation of that past.

This statement indicates this teacher's critical standpoint towards historical knowledge and its ability to tell something conclusively true about the past. She sees the act of turning the past into history as one that makes the past teleological, where there is "a very specific goal at the end of it". When she elaborates on what this means for her practice it becomes obvious that she sees it as a political act, where the teacher always plays a central role:

> I specifically teach teenagers; they don't know about this distinction [between past and history]. When they are sitting in a history classroom, they think that they are being told the past, they think they are being recounted what happened. And they are very much not aware of the fact that it is a human creation, the history that they are learning is a story that has been deliberately written for very specific reasons. […] If they are consuming this information as fact that has no right to be interpreted or thought about, then they are going to continue on repeating it and living it in a way that isn't being thought about and isn't being critically analysed […]. They are the consumers and they have to be employed with the right intellect to be able to have the ability to say "why am I learning this?" "why do other people think it's important that I'm learning this?".

This seems to be a very postmodern approach to history teaching (Seixas, 2000; Elmersjö et al., 2017), where the difference that is identified between the past and history is seen as unbridgeable. This participant teaches history with the question she asks at the end of her statement: "why am I learning this?" Her ideas about history probably push her to teach it as a form of discursive deconstruction where the reasons why history is constructed in a certain way are at the core of the thinking process and requires asking questions like: under what pretenses and discursive conditions was this history created, for whom is it important that we learn it, and what does that do to us and the society we are a part of? These questions push history teaching to be understood reflexively in the sense that it has as its main aim to show students how history, by definition, when separated from "the past", is political. But it also points to a *self*-reflexive inclination, as this teacher obviously thinks about what her teaching *does* to students and her role in that regard. Her own view of the nature of history is very present in her ideas about teaching.

One of the other teachers interviewed, a 68-year-old male (categorised in the questionnaire as consistent objectivist), also identified some sort of disparity between the concepts of past and history, even though he labeled them in "reverse" compared to our and VanSledright's definition above (i.e., the teacher explained that history is what happened, and the past is what we make of it). This "reverse" definition does not really influence our interpretation, because the distinction between what has happened and what is written is still there, no matter what label is chosen. However, he did not see good history teaching as a political act, but as an issue of doing better research and coming up with the right interpretation. When discussing the relationship between the past and history, he mentions the importance of developing an "accurate interpretation":

> I think [accuracy] matters a great deal. Because we cannot hm… how can I word this? We [historians and history teachers] are trying to succeed in interpreting history [the past]. Our success is measured by our opinion, our opinion is measured by the sources we use. […] For [students] to accept our opinion, we have to work harder at the interpretation of history [the past]. And I think that's what matters, because it forces us to be clear, it forces us to be succinct, it forces us in a lot of ways to be accurate, it forces us to be very open… extremely open.

While this teacher clearly sees the subjectiveness of historical interpretation when he uses the word "opinion" about historical accounts, he seems to struggle with subjectivity and its relationship with objectivity. He does not see the political implications involved and the consequent need for reflexive thinking. Instead, he seems to view history teaching as more of a scholarly act. He highlights the idea that one of the more important parts of teaching history is to be accurate, and at the same time to be open with how this accuracy was achieved. However, he is not at all reflexive regarding what history does to students. His ideas about accuracy point in the direction of an objective history, where evidence is clearly needed, but where he is not reflexive about his or the historian's own role in the process of knowledge construction.

Yet another teacher (a 45-year-old female, categorised in the questionnaire as consistent critical) made it clear that there is both a political and ideological dimension to history:

> I mean that's been proven so often that people use history or change [the] interpretation of history for political means or ideological means whether that be governments or educational institutions […]. [W]hat if you ask it in simple terms, what went down versus who interprets what goes down, there are many interpretations. I encourage [students] to question, I think that's what's really important. I don't think the Quebec history program wants teachers or students to question the course, but I wouldn't be doing my job if I didn't ask kids to be critical thinkers. And that includes questioning me […].

This statement again acknowledges the difference between the past and history, and the importance of teaching students to be critical towards the production of historical knowledge and history's different uses, even including her own uses of it as well. In highlighting that history can be interpreted for political and ideological reasons, she definitely takes a stand but seems to stop there and not go further. When looking at her feedback as a whole, it is as if she is helping her students to ask questions so that they remove layers of complexity and that they arrive at some neutral understanding of history that is there but is hidden. Moreover, she does not provide any information regarding the ability to be self-reflexive in her own thinking and construction of knowledge, and how this affects her teaching and her students. This turns out to be the case even despite the critical edge in her teaching where she asks her students to be critical of her. In standing outside and looking in, she seems to be apolitical in her approach, albeit with a critical inclination. It is as if she observes and acknowledges the uses of history in society, thereby making it political, but does not extend that to her own thinking and practice. On this point, she is different from the younger teacher mentioned above.

When combined, these interviews provide for a complex topic when discussing teachers' rapport with the construction and teaching of history. While all five teachers more or less distinguish the past from history in the interviews, not all of them identify this distinction as important (cf *reconstructionist*) or see that difference as bridgeable (cf *constructionist* and *deconstructionist* history: Jenkins & Munslow eds., 2004; Parkes, 2009; McCrum, 2013; Elmersjö et al., 2017) and perhaps do not even see it as their duty to overcome it. To this point, it is only the youngest teacher who is self-reflexive about her own construction and use of history, clearly situating herself as an actor who has the agency to question and expose the processes involved in transforming the past into something that is tangible. These interviews also highlight an important difference between recognising a difference between the past and history and its teaching as a political act in making meaningful sense of the past. It is clearly not enough to simply distinguish between teachers who differentiate between the past and history in this regard as we did in the prior quantitative section. Because of the many epistemological layers hidden within the group of teachers who make this distinction what is needed is to dig deeper into their thinking processes regarding where and how they position themselves when faced with transmitting historical information to their students. Distilling the political aspects of teaching seems to be a very important part of examining teachers' degree of reflexivity in terms of what their teaching of history *does* to their students.

If teachers acknowledge history's political nature, the chances of adopting a form of reflexivity regarding their teaching may increase, thereby enabling them to make sense of the subjectivity involved in the construction of historical knowledge. The three interviewees quoted in this article tend to fall on a spectrum of reflexivity directly related to their acknowledgement of the political act of teaching history. Of interest, their position on this spectrum tends to correlate with their age, which is moreover supported by the findings from our questionnaire, which also show a difference in criticality related to age, with a larger number of younger teachers being categorised as critical. The fact that the youngest teacher from our interviews is more critical in differentiating the past from history might then not be a coincidence.

Conclusions

In bringing the results from the questionnaire and what we learned from the interviews together it is possible to tentatively describe and theorise two simplified ideal typical teachers: (1) a young teacher, inspired by post-structural thought, critical of the idea of a straightforward relationship between the past and history, who sees history teaching as a political act, and who is self-reflexive in the process, and (2) an older teacher, more positivist in approach, believing that historical knowledge corresponds directly to the past itself, who is more inclined to teach the past "as it was" and who does not see its teaching as a political act, and thus is not as self-reflexive in his thinking and practice. These ideal types have some connections to two of Ronald W. Evans' (1989) five typologies of teachers' conceptions of history: the relativist/reformer and the storyteller. While there may be some similarities, Evans does not really engage with the political dimension of history teaching that we propose, relating more to pedagogical orientation, and none of his typologies relate to epistemology the way our ideal types try to suggest.

However, it is also important to remember that most history teachers from the survey seem to have an inconsistent view of epistemological matters, probably lacking the language needed to convey how they categorise and view the nature of historical knowledge. Most of these teachers seem to "wobble" between different positions, perhaps depending on the circumstances they face regarding their students or the historical events they are teaching; a kind of situational approach to epistemological matters and epistemic cognition, filtered through what the teachers think of as possible teaching strategies in their classroom. As most of them do not fit into the ideal types mentioned above, we have obviously only come a short way in mapping the ways history teachers think about these matters. However, we posit that teachers might be struggling with the subjective nature of the historical information they are responsible for teaching. As such they are "wobbling" between objectivist and critical approaches to distinguishing the past from history, and are perhaps, by extension, not reflexive in their thinking towards the production and transmission of historical knowledge. This, however, does require more scholarly attention.

Based on this, we can assume that there exists a spectrum of teachers, of all ages, who are more or less "critical" or more or less "objectivist", with a large in-between who are trying to account for history's subjectiveness with regard to the meanings that emerge from the past. Those, we believe, who have come to terms with this and are consciously political are in all probability those who are also self-reflexive in their practice. The results of our study, which we will pursue further, clearly indicate some sort of connection between criticality and reflexiveness, especially when teachers are aware of history's subjectiveness and the need to situate themselves in that regard. Having this reflexivity probably makes it easier to cope with the ambiguity of history curricula, and the multi-perspectivity that is advocated there.

To dig deeper into this and to better examine the different ways in which teachers' rapport with subjectivity makes them political in their teaching would require looking at the impact of their sense-making on the various positionalities they adopt in that regard. As humans' individual production of historical knowledge and its uses in our sense-making are cultural in nature, one way of deciphering teachers' degree of self-reflexivity is by examining the history-as-interpretive-filters they use for negotiating where they stand when faced with transmitting officially sanctioned historical knowledge (Zanazanian, 2019). In following Zanazanian's comprehensive

methodology, such an analysis could provide deeper insight into the cultural cognitive frames that teachers use in their position-taking, as it could also indicate, in the enactment of these templates, the extent to which they are political/apolitical in their thinking and teaching. Examining the workings of teachers' history-as-interpretive-filters in their sense-making can moreover provide insight into how to move them from objectivist and subjectivist stances, to one where they are self-reflexive and open to multi-perspectivity.

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Endnotes

[1] 1,000 history teachers in upper secondary schools were randomly selected from the SCB database of all teachers in Sweden. 375 responded.

[2] Because it is difficult to convey the issue of intrinsic meaning, perhaps especially when translated into Swedish, the word "*inre*" (which could be translated to "inner" or "innate") was added to the statement "The past has a meaning that we can hope to discover" ("*Det förflutna har en inre mening som det är möjligt för oss att finna*"). In French, the statement reads: "*Le passé a un sens que l'on peut espérer découvrir*". It is therefore possible, and even probable, that the teachers who answered the French version of the questionnaire were more inclined to interpret the statement to mean that it is possible for us to extract *any* meaning from the past, while the statement in Swedish explicitly mentioned intrinsic meaning in and of itself. This issue goes to show how difficult it is to overcome language barriers in research on epistemological issues.

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The interplay between historical thinking and epistemological beliefs: A case study with history teachers in Flanders

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ABSTRACT

History teachers' epistemological beliefs are considered to be greatly influential on their instructional practice and a necessary requirement to foster their students' historical thinking skills. In examining this relationship, two issues arise. First, adequately capturing teachers' epistemological beliefs remains a challenge as existing instruments appear not to be always valid and reliable. Some researchers suggest to distinguish between formal and practical epistemologies, which requires different measuring instruments. Second, it remains unclear how teachers' epistemological beliefs influence their teaching practice as several studies found there is no straightforward relationship due to the influence of other beliefs. At the same time, the role of teachers' own understanding of historical thinking in fostering this thinking among their students has not been extensively studied.

Through a qualitative research with 21 history teachers, this study examines the relationship between teachers' formal and practical epistemologies, their understanding of historical thinking and their instructional practice. It thereby reflects on methodological issues related to mapping teachers' epistemological beliefs.

Data analysis shows that teachers' epistemological beliefs remain difficult to capture, due to inconsistencies in and between measuring instruments. It could be concluded, nevertheless, that, while most teachers acknowledge the interpretive and constructed nature of history, they generally do not include this in their own descriptions of historical thinking. The research supports the idea that nuanced epistemological beliefs are required for interpretive history teaching, but are not a sufficient precondition. While other beliefs and contextual factors are indeed at play, it also appears necessary to support teachers' competence in designing materials to foster their students' historical thinking, including epistemological reflection. The article reflects on the implications for teaching training and professional development programs.

KEYWORDS

History education, epistemological beliefs, formal and practical epistemologies, instructional practice, historical thinking

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Introduction

Epistemological beliefs touch upon the core of every discipline and its functioning. They include beliefs about the nature of knowledge, the (un)certainty of knowledge, and the nature or processes of knowing, related to sources of knowledge and the reasoning and justification processes involved (Buehl & Alexander, 2001; Hofer & Pintrich, 1997).

Epistemological beliefs play an important role in the discipline of history. For a long time, a "realist" epistemological paradigm was the norm whereby historians believed it was possible to reconstruct the past exactly as it happened, by applying disciplinary methods. From the 1980s onwards, a shift occurred towards a perspectivist epistemology, paying more attention to the constructed and interpretive character of historical knowledge (Munslow, 1997). This perspectivist approach also became dominant in history education, which is particularly manifest in the central position occupied by historical thinking in history education in many Western countries (Lévesque & Clark, 2018).

Historical thinking combines "knowing history" and "doing history" in order to generate a deep historical understanding. Knowing history refers to the acquisition of substantive knowledge of the past; doing history refers to procedural knowledge in history, to building an understanding of how historical knowledge is constructed (Havekes, Arno-Coppen, Luttenberg, & van Boxtel, 2012; van Drie & van Boxtel, 2008). Building on earlier and novel research on historical thinking in the United Kingdom (conducted by scholars such as Denis Shemilt, Peter Lee, Alaric Dickinson and Rosalyn Ashby) various models have been developed that further operationalize historical thinking. One influential model is that presented by Seixas and Morton (2013) who distinguish six historical thinking concepts describing "the way historians transform the past into history" (p. 3). Another model focuses on historical literacy (Wineburg, 2001). In a European context, influential models are those devised by van Boxtel and van Drie (2008) and the model developed by the German FUER group, which distinguishes between four historical competences (Körber & Meyer-Hamme, 2015). Although these models differ in their concrete operationalization of historical thinking, they are based on a common element, namely revealing the interpretive and constructed nature of history by giving students an insight into the methods of historians, through the use of sources and the application of (characteristic) historical methods of reasoning.

Historical thinking, however, constitutes an "unnatural act" (Wineburg, 2001), implying that teachers play a particularly important role in students' learning process in this respect. The fact that teachers themselves have nuanced epistemological beliefs, in line with a perspectivist approach to history, is considered a necessary condition to enable them to convey this to their students and enhance their students' historical thinking skills (Wansink, Akkerman, & Wubbels, 2016; Yilmaz, 2008).

Various models exist which capture teachers' (and students') epistemological beliefs, both on a general and discipline-specific level. A number of influential models are presented in Table 1.

TABLE 1: Generic and Domain-specific Epistemological Models
(adapted from Maggioni et al., 2009, p. 196)

	Generic models		Discipline-specific models		
	King & Kitchener, 2002	Kuhn, Cheney & Weinstock, 2000	Lee & Shemilt, 2003	Nitsche, 2016	Maggioni et al. 2004; Maggioni et al. 2009
Naive beliefs: the past is given, knowledge is fixed	Prereflective	Realist Absolutist	Pictures of the past Information	Positivism	Copier stance
Knowledge about the past is uncertain, accounts are subjective	Quasi-reflective	Multiplist	Testimony Scissors and paste	Skepticism	Borrower/ subjectivist stance
Nuanced beliefs: the past is constructed and interpretive, based on disciplinary tools	Reflective	Evaluativist	Evidence in isolation Evidence in context	Narrative constructi-vism	Criterialist stance

Table 1 shows that these models use different names to describe epistemological beliefs. In general, however, we can observe a distinction between naive and more sophisticated, nuanced beliefs. People holding naive beliefs consider knowledge as fixed and singular, and ignore the existence of multiple perspectives and interpretations. Another instantiation of naive beliefs is the consideration of historical knowledge being purely subjective, thereby reducing history to a mere opinion. Advanced, nuanced beliefs only occur when history is considered as interpretive and constructed, when it is accepted that knowledge is subject to change and that claims about the past can be assessed based on disciplinary criteria (Kuhn, Cheney, & Weinstock, 2000; Maggioni et al. 2009; Stoel, Logtenberg, Wansink, Huijgen, van Boxtel, & van Drie, 2017). They require a "coordination of the subjective and objective dimensions of knowing" (Kuhn et al., 2000, p. 311).

History teachers' epistemological beliefs are important in order to understand their instructional practice. It is therefore important to map them accurately. In this context, however, two difficulties arise. A first is related to measuring teachers' epistemological beliefs, a second to the relationship between epistemological beliefs and teachers' instructional practice.

Measuring history teachers' epistemological beliefs

A first difficulty is that it is complicated to map history teachers' epistemological beliefs. Maggioni, VanSledright, & Alexander (2009) developed an instrument based on a synthesis of existing (progression) models and literature on the development of historical thinking (Maggioni et al., 2009). The Beliefs about Learning and Teaching History Questionnaire was initially administered to elementary teachers and college history professors. An adapted questionnaire (the Beliefs about History Questionnaire, or BHQ) was developed to assess students' epistemological beliefs (Maggioni, 2010) and has become a widely used instrument (Stoel et al., 2017). Although this is a validated questionnaire, several researchers experienced difficulties in replicating the results, and/or in assigning teachers, and students, to one of the three stances (Stoel et al. 2017; Voet &

De Wever, 2019; VanSledright & Reddy, 2014). The items relating to the subjectivist stance, in particular, are problematic, because recognizing subjectivity can suggest both naive and nuanced beliefs (Stoel et al., 2017).

Therefore Stoel et al. (2017) tested an alternative questionnaire based among other things on items from the BHQ (Maggioni, 2010). They tested a simple distinction between naive and nuanced ideas, where items related to subjectivist beliefs would be divided between naive and nuanced ideas. Naive ideas were characterized among other things by statements referring to historical knowledge as fixed and singular, literally embedded in sources, or uncertain and personal. Nuanced ideas were related to statements describing historical knowledge as interpretive yet bound by disciplinary methods and criteria (Stoel et al., 2017). They conducted their research among students in the 12th grade, and also presented their statements to experts in the field of history. They were, however, unable to separate naive and nuanced subjectivist items; the factor analysis resulted in three subscales: on a naïve level, one subscale was labelled "nature of knowledge – objective" and "nature of knowing – naive", both related to objectivist beliefs. On a nuanced level, no distinction was found between beliefs about the nature of knowing and those about the nature of knowledge. Instead, nuanced beliefs were captured in one subscale, labelled "nature of knowing – nuanced". Agreement with this subscale meant respondents valued disciplinary "procedures to interpret sources and construct reliable claims" (Stoel et al., 2017, p. 131). For this reason, the subscale was relabelled "historical methodology". Students were sometimes found to agree both with this subscale and with the subscale "nature of knowing – naive", indicating a "procedural objectivist" stance in which students "value historical-thinking skills because they believe that these skills make it possible to separate true and false sources and could generate true and fixed knowledge" (Stoel et al., 2017, p. 131). Interestingly, the two subscales related to naive, objectivist beliefs were answered as one factor by experts, and were both strongly rejected. Hence, they hypothesize that an increased epistemological understanding might be characterized both by an acceptance of items related to the importance of historical methods and by the degree to which they reject the naive, objectivist subscales related to the nature of knowing and the nature of knowledge.

Given these methodological difficulties, some researchers have called for the development of different measuring instruments. According to Kuhn and Weinstock (2002), epistemic thinking should be understood as "theory-in-action" (p. 134): peoples' "tacit theories" about knowledge and knowing are activated when they are confronted with a specific claim, problem and sources of information. A distinction should hence be made between formal and practical epistemologies (Sandoval, 2005; Sinatra & Chinn, 2012). Formal epistemologies refer to general ideas about the "characteristics of knowledge and its justification in a particular field" (Sinatra & Chinn, 2012, p. 264), while practical epistemologies refer to epistemic practices that are activated, for instance, via inquiry activities. Formal and practical epistemologies are not necessarily aligned. Sinatra and Chinn (2012) remark that beliefs about knowledge in general may be inconsistent with epistemic practice. Within the domain of history, formal epistemologies might be accessed via questions gauging respondents' conceptualization of history as a discipline (e.g. Yilmaz, 2008). Practical epistemologies refer to the actual reasoning and thinking that is at play when someone is engaged in a discipline-specific task, for instance when confronted with a historiographical debate or conflicting sources. Accessing practical epistemologies hence requires instruments that provoke reasoning about concrete problem scenarios (Barzilai & Weinstock, 2015). Kuhn et al. (2000) developed a short paper and pencil assessment based on conflicting statements on various knowledge domains, which they stated corresponded well enough with results from an interview-based assessment to justify its use.

The use of contrasting statements as a measure of epistemic thinking among history teachers has not been broadly researched. Yet several scholars emphasize that this might be beneficial in overcoming the issue related to measuring history teachers' epistemological beliefs, as well as to the need for studies triangulating different instruments (Stoel et al., 2017; Voet & De Wever, 2019). Finding a reliable and valid paper and pencil assessment for measuring epistemological beliefs, however, remains a major challenge to date.

Assessing the relationship between teachers' epistemological beliefs and instructional practice

A second difficulty is that it is unclear exactly how teachers' epistemological beliefs influence their instructional practice. Some studies have found a relationship between epistemological beliefs and instructional practice. Yeager and Davis (1996), for instance, found teachers who perceive history as a construction to be more likely to favor heuristic approaches, such as analysis and interpretation, whereas teachers who regard history merely as an univocal account were more likely to use sources solely to extract information from. McCrum (2013) found teachers' recognition of the constructed nature of history to be associated with a more student-centered pedagogy and learning activities. However, several studies show that nuanced epistemological beliefs are not a sufficient condition for an instructional practice that pays attention to interpretive history teaching (e.g. Hartzler-Miller, 2001; VanSledright, 1996; Voet & De Wever).

Thus, there does not always appear to be a correspondence between history teachers' epistemological beliefs and their instructional practice. In this respect, Maggioni and Parkinson (2008) make mention of a "double epistemic standard" (p. 453) among teachers in different disciplines. While teachers might acknowledge the constructed and incomplete nature of disciplinary knowledge, they sometimes consider "school knowledge" (the knowledge students encounter in school) as fixed and complete. Hence, they adhere to different formal epistemologies when it comes to disciplinary and school knowledge. Wansink, Akkerman, Vermunt, Haenen, & Wubbels (2017) and McDiarmid (1994) found evidence for the existence of this double epistemic standard among students and prospective history teachers.

This incongruity highlights the importance of other factors that influence this relationship, and their connection in a belief system (Nespor, 1987; Pajares, 1992). Within history education, research has already been carried out into (prospective) teachers' beliefs about the goals of history, the teaching and learning of history and the influence of contextual factors such as the available time, teachers' access to didactic materials, curricular requirements and the presence of standardized tests (e.g. Barton & Levstik, 2004; 2003; Hicks et al., 2004; Husbands, 2011; Van Hover & Yeager, 2003; VanSledright & Limón, 2006; Voet & De Wever, 2019; 2016; Wansink et al., 2016). It shows that various beliefs and contextual factors interact with and influence instructional practice. Nitsche (2019) frames the relationship between theoretical and didactic beliefs about history and practice within a set of internal (e.g. beliefs about students) and external (e.g. curricular) factors.

One factor that is often ignored in these studies is teachers' own understanding of historical thinking. Since historical thinking is a broad and complex concept, it can be assumed that this understanding will vary. Research into teachers' conceptions of inquiry-based learning in history confirms this and suggests that these understandings influence instructional practice (Voet & De Wever, 2016). It therefore seems important to map teachers' understanding of historical thinking as well. To what extent, for instance, do teachers consider epistemological reflection as part of historical thinking, and how does this relate to their epistemological beliefs and instructional practice?

In this latter respect, an additional difficulty arises in adequately capturing teachers' instructional practice. Some small case-studies rely on extensive classroom observations (e.g. Hartzler-Miller, 2001; Martell, 2013; VanSledright, 1996), while others rely on teachers' beliefs about instruction (e.g. Voet & De Wever, 2016) or self-reported practices, gathered through interviews (i.e. McCrum, 2013) or Likert-type statements (i.e. Hicks et al., 2004; Voet & De Wever, 2019). While lesson observations are very time-consuming, self-reported practices only provide an indirect insight into teachers' practice. Voet and De Wever (2016) therefore recommend complementing interviews with lesson observations or an analysis of the learning materials actually used by teachers.

Aims of this study

This study examines teachers' epistemologies, their understanding of historical thinking and their instructional practice, thereby taking into account the issues discussed above. The guiding research questions are:

RQ1: What do teachers' formal and practical epistemologies look like and how do these relate to their understanding of historical thinking? This research question will also address methodological issues related to the measurement of teachers' epistemological beliefs.

RQ2: How are teachers' epistemological beliefs and understanding of historical thinking reflected in their instructional practice?

Research design and methodology

A qualitative study was set up with 21 history teachers teaching in the 11th-12th grade of secondary education. Data collection took place during March-June 2019. The call for participation was distributed through contacts of the teacher training and pedagogical counsellors, but did not mention the specific research topic, so as to avoid selection bias. The research was presented as an examination of history teachers' opinions and practices.

Research context

The study was conducted in Flanders, the northern part of Belgium. History education is part of the basic curriculum of general (2h/week) and technical (1h/week) secondary education. The standards, issued by the Flemish Ministry of Education, do not differ much between them. They assign teachers a lot of freedom: they do not impose specific content, yet only prescribe which time period should be studied in each stage (e.g. the 11-12th grade deal with the period ca. 1750-present) and require teachers to cover political, economic, social and cultural themes. Also, the government does not organize central examinations or exercise state control on history textbooks (Van Nieuwenhuyse, 2020).

The standards only set historical thinking implicitly as a goal: they do not conceptualize nor operationalize this notion. They try to connect to an academic, disciplinary approach of history yet in so doing bring a rather 'realist' approach to the fore, in which it is assumed that following disciplinary methods (rigorous source analysis) leads to the discovery of 'the' historical truth (Van Nieuwenhuyse, 2020). This is evident, for instance, in the fact that they emphasize the importance of critical source analysis, but do not offer concrete guidelines or didactic support on how to foster this, nor connect it to fostering epistemological reflection (Van Nieuwenhuyse et al., 2017).

The standards date from 2000. Since 2019, new ones are gradually being introduced in which historical thinking occupies center stage and in which a perspectivist approach is dominant. In order to teach history in the 11th-12th grade, both a teaching degree and a Master's degree in history is required. Hence, almost all participating history teachers are trained historians with a good understanding of history as a discipline and acquainted with historical research methods and historical thinking. Furthermore, in teacher training, professional development initiatives and professionally oriented journals, attention is paid to (different models of) historical thinking.

Participants

Twenty-one teachers participated in the research. Six of them worked in general education (2h history education a week), six in technical education (1h/week) and nine in both levels. General education primarily prepares students for higher education in universities or university colleges, whereas technical education prepares students for higher education in university colleges as well as for the labor market. Their teaching experience varied between one and 38 years. All teachers had a Master's degree in history as well as a teaching degree. One teacher also held a PhD in history.

TABLE 2: Descriptive Information on Respondents

Respondent	Gender (male/female)	Years of experience	Currently teaching in the following educational type (general/technical)
1.	M	25	Technical
2.	M	7	Both
3.	M	3	General
4.	F	22	General
5.	M	32	Both
6.	F	15	Both
7.	F	32	General
8.	M	2	General
9.	M	30	Technical
10.	F	5	Both
11.	F	39	General
12.	M	4	Both
13.	M	13	Technical
14.	M	30	Technical
15.	M	2	Technical
16.	M	8	Both
17.	M	1	Both
18.	M	17	Technical
19.	F	17	Both
20.	F	8	General
21.	F	25	Both

Data collection

Data on teachers' general and practical epistemologies, their understanding of historical thinking and their instructional practice were collected via a questionnaire and two semi-structured interviews, which had been pilot-tested beforehand and adjusted as necessary.

Teachers first completed an online questionnaire containing two open-ended questions to gauge teachers' understanding of historical thinking: "How would you describe historical thinking" and "List five strategies you use to foster students' historical thinking abilities". The questionnaire assessed teachers' formal epistemologies through statements derived from Stoel et al. (2017). Respondents assessed fifteen statements on a 6-point Likert scale from "strongly disagree" to "strongly agree". Statements included among others "It is not possible to write adequately about history when sources contradict each other" (naive) and "In history education it is important that you learn to support your reasoning with evidence" (nuanced). Considering that the statements assessed teachers' general ideas about knowledge (construction) in history, we considered them to be an adequate measure for their formal epistemologies. As these statements were initially aimed at students, some small adjustments were made. For instance, in the statement "When something is written in your history textbook, you can assume it is true", the phrase "your history textbook" was changed to "a history textbook".

In the first interview, respondents' answers from the questionnaire were discussed. Teachers were asked to elaborate on their answers to the open-ended questions. After discussing their own understanding of historical thinking, they were presented with a model which defined historical thinking as requiring "an understanding of both the past and historical practice". That model (see Appendix A) consisted of five components, based on a synthesis of existing models of historical thinking (Seixas & Morton, 2013; van Drie & van Boxtel, 2008; Wineburg, 2001). Respondents were asked to what extent this related to their own understanding of the concept and their

instructional practice (e.g. did they recognize the aspects of historical thinking presented in the model? Were any of them new to them?, etc.).

The first interview also gauged teachers' practical epistemologies. To this end, a scenario-based approach was developed using a case study with contrasting statements. The measurement instrument required teachers to reason about a concrete, discipline-specific task, thereby providing an insight into their practical epistemologies. The measure used contrasting statements based on Kuhn et al. (2000), but added a content-rich scenario with sufficient background information, following the suggestion and work of Barzilai and Weinstock (2015). The case presented two causes for the spread of agriculture across Europe ca. 6000 BC and presented respondents with the following statements: "Only one explanation can be correct" or "Both explanations can be correct". If they selected the latter they were offered a choice between two additional statements: "Both are equally correct" or "One can be more correct than the other". Respondents' answers were further discussed by asking them to explain their choice and by follow-up questions such as "How can you explain the fact that different scholars come to different conclusions?". If teachers' answers to the statements in the questionnaire contained discrepancies, this was also discussed in the interviews. Teachers with nuanced beliefs were expected to indicate that both explanations could be correct, but that one could be more correct than the other.

After the first interview, teachers were asked to provide concrete, self-developed teaching materials, drawn from their actual teaching practice which they used to promote their students' historical thinking skills. In so doing, we provided teachers the opportunity to present what they considered to be their 'best practices' in terms of historical thinking. Teachers were asked to present the material in the second interview and to explain their rationale and teaching purposes related to the material. Questions addressed aspects such as what learning goals (including historical thinking aspects) teachers hoped to achieve through these materials, what kind of student answers they expected, how often these kinds of materials were used and how the material related to their overall instructional practice. To ensure that we were able to go beyond mere self-reported practices, we applied our own analysis of the materials after the interview. An overview of the analytical concepts in relation to the data collection instruments is presented in appendix B.

Data analysis

Data from the Likert-type items assessing formal epistemologies were analyzed quantitatively. For each respondent a mean score was calculated for each of the three subscales. Data from the interviews as well as the teaching material were analyzed qualitatively, using a thematic analysis. Codes were created inductively, data-driven and deductively. A priori codes were created for the main research themes: understanding of historical thinking, epistemological beliefs and instructional practice. An initial coding scheme was created by the first and third author. The first author conducted an initial analysis of the data and created additional, data-driven codes. The codes were discussed and defined in deliberation with the second and third author. The revised coding scheme was then applied to the data by the first author, after which the analysis was reviewed and discussed with the second and third author, leading to consensual agreement.

For the research theme "epistemological beliefs", subcodes distinguished between formal and practical epistemologies. In line with the research by Stoel et al. (2017), we employed a simple distinction between naive and nuanced epistemological beliefs in the subcodes, for both the formal and practical epistemologies.

Subcodes were created for the research theme "understanding of historical thinking", to label various aspects of the concept in teachers' own descriptions. They included, among others, asking historical questions, historical modes of reasoning (e.g. causality, significance, agency, continuity and change) and source analysis. This coding was based on a synthesis of various historical thinking models (Seixas & Morton, 2013; van Drie & van Boxtel, 2008; Wineburg, 2001) as well as the validated historical thinking observation instrument of Gestsdóttir, van Boxtel and van Drie (2018).

For the theme "instructional practice", a first set of codes identified various aspects of historical thinking in the material. Codes included among others: source analysis, multiperspectivity, asking historical questions, analyzing historical representations. As regards source analysis, subcodes were used to analyze how sources were presented and questioned, indicating for instance whether sourcing, contextualization and/or corroboration were present (Wineburg, 2001), as well as reasoning with and/or about sources (Rouet, Britt, Mason, & Perfetti, 1996). A second set of codes labelled instances where opportunities to stimulate epistemological reflection were present, or were missed. If the material did address epistemological reflection, subcodes indicated whether this reflection stimulated either nuanced of naive beliefs. For instance, if a teacher designed materials aimed at critical source analysis, but questions in the materials were only aimed at extracting information from the source (i.e. only reasoning with sources), this was coded as naïve. When the questioning of sources fostered students' understanding of history as interpretation and construction, this was labelled as nuanced.

A within-case analysis was applied to create a profile for each respondent, describing their epistemological beliefs, understanding of historical thinking and instructional practice as well as their relationship. General patterns in the data were identified using a cross-case analysis (Miles, Huberman, & Saldaña, 2015).

Results

RQ1: What do teachers' formal and practical epistemologies look like and how does this relate to their understanding of historical thinking?

Formal epistemologies

Based on teachers' answers to the statements in the questionnaire, an average score (out of 6) was calculated for each of the three subscales. The results for each respondent are shown in Table 3.

A high score on the first two subscales (columns 1 and 2) indicates rather naive beliefs, both with regard to the nature of knowing and the nature of knowledge. A high score on the last subscale (column 3) indicates nuanced beliefs. Stoel et al. (2017) do not provide specific cut-off points indicating when a score can be considered high or low, which makes interpretation somewhat difficult. However, we can assume that a score above 3 indicates that a respondent is more likely to agree with the statements in a certain subscale and a score below 3 that the respondent tends to disagree.

The data in Table 3 show that, broadly speaking, all participants largely agreed with items from the subscale "historical methodology", which indicates nuanced beliefs. Items related to naive beliefs were generally rejected. When looking in more detail, however, two groups emerge. The first group consists of respondents who assigned a very pronounced score to the nuanced and naive subscales. These respondents strongly agreed with the statements related to nuanced beliefs and strongly rejected statements related to naive beliefs. This is the case with the majority of respondents. In a second, smaller, group the difference was less pronounced. These respondents also agreed with the statements indicating nuanced beliefs, but at the same time gave an above-average score to the statements related to naive beliefs (e.g. respondents 4, 6, 11 and 19).

A second observation is that, although all respondents generally agreed with statements related to nuanced beliefs, some deviated from this pattern for one or more statements. Where this was the case, these statements were discussed in the interview in order to ascertain the reasoning underlying the teachers' responses. This generally revealed two things.

TABLE 3: Respondents' Mean Scores on Subscales Assessing Formal Epistemologies

	Naive epistemological beliefs		Nuanced epistemological beliefs (advanced)
Respondent	Nature of knowing (naive)	Nature of knowledge (objective)	Nature of knowing – nuanced/historical methodology
1.	1.25	1.40	6.00
2.	1.75	1.80	5.17
3.	2.25	1.60	4.17
4.	3.25	3.00	4.33
5.	2.00	2.60	5.33
6.	3.75	3.00	4.67
7.	1.75	2.20	5.83
8.	1.50	2.20	5.33
9.	3.00	2.40	4.67
10.	2.75	3.00	4.67
11.	3.50	3.00	4.00
12.	2.25	1.00	5.67
13.	2.50	2.20	5.00
14.	2.50	3.00	5.00
15.	1.50	1.20	5.83
16.	2.00	2.00	5.33
17.	2.00	1.80	5.33
18.	1.25	2.20	5.33
19.	3.75	3.20	4.83
20.	2.50	2.20	5.33
21.	2.00	1.80	4.83

First, the discussion revealed that some teachers merely wanted to nuance the statement, or had understood it differently. Teacher 12 indicated that he "agreed" with the statement "If eyewitnesses disagree, you cannot discover what actually happened", which was striking considering that his answers otherwise very unambiguously suggested nuanced beliefs. However, he explained his answer by referring to a specific topic in ancient history, where the source material is sometimes so limited that it is indeed difficult to find out what happened. This teacher subsequently spontaneously linked this to the need to study the credibility of the authors and to weigh up the arguments, and thus, to the disciplinary methods of historians.

Second, further discussion of certain statements suggested that teachers applied a "didactic frame" when answering the statements, and kept their students and teaching practice in mind. Teacher 2 explained why he "rather disagreed" with the statement "A good history account discusses different views of the past". He stated: "I see this from my work as a history teacher. If I make it too complicated, I lose them (the students) completely and then they remember nothing of it". As a history teacher he therefore saw it as his task to consider "what is the most probable at that point in time and then to present it clearly as a univocal, structured account". A similar mechanism was at play in the reasoning of teacher 6. She "rather agreed" with the statement "You can't write well about the past when sources contradict each other", but clarified in the discussion that she found it especially difficult to teach about the past when sources contradict each other. She pointed to the level of difficulty for her students and the limited teaching time, which makes it difficult to paint a nuanced picture of the past.

On a methodological level, these examples show that caution is needed when interpreting the results of these kinds of statements, as they seem to measure more than epistemological beliefs.

First, this is because, when considering these statements, teachers allow other beliefs about the teaching and learning of history, as well as contextual factors, to influence their answer. The finding that, on an academic level, teachers are aware of the constructed nature of historical knowledge, but in their teaching prefer to adhere to a univocal and factual historical account, connects to Maggioni and Parkinson's (2008) notion of a double epistemic standard. Second, caution is needed because it remains unclear precisely how teachers interpret such statements. Although some respondents disagreed with items related to nuanced beliefs, it became clear in the discussion that they did actually hold nuanced beliefs.

To obtain a more accurate picture, therefore, it is important to complement these results with those of the case study involving contrasting statements.

Practical epistemologies

Practical epistemologies were mapped using a case study with contrasting statements. Two theories were presented about the spread of agriculture ca. 6000 BC. Teachers were asked whether both theories could be correct and, if so, whether one could be more correct than the other.

Teachers answered the contrasting statements in two different ways. One teacher indicated that both theories were equally correct. This answer indicates naive beliefs. All the other respondents replied, in line with nuanced epistemological beliefs, that both statements could be correct, but one could be more correct than the other. Thus, based on these answers, almost all respondents seemed to have nuanced epistemological beliefs. However, the discussion of the answers to the case study generated more ambiguous results. Based on the argumentation put forward by the respondents, two categories were distinguished.

A first category consisted of respondents whose explanation confirmed the result of the contrasting statements. These respondents provided an argumentation for their response which clearly pointed to nuanced epistemological beliefs. They directly or indirectly mentioned the constructed and interpretive character of history, as they explained the existence of different theories by referring to differences in the source material which was available or was examined, differences in the interpretation of the source material or in the background or positionality of the researchers. Moreover, these teachers emphasized the importance of argumentation and evidence that could help determine which theory might be more or less plausible.

A second category consisted of teachers whose explanation somewhat questioned the result of the contrasting statements, either because of a lack of good argumentation, or because the argumentation leaned towards rather naive beliefs. Teacher 14, for instance, initially started by saying that "Both could be right; however, these are actually two opposite theories, so I think it is one or the other". Nevertheless, he concluded that both theories could still be right, by theorizing about ways in which both phenomena could occur alongside each other. Rather than explaining why one theory could be more correct than the other, this respondent tried to reconcile both theories and thus somewhat contradicted himself. A similar reasoning was expressed by teacher 2. Other respondents emphasized the importance of historical methodology so strongly that they appeared to lean towards procedural objectivism (Stoel et al., 2017). For example, teacher 4 stated that both theories can be correct "until it has been definitively researched"; teacher 20, who initially did refer to the positionality of historians, subsequently stated that one theory could be more correct because "one method may be better executed (…): more neutral, objective and scientific". Based on the explanations provided by these teachers, it is questionable whether they do actually hold nuanced epistemological beliefs.

Table 4 shows for each respondent whether the answer to the contrasting statements was in line with nuanced or naive beliefs and whether this was confirmed by the explanations they provided for their answers.

Table 4: Respondents' Answers and Discussion of the Case Study Measuring Practical Epistemologies

	Formal epistemologies			Practical epistemologies	
Respondent	Nature of knowing (naive)	Nature of knowledge (objective)	Nature of knowing – nuanced/historical methodology	Case-study: contrasting statements	Does the discussion of the case-study confirm the result of the contrasting statements?
1.	1.25	1.40	6.00	Nuanced	Yes
2.	1.75	1.80	5.17	Nuanced	No
3.	2.25	1.60	4.17	Nuanced	Yes
4.	3.25	3.00	4.33	Nuanced	No
5.	2.00	2.60	5.33	Nuanced	No
6.	3.75	3.00	4.67	Nuanced	No
7.	1.75	2.20	5.83	Nuanced	No
8.	1.50	2.20	5.33	Nuanced	Yes
9.	3.00	2.40	4.67	Naive	Yes
10.	2.75	3.00	4.67	Nuanced	Yes
11.	3.50	3.00	4.00	Nuanced	No
12.	2.25	1.00	5.67	Nuanced	Yes
13.	2.50	2.20	5.00	Nuanced	Yes
14.	2.50	3.00	5.00	Nuanced	No
15.	1.50	1.20	5.83	Nuanced	Yes
16.	2.00	2.00	5.33	Nuanced	Yes
17.	2.00	1.80	5.33	Nuanced	Yes
18.	1.25	2.20	5.33	Nuanced	Yes
19.	3.75	3.20	4.83	Nuanced	No
20.	2.50	2.20	5.33	Nuanced	No
21.	2.00	1.80	4.83	Nuanced	Yes

Table 4 shows that almost half the respondents gave answers to the contrasting statements that were in line with nuanced beliefs, but were unable to substantiate this properly. It seems as if teachers knew on a general, abstract level that history is based on interpretation, but found it difficult to apply this to a concrete case. This only emerged, however, when they were asked to explain their answers. If we compare these results to those of the formal epistemologies, it appears that teachers who have difficulty providing an adequate explanation for their answer are also those who, in addition to a high score on the nuanced subscale, assigned relatively high(er) scores to the other scales (e.g. teachers 19 and 11), although exceptions occur (e.g. teacher 2).

This again raises methodological questions, because, based on these results, it seems that the contrasting statements are insufficient to identify variations in epistemological beliefs. Moreover, it is unclear to what extent practical epistemologies are actually applied when answering the contrasting statements, as teachers' answers seemed to be based primarily on general beliefs about knowledge of the past. The practical epistemologies mainly appeared to come into play when they were explaining their answers.

Teachers' understanding of historical thinking

Introducing students to the practice of historians, and consequently to the interpretive and constructed character of history, is an essential part of various models of historical thinking. The question then arises as to what extent teachers themselves see this as a part of historical thinking, and spontaneously include it in their own descriptions of the concept. Table 5 shows for each respondent whether their description of historical thinking included a reference to epistemological reflection.

Teachers' own descriptions of historical thinking in the questionnaire and in the interviews show that epistemological reflection was spontaneously mentioned by a minority of the respondents. For example, teacher 4 described historical thinking as "making students aware that (...) historians reconstruct the past based on sources and that these sources give "an image" of the past". Although most teachers, especially at a formal level, seemed to have nuanced epistemological beliefs, these were not strongly reflected in their descriptions of historical thinking. When epistemological reflection was mentioned, this was usually done by teachers who seemed, based on the statements and the case study, to have nuanced beliefs. A pronounced presence of nuanced epistemological beliefs therefore seems to be consistent with a more complete understanding of historical thinking.

Aspects of historical thinking which were mentioned by the majority of respondents were: working with sources, certain historical modes of reasoning and contextualization. Hence, teachers do actually refer to various aspects of introducing students to the disciplinary methods and in that way involve epistemological reflection in their understanding of historical thinking, albeit in an implicit way.

In order to gain a better understanding of teachers' ideas about historical thinking, respondents were confronted with an existing model and conceptualization of historical thinking, which included epistemological reflection. Teachers indicated that they generally recognized and agreed with this description of historical thinking, even when it was much broader than their own descriptions. This suggests that they have a fairly tacit understanding of the concept. The question therefore arises as to whether this permeates their instructional practice and whether they address epistemological reflection in that practice.

TABLE 5: Epistemological Reflection in Teachers' Understanding of Historical Thinking

	Formal epistemologies			Practical epistemologies		Understanding of historical thinking
Respondent	Nature of knowing (naive)	Nature of knowledge (objective)	Nature of knowing – nuanced/historical methodology	Case-study: contrasting statements	Does the discussion of the case-study confirm the result of the contrasting statements?	Constructed and interpretive nature of history mentioned as part of historical thinking?
1.	1.25	1.40	6.00	Nuanced	Yes	Yes
2.	1.75	1.80	5.17	Nuanced	No	No
3.	2.25	1.60	4.17	Nuanced	Yes	Yes
4.	3.25	3.00	4.33	Nuanced	No	Yes
5.	2.00	2.60	5.33	Nuanced	No	No
6.	3.75	3.00	4.67	Nuanced	No	No
7.	1.75	2.20	5.83	Nuanced	No	No
8.	1.50	2.20	5.33	Nuanced	Yes	Yes
9.	3.00	2.40	4.67	Naive	Yes	No
10.	2.75	3.00	4.67	Nuanced	Yes	Yes
11.	3.50	3.00	4.00	Nuanced	No	No
12.	2.25	1.00	5.67	Nuanced	Yes	Yes
13.	2.50	2.20	5.00	Nuanced	Yes	No
14.	2.50	3.00	5.00	Nuanced	No	No
15.	1.50	1.20	5.83	Nuanced	Yes	Yes
16.	2.00	2.00	5.33	Nuanced	Yes	No
17.	2.00	1.80	5.33	Nuanced	Yes	Yes
18.	1.25	2.20	5.33	Nuanced	Yes	No
19.	3.75	3.20	4.83	Nuanced	No	No
20.	2.50	2.20	5.33	Nuanced	No	No
21.	2.00	1.80	4.83	Nuanced	Yes	Yes

RQ2: How are teachers' epistemological beliefs and understanding of historical thinking reflected in their teaching practice?

Teachers' instructional practice

When asked for concrete self-developed teaching materials regarding historical thinking, teachers mostly presented individual or group assignments for students. A few teachers provided the entire syllabus which they had designed themselves and students used throughout the year. The materials presented were mainly designed to enhance students' skills in source analysis, although some focused on other aspects such as multiperspectivity, or deconstructing historical representations.

When analyzing the material in terms of whether and how historical thinking, including epistemological reflection, was addressed, three types could be distinguished. This is depicted in Table 6, which shows for each respondent whether the material supported epistemological reflection (yes/no) and if so, whether it reflected more naive or nuanced beliefs.

In the first type, the material presented a univocal and closed account of the past, leaving no room for interpretation and paying no attention to the way in which historical representations are created. Sources were for instance used only in an illustrative way, to exemplify the presented historical narrative. This kind of material therefore does not foster students' historical thinking skills and could possibly promote rather naive epistemological beliefs among students.

A second type (labelled as "yes-rather naïve") did pay attention to the disciplinary methods of historians, but reflected rather naive beliefs. These materials were designed by teachers specifically in order to introduce students to disciplinary methods, yet they did not manage to present them in an accurate way. They contained a discrepancy between teachers' (reported) goals and the actual material. Some materials, for example, were aimed at critical source work and urged students to answer a historical question based on sources. The questions related to the sources, however, only asked about the content of those sources. Critical reasoning about the sources, for instance in terms of their trustworthiness and representativeness, was not taken into account. This could implicitly give students the idea that sources are a direct reflection of the past and that historical research is limited to merely collecting and summarizing information obtained from sources. The role of interpretation and construction by historians was omitted in this type of material.

Even source work in which attention was paid to the trustworthiness of sources sometimes implicitly reflected naive epistemological beliefs, as it was assessed without reference to a concrete research question. The extent to which a source is trustworthy does not however lie within the source itself, but depends on the historical question at hand. In this regard, teachers sometimes used a fixed set of questions that students had to answer mechanically for each source. In other cases, source analysis was reduced to identifying objective (described as "facts") and subjective (described as "opinions") elements in sources, whereby subjectivity was equated with untrustworthiness. Students were also asked to assess the extent to which a historical representation, for example in a movie, was consistent with historical reality. "Subjective" sources were then compared to the "objective" work of historians, without referring to evolving historians' representations or the existence of historiographical debates. Although this type of source work was attentive to the subjective nature of sources and the role of historians, it still reflected rather naive beliefs as it reduced historians' disciplinary methods to the identification of objective elements in sources.

Moreover, material in this category paid little attention to the role of evidence and argumentation. In an assignment on multiperspectivity, in which students were introduced to multiple perspectives on the Israeli-Palestinian conflict, no reflection was encouraged on the quality of the perspectives. The extent to which the perspectives were based on evidence, and whether the arguments were equally strong in both cases, was not assessed. The material emphasized the interpretive and subjective dimensions of historiography, but without

acknowledging the role of historical methodology which allows historians to weigh the quality of different claims against each other.

A third type of material (labelled as "yes-nuanced") did support nuanced epistemological beliefs among students, and explicitly discussed the disciplinary methods of historians, for instance by means of a high-quality critical source analysis through which students answered a historical question. Sources were provided with sufficient contextual information to allow students to make a substantiated and well-reasoned judgement about their trustworthiness in relation to the research question. Other material in this category introduced students to different views on a historical phenomenon and then, based on an assessment of the sources, asked them to make their own, substantiated claim regarding the topic. For example, teacher 12 presented an assignment in which students weighed the arguments of one historian regarding the responsibility of Christianity for the destruction of classical culture. Based on a critical examination of this historian's evidence, students were encouraged to construct their own argument. This type of material introduced students to interpretation in historiography and to the way in which historians construct historical representations, while at the same time familiarizing them with procedures and methods designed to weigh various claims against each other. This material hence contributed to the development of nuanced epistemological thinking.

TABLE 6: Epistemological Reflection in Teachers' Instructional Practice

	Formal epistemologies			Practical epistemologies		Understanding of historical thinking	Instructional practice
Respondent	Nature of knowing (naive)	Nature of knowledge (objective)	Nature of knowing – nuanced/historical methodology	Case-study: contrasting statements	Does the discussion of the case-study confirm the results of the contrasting statements?	Constructed and interpretive nature of history mentioned as part of historical thinking?	Does the instructional practice support epistemological reflection?
1.	1.25	1.40	6.00	Nuanced	Yes	Yes	Yes - nuanced
2.	1.75	1.80	5.17	Nuanced	No	No	Yes – rather naive
3.	2.25	1.60	4.17	Nuanced	Yes	Yes	Yes – rather naive
4.	3.25	3.00	4.33	Nuanced	No	Yes	Yes – rather naive
5.	2.00	2.60	5.33	Nuanced	No	No	No
6.	3.75	3.00	4.67	Nuanced	No	No	Yes – rather naive
7.	1.75	2.20	5.83	Nuanced	No	No	Yes – rather naive
8.	1.50	2.20	5.33	Nuanced	Yes	Yes	Yes - nuanced
9.	3.00	2.40	4.67	Naive	Yes	No	No
10.	2.75	3.00	4.67	Nuanced	Yes	Yes	Yes – rather naive
11.	3.50	3.00	4.00	Nuanced	No	No	Yes – rather naive
12.	2.25	1.00	5.67	Nuanced	Yes	Yes	Yes - nuanced
13.	2.50	2.20	5.00	Nuanced	Yes	No	Yes - nuanced
14.	2.50	3.00	5.00	Nuanced	No	No	No
15.	1.50	1.20	5.83	Nuanced	Yes	Yes	Yes – rather naive
16.	2.00	2.00	5.33	Nuanced	Yes	No	Yes – rather naive
17.	2.00	1.80	5.33	Nuanced	Yes	Yes	Yes - nuanced
18.	1.25	2.20	5.33	Nuanced	Yes	No	Yes – rather naive
19.	3.75	3.20	4.83	Nuanced	No	No	Yes – rather naive
20.	2.50	2.20	5.33	Nuanced	No	No	Yes – rather naive
21.	2.00	1.80	4.83	Nuanced	Yes	Yes	Yes - nuanced

The relationship between teachers' epistemological beliefs, understanding of historical thinking and instructional practice

Table 6 allows for an exploration of the manner in which respondents' epistemological beliefs and description of historical thinking relate to their instructional practice.

In a number of cases (e.g. 1, 8 and 12), a clear one-to-one relationship could be discerned between the teachers' epistemological beliefs and the way in which the teaching material presented history. They unambiguously espoused nuanced epistemological beliefs, both in the statements and the discussion of the case study. Moreover, they addressed epistemological

reflection in their own description of historical thinking and developed teaching materials which reflected nuanced epistemological beliefs. Conversely, teachers 6 and 9 held epistemological beliefs which could not unequivocally be qualified as nuanced. These teachers scored relatively high on the subscales related to naive and nuanced beliefs. Their results in the case study added to this ambiguity. This was also evident in their instructional practice, which either did not pay attention to epistemological reflection or leaned towards rather naive beliefs. However, for a large number of respondents, the relationship was not so straightforward. Some teachers (e.g. 15 and 18) did have nuanced epistemological beliefs, but did not transfer this into their instructional practice.

In general, it can be concluded from Table 6 that teachers who paid attention to the interpretive and constructed character of history in their instructional practice also held nuanced epistemological beliefs themselves. Conversely, having nuanced beliefs did not necessarily lead to an instructional practice that supported nuanced beliefs.

Two considerations are important in this regard. First, this finding indicates that other beliefs influence the relationship between epistemological beliefs and instructional practice. This was illustrated clearly in the case of teacher 12. Although he himself had nuanced beliefs and addressed this in his instructional practice, he spontaneously indicated that he only rarely did so. Within the amount of time available for history education, he preferred to prioritize other objectives in his teaching. Hence, both his beliefs about the purpose of history education and contextual factors had an influence. Second, methodological issues continue to play a role here. Both the Likert-type statements and the case study appear to be insufficiently capable of accurately capturing teachers' epistemological beliefs. Moreover, they do not always unequivocally point in the same direction.

Conclusion and discussion

This study sought to gain an insight into the relationship between teachers' formal and practical epistemologies, their understanding of historical thinking and their instructional practice. Using a questionnaire and interviews, 21 history teachers' epistemological beliefs on a general and practical level were analyzed, along with their understanding of historical thinking and their instructional practice. In so doing, we also sought to contribute to methodological debates about measuring epistemological beliefs.

Teachers' understanding of historical thinking, epistemological beliefs and instructional practice

As regards history teachers' epistemological beliefs, it is difficult to paint an unambiguous picture. Based on a combined analysis of their general and practical epistemologies, it was only possible to unambiguously identify nuanced or naive beliefs in about half the respondents. For the other half, nuanced beliefs seemed to be present only superficially. This was apparent from the absence of an accurate argumentation in the case study and in the combination of nuanced and naive beliefs. In some cases, this appeared to stem from a procedural objectivist stance (Stoel et al., 2017). For these teachers, naive and nuanced beliefs coexisted and they attached great importance to disciplinary procedures as a means of obtaining absolute knowledge about the past.

As regards teachers' understanding of historical thinking, it appears that most teachers were aware of history being a matter of interpretation and construction. Yet less than half of them spontaneously brought this up. The same applied to other dimensions of historical thinking, which suggests that teachers have only a cursory understanding of the concept. The absence of a clear operationalization of historical thinking in the Flemish history standards, can serve as an explanatory factor here.

This cursory understanding of historical thinking could also be observed in teachers' instructional practice. In the teaching materials we analyzed, teachers aimed to introduce

students to the disciplinary methods of historians, yet only a handful of teachers succeeded in developing materials that adequately reflected the interpretive and constructed nature of historical knowledge. The majority of teachers presented materials which reflected a rather naïve understanding of history by either over-emphasizing the subjective nature of historical knowledge or misrepresenting disciplinary methods. These superficial practices regarding historical thinking might be connected to teachers' rudimentary understanding of the concept, but might also be due to epistemological or other beliefs.

As to the relationship between epistemological beliefs and instructional practice, this study confirms the existence of a such a relationship (Van Hover & Yeager, 2004; Wansink et al., 2016; Yilmaz, 2008). More specifically, nuanced epistemological beliefs among teachers seem to be a necessary condition for a practice that includes interpretive history teaching, although they are not in themselves a sufficient condition. In line with the research by VanSledright (1996), Hartzler-Miller (2001), McDiarmid (1994) and Voet and De Wever (2016; 2019), this study found that teachers' nuanced epistemological beliefs were not always reflected in their instructional practice.

We propose three explanations for this. A first is that teachers sometimes held rather naive practical epistemologies, even though their general epistemologies were more nuanced. As we will argue later, teachers' practical epistemologies were more accurately captured in the discussion of the case study rather than via the contrasting statements themselves. For a number of teachers (e.g. teacher 2, 6, 7 and 11) these discussions revealed rather naive views, which could explain why their teaching materials did not fully support nuanced epistemological beliefs either.

For other teachers, this explanation does not suffice, as both their formal and practical epistemologies (based on the discussion) indicated nuanced beliefs, while their practice did not (e.g. teacher 3 and 10). A second explanation is therefore related to the situated nature of teachers' instructional practice. Several researchers have pointed out the importance of context when assessing epistemological beliefs, as specific conditions might generate different epistemic cognitions and aims (Chinn, Buckland, & Samarapungavan, 2011; Sandoval, 2014). It is for instance possible that a teacher's aim is not to introduce students to the interpretive nature of historical knowledge, but rather to transfer the 'existing' knowledge, because the teacher does not consider it feasible or desirable to translate their own nuanced epistemic beliefs into their teaching practice. This links to findings in other studies emphasizing the importance of contextual factors in teachers' instructional practice (e.g. Hicks, Doolittle, & Lee, 2004; VanSledright & Limón, 2006; Voet & De Wever, 2016).

Lastly, we should consider the possibility that teachers may encounter serious difficulties in designing materials that accurately reflect disciplinary methods and promote a nuanced epistemological understanding in students. Our analysis of the teaching materials showed that several teachers did try to introduce students to the methods of historians, but did not always succeed in developing materials that achieved this adequately. This might indicate that teachers' competence in designing such materials is not sufficiently developed. The fact that teachers cannot rely on a concrete conceptualization or didactic support from the history standards might exacerbate this difficulty.

These observations have implications for teacher training programs and professionalization initiatives. It is particularly important that these pay explicit attention to and support teachers in the development of teaching materials aimed at fostering epistemological reflection. Furthermore, a thorough understanding of the concept of historical thinking should be imparted, given teachers' limited and tacit understanding of the concept.

Methodological findings

On a methodological level, the combined analysis of teachers' formal and practical beliefs in this study revealed two difficulties. A first concerns the question of whether the measurement instruments are capable of accurately mapping teachers' epistemological beliefs. It appeared that the statements based on Stoel et al. (2017) were interpreted in various ways by teachers, and that

their answers were not always in line with their actual beliefs. Moreover, the instrument did not succeed in isolating teachers' epistemological beliefs: throughout the discussion of the statements, it became apparent that teachers considered them from a didactic perspective and took into account contextual factors when answering them. Teacher 2, for instance, saw it as his task to weigh up different perspectives on the past for himself, in order to subsequently present a univocal account to his students. The fact that teachers can have a double epistemic stance and thus have differing views on disciplinary and school knowledge has already been established (Maggioni & Parkinson, 2008), but the discussion of the statements shows that it is difficult to separate the two in teachers' minds and thoughts. This explains inconsistencies in answers and casts doubt on whether general statements are capable of generating a valid assessment of teachers' formal epistemological beliefs. This might also explain why scholars experience difficulties when using statements to capture these beliefs (e.g. Voet & De Wever, 2019).

The finding that teachers do not distinguish their own epistemological beliefs from the context of their teaching only became apparent after we discussed some of the statements with the respondents. We also applied this procedure to the instrument that assessed teachers' practical epistemologies. At first glance, this instrument seemed less sensitive in this regard, as we found no indication that teachers were including their beliefs about school knowledge and contextual factors in their response. However, the discussion of the contrasting statements uncovered a second methodological issue: the inconsistency between teachers' responses and their justification for them. It was only when responses were discussed that variations in teachers' epistemological beliefs emerged, sometimes revealing rather naive views. This suggests that the contrasting statements by themselves were insufficient to identify teachers' practical epistemologies. We suspect this to be the case because although the contrasting statements were connected to a concrete case, they might still primarily gauge formal epistemologies, since they are fairly generic and require little concrete application of epistemological beliefs. Only when teachers were asked to explain their answers did they start to reason about the specific case at hand, which seemingly activated practical epistemologies.

Methodological implications for future research

This study also provides suggestions for how to proceed in further research. First, this study highlighted the profound interconnectedness of teachers' epistemological beliefs with other beliefs and contextual factors. When trying to measure teachers' epistemological beliefs, researchers might therefore consider starting from the assumption that teachers will bring their didactic context into play, making it difficult to measure something as complex as epistemological views using general statements. Precisely because such statements fail to capture the mediating role of teaching contexts and other beliefs in the translation of teachers' beliefs into their practice, they appear to be poor predictors of that practice.

Second, rather than focusing on general epistemological beliefs, future research might benefit from concentrating more on teachers' practical epistemologies. When teachers were asked to reflect on an authentic discipline-specific case, differences in epistemological views emerged that remained hidden at a formal level and that appeared to correspond better with their teaching practice. However, more research is needed to develop a measurement instrument that can accurately capture these practical epistemologies, as the contrasting statements by themselves still seemed to primarily gauge formal epistemologies. An instrument that requires teachers to provide substantiated reasoning about a discipline-specific task would seem to be more suitable. The scenario-based Epistemic Thinking Assessment by Barzilai and Weinstock (2015), which combines a scenario-based approach for biology and history with Likert-type statements, might be interesting in this regard. Although the history-based scenario was less valid and reliable than the biology scenario, a further examination of this instrument in future research might constitute a valuable addition.

Third, this study showed that teachers' instructional practices revealed a variety of views on disciplinary knowledge. Some teachers presented history as a single, univocal narrative, while

others emphasized the subjective nature of historical knowledge or presented history as interpretive and constructed. Considering this variation, it might perhaps be fruitful for further qualitative research to work 'in reverse': rather than trying to understand teachers' practices via their beliefs, teachers' instructional practice might perhaps serve as a fruitful starting point for examining their epistemological beliefs and their understanding of historical thinking. It remains important, however, to simultaneously assess other beliefs and the role of contextual factors and related epistemic aims, so that their influence can be identified.

A final implication stems from the finding that a discrepancy sometimes occurs between teachers' intended objectives for their practice and the actual materials used. It therefore seems imperative that research on teachers' epistemological beliefs and practices does not rely solely on self-reported practices, but complements this with an analysis of actual teaching practices, for instance via lesson observations or an analysis of didactic materials.

Finally, two limitations should be mentioned. First, the sample consisted entirely of teachers from the last stage of secondary education. They all had a Master's degree, which can be expected to influence their epistemological beliefs (e.g. Voet & De Wever, 2019). Second, in most cases we only studied a fraction of teachers' instructional practice. Teachers were given the opportunity to make their own selection of 'best' materials, but how these materials relate to their teaching practice as a whole was not thoroughly examined.

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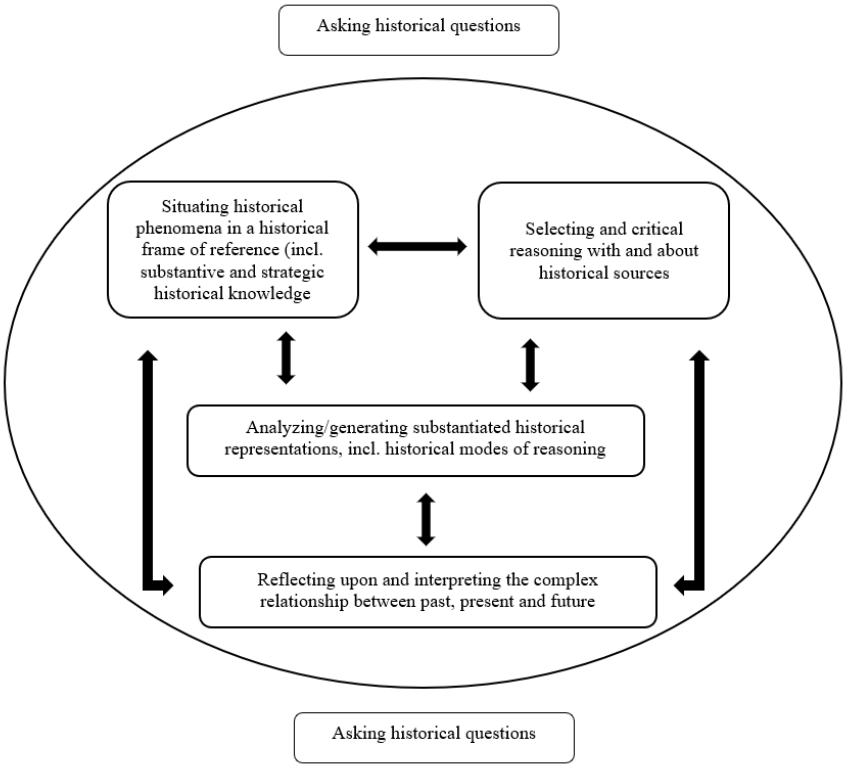
Appendix A: Conceptualization of historical thinking as used in this research

FIGURE A1: Conceptualization of Historical Thinking



Note: The conceptualization of historical thinking consists of five building blocks.

- Asking historical questions about the past, which constitutes a starting point for historical thinking.
- Situating historical phenomena, sources and representations in a broader historical frame of reference. This includes the acquisition of substantive and strategic historical knowledge.
- Selecting and critically analyzing historical sources, including reasoning with and about sources. This includes, among others, the ability to evaluate a source's usefulness, reliability, and representativeness in light of a specific historical question.
- Analyzing and/or formulating a substantiated answer to a historical question (i.e. constructing a historical representation). This building block includes the ability to deconstruct existing historical representations as well as to construct one. This is based on a critical source analysis and includes the application of typical historical modes of reasoning such as: cause and consequence (incl. contingency); continuity and change, historical contextualization, historical empathy, multiperspectivity, the attribution of agency, drawing historical analogies, deconstructing collective memory, deconstructing narratives and constructing open and substantiated narratives.
- Critically reflecting on and interpreting the complex relationship between past, present and future. This explicitly includes the need for epistemological reflection and requires students to understand the interpretive and constructed nature of historical knowledge and the importance of one's positionality.

Reference: Van Nieuwenhuyse (2020, pp. 373-379).

Appendix B: Overview of analytical concepts in relation to the data collection instruments

TABLE A1: Overview of Analytical Concepts in Relation to the Data Collection Instruments

Theoretical concepts	**Analytical categories (codes)**	**Data collection instruments**		
		Questionnaire	**1st semi-structured interview**	**2nd semi-structured interview**
Teachers' understanding of historical thinking *Which aspects of historical thinking do teachers mention in their own conceptualization?*	Among others: Historical questions Historical modes of reasoning _agency _multiperspectivity _causality _ … Epistemological reflection	Open-ended questions: - Teachers' own definition of historical thinking - Strategies to foster it among students	Discussion of answers to questionnaire Discussion of model of historical thinking	
Formal epistemology *What are teachers' general beliefs about the characteristics of knowledge and its justification in history?*	Formal EB _naive _nuanced	Likert-type statements (based on Stoel et al., 2017)	Discussion of inconsistencies within statements gauging formal epistemology	
Practical epistemology *What kind of epistemic reasoning and thinking do teachers display when confronted with a discipline-specific task?*	Practical EB _naive _nuanced		Case-study on a historiographical debate with contrasting statements and discussion	
Instructional practice regarding historical thinking *Which aspects of historical thinking are addressed? How are disciplinary practices and knowledge presented in teachers' instructional practice aimed at fostering historical thinking?*	Among others: Historical modes of reasoning _agency _multiperspectivity _causality _ … Source work _reasoning with _reasoning about _… Epistemological reflection _naive _nuanced			Analysis and discussion of concrete teaching materials regarding historical thinking, provided by respondent.