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History teachers' conceptions of inquiry-based learning, beliefs about the nature of history, and their relation to the classroom context.

ABSTRACT

The present study provides a comprehensive picture of history teachers' conceptions of inquiry-based learning (IBL), based on interviews with 22 secondary school teachers. The results indicate that, although most teachers' beliefs about the nature of history were conducive to teaching historical reasoning, their conceptions of IBL often remained limited to critically evaluating information, instead of using the available information to conduct inquiries into the past. Furthermore, teachers' conceptions of IBL appeared to be strongly connected to the context in which they worked. Based on these findings, several implications for supporting history teachers' adoption of IBL are discussed.

1. INTRODUCTION

School history's purpose and content have long been subject to heavy debate. In the U.S., Evans (2004) described the subject's long succession of curriculum reforms as a clash between different pedagogical and ideological movements. The extent to which each of them could bring their ideas to bear, appeared to depend mainly on the social and political climate: whereas a move towards traditional curricula was often observed during times that could be labeled as more conservative, more liberal times appeared to create an environment that was instead favorable to inquiry- or issue-based curricula (Evans, 2006). The situation seems to be similar in European countries, such as England, Germany and the Netherlands, where a study of curriculum developments led Wilschut (2010) to conclude that, apart from pedagogical considerations, the course of history teaching is often directed by politics and society.

In contrast to the often divided and fluctuating public opinion, research on history teaching agrees that, for students to develop a deep understanding of the subject, history lessons must strike a balance between *knowing and doing history* (Havekes, Arno-Coppen, Luttenberg, & van Boxtel, 2012). In addition to cultivating and building onto students' frameworks of the past, teachers are called on to involve their students in disciplinary thinking and to improve their understanding of how historical knowledge is constructed (Lee & Ashby, 2000). Central to this approach is a premise that knowledge in history is something that needs to be grounded (Haydn, 2011), with proponents arguing that a basic

understanding of the way history works is necessary to make sense of what teachers, historians or others might say about the past (Lee, 2005).

According to Ashby (2005), the concept of evidence is fundamental to an understanding of history, as it supports the ability to make claims based on information sources about the past. More specifically, it can be argued that the key to historical understanding lies in grasping the discipline's interpretative nature. In history, the meaning of sources can vary depending on the questions that are asked, and the ideas that one brings to the investigation (Monte-Sano, 2011b). Yet, this does not mean that sources are investigated haphazardly, as historians have been found to use a number of heuristics, such as situating information within the historical context in which it was produced (see also Wineburg, 1991). Accounts of the past are then constructed by carefully weighing different arguments and interpretations against each other (Kuhn, 1991).

Efforts to develop students' understanding of these ideas have underlined the importance of *inquiry-based learning* (IBL) activities (e.g. Bain, 2005; Barton & Levstik, 2011; Monte-Sano, 2011a), which require students to form their own conclusions about the past, based on an analysis of sources (Levy, Thomas, Drago, & Rex, 2013). Next to providing opportunities to build deep knowledge of the content (Wiley & Voss, 1999), such activities enable teachers to involve students in disciplinary thinking and develop their ideas about the discipline (Hartzler-Miller, 2001). However, as Lee (2011) cautioned, this does not mean that students should be expected to do work at the same level of historians, but rather that they should acquire and learn to apply a conceptual understanding of how we know, explain, and give accounts of the past.

Although research in different countries has paid considerable attention to developing history teachers' pedagogical content knowledge (e.g. Husbands, 2011; Monte-Sano, 2011b; Seixas, 1998), it has frequently overlooked their conceptions of IBL. Furthermore, the findings presented in earlier work on this topic are generally inconsistent (see sections 2.1, 2.2, and 2.3). As such, more information is needed, especially as a review by Kagan (1992) suggests that "a teacher's beliefs tend to be associated with a congruent style of teaching that is often evident across different classes and grade levels" (p. 66). The present study therefore aims to uncover the status of IBL in history teachers' ideas about the subject, which can help to inform future research and educational practice at an international level.

2. RESEARCH ON HISTORY TEACHERS' BELIEFS

Teachers' beliefs have been described as a body of suppositions, commitments and ideologies (Calderhead, 1996), and have generally been regarded as distinct from knowledge due to their strong affective and evaluative nature (Pajares, 1992). More recently, however, it has been argued that, rather than existing separate from knowledge, beliefs constitute a

particular form of personal knowledge (Murphy, 2000). As teachers' experience in classrooms increases, their beliefs grow richer and more coherent, into a personal pedagogy or belief system (Kagan, 1992), which is generally resistant to change (Brousseau, Book, & Byers, 1988), and determines teachers' perception and behavior (Goodman, 1988). According to Nespor (1987), the reason why beliefs play such a major role in teachers' behavior, is that they are particularly well-suited for dealing with the ill-defined and complex problems that often characterize the context where teachers work.

Research indicates that teachers' thought and action are mainly driven by strong beliefs about what constitutes relevant content and how it should be taught (Gess-Newsome & Lederman, 1999). As such, beliefs about the subject matter of history are of prime importance for understanding teachers' instruction (Yilmaz, 2010). A broad distinction can be made between (1) *beliefs about the nature of history*, including propositions about knowledge and knowing within the field, and (2) *beliefs about teaching history*, or ideas about learning goals and effective instruction. (Kagan, 1992). Some studies have also investigated the (3) *interplay between these two types of beliefs* (e.g. Bouhon, 2009; Hartzler-Miller, 2001; McDiarmid, 1994). Furthermore, due to their socially constructed nature, teachers' beliefs are strongly intertwined with (4) *contextual influences*, such as those exerted by students, parents and the school (Fang, 1996). It is clear that each of these four research topics can contribute to an understanding of history teachers' conceptions of IBL. They provide the theoretical basis for the present study, and are further explored through a review of studies that were carried out in a variety of countries.

2.1. Beliefs about the nature of history.

Teachers' ideas about knowledge and knowing in history, also referred to as (domain-bound) epistemological beliefs (Muis, Bendixen, & Haerle, 2006), center around the roles of evidence and interpretation within the discipline (Yilmaz, 2010). In line with research on how epistemological beliefs influence reasoning (e.g. King & Kitchener, 1994; Kuhn, Cheney, & Weinstock, 2000), studies on beliefs about the nature of history have often adopted a developmental perspective, advancing from a right-or-wrong view to a view of knowledge as constructed and contextual, rather than regarding epistemological ideas as a system of independent beliefs (e.g. Schommer, 1990). According to Wilson and Wineburg (1993), the different perspectives that have been found overlap with distinct conceptualizations of history that academia has adopted over the past decades. For instance, Bouhon (2009) distinguished between positivist beliefs, emphasizing a neutral, distant and objective report of historical facts, and constructivist beliefs, which argue that facts are inevitably interpreted by historians, in the construction of a personal narrative of the past. Adding a third type of beliefs to the continuum, Maggioni, VanSledright and Reddy (2009) identify teachers' beliefs

as: (1) *objectivism*, maintaining that history has no need of interpretation, but must stick to the evidence; (2) *subjectivism*, which insists that all of history is an interpretation, and that there is no real evidence of the past; or (3) *criterialism*, proposing that history is an interpretation, but should nevertheless be grounded in evidence and arguments. Similarly, McCrum (2013) found that teachers held either reconstructionist, constructionist or postmodernist beliefs. Although the frameworks clearly overlap, findings across different countries have often been inconsistent. Whereas Bouhon (2009) noted that secondary school teachers carried both positivist and constructivist beliefs, Maggioni, VanSledright and Alexander (2009) reported that most of them agreed with criterialist statements, and disagreed with objectivist statements. In contrast, McCrum (2013) found that different types of beliefs were almost evenly spread across student teachers.

2.2. Beliefs about the teaching of history.

When it comes to teachers' beliefs about instruction, McCrum (2013) reported a broad distinction between teacher-centered beliefs, which emphasize the transmission of content knowledge, and pupil-centered beliefs, focusing on students' reasoning skills. Earlier, Evans (1994) had outlined 5 types of history teachers: the story teller and cosmic philosopher, respectively focusing on stories about the past and patterns or grand theories; the scientific historian and relativist, stressing inquiry to improve understanding of either competing interpretations of history or present day issues; and eclectic teachers, displaying the characteristic of two or more of the other categories. Similarly, Bouhon (2009) described three types of teacher beliefs: (1) *exposition-recital*, viewing instruction as an act of transmitting historical knowledge; (2) *discourse-discovery*, which focusses on knowledge acquisition and the training of critical thinking skills; and (3) *apprenticeship-research*, aimed at building historical consciousness and an understanding of historical research. Consistent with the previous section, findings across different educational systems are not always in agreement. According to McDiarmid (1994), student teachers equated good teachers to those that tell good stories. Virta (2001) also found that most student teachers were rather reluctant to consider student-centered learning as a real alternative for teaching history. In contrast, McCrum (2013) reported that about half of the student teachers participating in her study held student-centered beliefs. Likewise, Bouhon (2009) found that secondary school teachers were almost evenly distributed across the exposition-recital, discourse-discovery, and apprenticeship-research categories.

2.3. Interplay between these two types of beliefs.

Most of the previous research suggests that teachers' beliefs about the nature of the history are somehow connected to their beliefs about how the subject should be taught. For

example, the work of Husbands (2011) suggests that history teachers' instruction is in part determined by their overall conception of history as a discipline, which is in turn connected to their knowledge of content and historical concepts like evidence, change, and causality. More specifically, Bouhon (2009) found that positivist beliefs had a positive effect on instructional beliefs that emphasized the teaching of content knowledge, and a negative one on beliefs that centered around investigating the past within the classroom. Likewise, McCrum (2013) found that student teachers with modernist beliefs were more inclined to focus on knowledge acquisition. However, McDiarmid (1994) still found that, even when student teachers' beliefs about the nature of history had changed after taking a historiography course, their ideas about teaching the subject remained unchanged.

2.4. Contextual influences.

As the primary function of teachers' beliefs is to make sense of the context in which they work (Nespor, 1987), contextual factors, such as the complexities of classroom life, exert a powerful influence on teachers' beliefs (Fang, 1996). For instance, studies have indicated how both the school's history curriculum, as well as educational standards and central exams, often lead to a need to cover the content and thus limit teachers' actions (e.g. Hicks, 2005; Van Hover & Yeager, 2003; VanSledright, 1996). The available resources also seem to play a role, together with teachers' beliefs about students' abilities (Husbands, 2011). In this light, some have reported how beliefs that students are incapable of engaging in IBL were even able to override teachers' beliefs (Moisan, 2010; Van Hover & Yeager, 2003). Finally, these problems are often exacerbated by the limited amount of time that is generally available for teaching history (Haydn, 2011).

3. AIM OF THE PRESENT STUDY

Although researchers across different countries are becoming increasingly interested in history teachers' beliefs, there exists little research that has simultaneously considered each of these four topics when examining teachers' beliefs about history. The present study aims to provide a more comprehensive overview of teachers' conceptions of IBL in the classroom, by investigating teachers' epistemological and instructional beliefs, in relation to each other as well as to the teaching context. Thus, the main research questions are:

- What are teachers' beliefs about the nature of history?
- What are teachers' goals and views with regard to teaching history, and particularly, IBL?
- How are both types of teachers' beliefs related to one another?
- In what way are teachers' beliefs about IBL related to the context in which they work?

4. DESIGN AND METHOD

In the following section, the design and method of the study are explained more in detail. In addition, more information is given about the context of the research.

4.1. Recruitment.

This study was part of a larger research project in Flanders (Belgium) about secondary school history teachers' beliefs and competences related to IBL (see also Voet & De Wever, in press). Invitations to participate in the study were sent out to schools in the region of East-Flanders and then further distributed across other Flemish regions by pedagogical counselors, who were tasked with providing instructional support to history teachers. To avoid a selection bias, invitations did not mention IBL, and the study was presented as focusing on teachers' beliefs about history in general. Furthermore, only teachers with at least three years of experience in teaching history were allowed to participate, to ensure that each participant had had a number of opportunities to reflect on his or her beliefs in light of the reality of the classroom. As such, the study did not explore the beliefs of beginning teachers. Next to this, only teachers working in grade 4 (average student age: 15-16 years) were allowed to participate, as the attainment goals for grade 3 and 4 are the first in secondary school to put a strong focus on students' acquirement of historical reasoning skills (Flemish Government, 2014). The fact that each of the teachers taught student groups of a similar age made it also possible to compare the cases against each other. Registrations were closed after 12 days, when more than 20 teachers had responded to the call to participate. Prior to their participation, all teachers were asked to give their consent, after being informed that the collected data would be kept confidential. It was explained that the data would be used for research purposes only, and that results would be rendered anonymous for publication.

4.2. Participants.

In total, 22 teachers participated in the study. Their mean age was 43 years (SD: 11 years) and their mean experience in teaching history was 15 years (SD: 8 years). Eleven teachers were male, and eleven were female. Five teachers held a bachelor degree of a three-year teacher training program at university college, focused on learning to teach history and one or two other school subjects. This degree enabled them to teach in the lower and middle grades of secondary education (grade 1 to 4). Seventeen other teachers held a degree of a four-year master in history at university, introducing them to academic history. In addition, these teachers had obtained a certificate of a one-year teacher training, preparing them to teach in the middle and higher grades of secondary education (grade 3 to 6). One of these teachers had also achieved a PhD in history. The finding that most teachers had received

specific training for teaching history, is in line with the outcomes of a more recent large-scale study with secondary school history teachers in Flanders, as is the mean of teaching experience reported here (see also Voet & De Wever, 2017). Finally, all but two of the teachers taught history in different schools. Depending on the study track to which their school belonged, teachers instructed either one or two 50-minute school periods of history during each week of the school year. Within the context of the present study, tracks including two periods of history placed an emphasis on broad general education, whereas those offering one hour of history combined general with technical subjects (for more information on history education in Flanders, see also De Wever, Vandepitte, & Jadoulle, 2011).

4.3. Data collection.

Teachers' beliefs are generally examined indirectly, because teachers are often unaware of their beliefs and therefore may find it difficult to describe them (Kagan, 1992). Qualitative research methods, such as interviews, are commonly used to capture teachers' beliefs and appear to be particularly promising for capturing their richness (e.g. McCrum, 2013; Yilmaz, 2010). As such, a semi-structured interview was carried out with each of the participants. On average, the interviews lasted about 90 minutes. Teachers' beliefs about the nature of history were explored through questions drawn from debates within historiography, including: 'Is there a difference between a historical theory and an opinion?' and 'How can contrasting conclusions in historical research be explained?' Their beliefs about IBL in history were mapped through questions about learning goals and teaching activities, and in particular those related to developing a disciplinary understanding. Examples include: 'Are there similarities between school history and historical research?' and 'What should students know and be able to do?' Next to this, teachers were asked to describe which contextual factors supported or obstructed the implementation of IBL activities in the classroom. For the complete interview protocol, see Appendix A.

4.4. Analysis.

All interviews were recorded, transcribed and then analyzed using NVivo 10, following a content analysis approach (Neuendorf, 2002). Based on previous studies investigating history teachers' beliefs (e.g. Maggioni, VanSledright, & Reddy, 2009; Yilmaz, 2010), a theoretical framework was developed to code the data, including as its main categories: beliefs about the nature of history, beliefs about the teaching of history, and contextual influences (An overview of the coding scheme can be found in appendix B). Multiple re-readings of the transcripts resulted in a number of sub-codes (e.g. beliefs about the nature of history covered such sub-categories as: goals of historical research, general nature of

history, nature of knowledge, research methods and procedures, and criteria for evaluating knowledge). Units of meaning, which could consist of a word, sentence or even a whole paragraph expressing a single thought, were chosen as the unit of analysis. Following the advice of Miles and Huberman (1994) for interpreting large amounts of qualitative data, three matrices were compiled based on the final coding, to support interpretation of the contents of each code, as well as the relationship between codes. These matrices contained a summary of each teacher's (1) beliefs about the nature of history, (2) beliefs about the teaching of history, and (3) perceived contextual influences. By classifying the contents of these matrices (e.g. different positions regarding the scientific nature of history, the roles of evidence and interpretation, the importance of teaching knowledge versus research skills, the role of inquiry in the classroom), a profile was constructed for each teacher, positioning individual teacher cases on two axes: one included three types of epistemological beliefs (see Maggioni, VanSledright, & Reddy, 2009), whereas the other contained three types of instructional beliefs that surfaced during data analysis. "In some cases, however, teachers' statements throughout the interview contained traces of different types of beliefs. Although it was considered that teachers' conceptions might borrow from more than one of the types of beliefs that were specified, a dominant perspective generally stood out upon further analysis of the statements in question. Still, these teachers appeared to hold more moderate beliefs compared to others.

4.5. Validity and reliability.

In order to decrease the chance of teachers responding in a socially desirable way, the interviewer started each session by explaining that he was particularly interested in their personal beliefs about and approach towards the subject and, as such, that there were no right or wrong answers. Furthermore, the assurance that all data would be kept confidential helped to create a context in which teachers could talk freely about their ideas and actions, without fear of negative repercussions. During the analysis, inter-rater agreement was calculated to check the reliability of the results. Each of the teachers' transcripts was reviewed by another researcher, who independently assigned them a position on the two axes. Percent agreement between both analyses was 81.82% (18 out of 22 cases) for beliefs about the nature of history, and 90.91% (20 out of 22 cases) for beliefs about the teaching of history, and in both cases did not violate the 80% threshold as advocated by Riffe, Lacy and Fico (1998). The cases of which interpretations differed were usually those that held a number of statements hinting at different types of beliefs. In order to resolve disagreement, both parties presented their arguments for assigning teachers to a particular position (as there was a possibility that the other researcher might have overlooked relevant information), and then continued to discuss the interpretation of the data. Similar to the

original analysis, both researchers took into account the possibility that more than one type of beliefs might govern teachers' thinking, but agreed upon the presence of one dominant perspective after discussing each case.

5. RESULTS

In this section, the findings are presented in two parts, combining a quantitative with a qualitative approach to the data, in order to make their interpretation less subjective (Chi, 1997). The first part presents an overview of the findings across teacher cases, whereas the second part tries to further explain these findings by offering a detailed description of three illustrative teachers' cases.

5.1. Overview of teacher cases

In this first part of the result section, each of the four research questions are answered using findings across teachers' cases. By using the whole dataset, the goal is to provide a comprehensive overview of teachers' beliefs about the subject.

5.1.1. RQ1: Teachers' beliefs about the nature of history

When talking about the general nature of history, all teachers emphasized its scientific character, arguing that good history is both empirical and rigorous, which means that it should provide a detailed description of the past that is grounded in an analysis of historical information. There appeared to be some differences between teachers' exact beliefs about this scientific nature, as six teachers were convinced that history is as much a science as chemistry or physics, whereas sixteen others maintained that history is also somewhat of an art. Closer investigation revealed that these differences mainly depended on whether teachers emphasized either the following of a scientific approach or coping with uncertainty in their description of the discipline. For example, teacher 20 explained that: "It is a science, because you have to follow a number of strict historical methods. Through these historical methods, you reach conclusions of which you know up front that they are subjective.", while teacher 7, felt that: "It should be more of a science, but the sources are incomplete. It is not like the hard sciences. You cannot formulate a hypothesis that can be tested by everyone and yield the same results every time."

Of all teachers, three stood out because they gave explanations that differed significantly from current scholarly thinking on history. Teacher 1 solely referred to history's connection with hard sciences, proposing that: "It is a science and is increasingly becoming a science, because we use DNA-research, radiography for paintings...". In contrast, teacher 9 believed that history is a science because evolutions within the domain of science are also a part of history. To illustrate this, he argued that: "You can see a very interesting evolution in

ship-building, starting with unwieldy ships that couldn't transport much. And then they started to think, whether this is science or not... I think it is, to make a ship go faster, to increase its carrying capacity..." Finally, teacher 18 noted that: "Historians probably use libraries and archives.", but then had to admit that he knew very little about the way in which historians carried out their work.

Based on teachers' answers to the questions about historiography, it was possible to categorize their cases across three types of beliefs about the nature of history. Table 1 presents an overview of the findings. (1) A majority of 17 teachers were identified as *criterialists*, who believed that historians reconstruct the past through an interpretation of sources, by making personal judgments about the information. At the same time, criterialist teachers stressed that this interpretative work does not grant historians the freedom to spread whatever stories they want, but that the plausibility of a historical account should be evaluated using different criteria, such as the quality of the research methods, the value of the evidence and the soundness of arguments. Next to these basic criteria, some teachers also had their own ideas, like teacher 21, who stated that: "I also think it is particularly dangerous when a topic has been studied for years by only one person, because I believe that, on your own, you cannot do research as well as a team."

Table 1

Teachers' beliefs about the nature of history

Type	Characteristics	N teachers
<i>Criterialist</i>	Personal choice and judgment play an important role in conducting historical research and forming conclusions, but clear criteria exist to judge the plausibility of accounts.	17
<i>Objectivist</i>	Interpretation does or should not play a role in history, other than filling up gaps between sources. History is akin to a quest for the truth about the past.	3
<i>Subjectivist</i>	Historical accounts should be based on evidence, but it is not possible to say which explanation is more plausible, as this is ultimately a matter of opinion.	2

Interestingly, the five remaining teachers included the three teachers who provided rather distinct explanations for the scientific nature of history. (2) Three out of five (1, 3 and 18) were categorized as *objectivists*, who believed that interpretation should be reduced as much as possible when investigating the past, and generally referred to the discipline as a

quest for the historical truth. As such, these teachers generally attributed conflicting visions between historians to a lack of sources, mistakes, or hidden agendas. To give an example, teacher 3 said that: “It is okay to be creative in the way you present your research, but it has to be the truth. If you tell a story, you should tell people that it’s just that, a story.” (3) The remaining two teachers (9 and 18), were classified as *subjectivists*. They agreed that historians should start their work from evidence, but were at the same time convinced that history is ultimately a matter of opinion. In general, they claimed that it is impossible to know how things really went in the past, or argued that the truth has many layers. As teacher 8 put it: “It is better to look for the account that fits best with our own ideas. I think that is better. But the one more plausible than the other? I think that is a matter of personal feeling.”

5.1.2. RQ 2: Teachers’ beliefs about the teaching of history

When talking about their beliefs regarding history teaching in general, teachers commonly stressed the development of a historical consciousness, allowing students to situate phenomena in time and explain them. The majority of the teachers spontaneously expressed an aversion to learning a multitude of facts and data, and instead emphasized an understanding of history. As teacher 5 argued, “We had to know who Clovis was, and had to be able to sum up all Roman kings. They will forget it anyway, it is nonsense and has no use.” In the same sense, some also remarked how history education had gone through an evolution over the past years, and how they were increasingly expected to cut down on knowledge transferal, to make more room for the active development of understanding and skills.

Yet, teachers’ talk about the learning goals related to history suggested that ‘knowing history’ still dominated their thinking about the subject, as a large majority of the goals that were mentioned referred to learning about what had happened in the past. First of all, seventeen teachers argued that students should learn about the historical roots of today’s society to better understand the present. Illustrating this, teacher 13 said that: “For example, Colbertism, or protection of the inland economy under Louis XIV, is still seen today in the European Union.” In addition, thirteen teachers thought that history was part of a general education, and that students should learn the story about the past to become more familiar with their own culture. The third goal, which was mentioned by twelve teachers, did not refer to the content of history, but stressed the development of a critical attitude. As teacher 3 explained: “This is also a part of history education, because when students look up information about the past, they often accept it unquestioningly.” Citizenship education was a fourth goal, stated by eleven teachers, who believed that students should learn the history of their country, as a part of becoming an active citizen. For instance, teacher 8 believed

that: “You should know your country and its politics, economy and policy, to be able to participate. You could say that you do not care about it, but what are you doing here, then?” Seven teachers also noted that one of their main goals for teaching was to increase students’ interest in history. What was most remarkable, however, was that only three teachers talked about familiarizing students with the constructed nature of history, or the basics of historical research.

Table 2

Teachers’ conceptions of IBL in history

Type	Characteristics	N teachers
<i>Investigating</i>	IBL is about solving problems, by generating questions, analyzing information and forming arguments.	4
<i>Evaluating</i>	The goal of IBL is learning how to critically evaluate information, to determine which information is correct.	16
<i>Understanding</i>	IBL activities are reduced to processing and comprehending information that further explains the lesson topic.	2

Similar to teachers’ beliefs about the nature of history, three belief sets could be discerned among their conceptions of IBL in history. An overview of the findings is presented in Table 2. (1) In the minds of a small group of two teachers (1 and 17), IBL was reduced to reading and *understanding*. These teachers expected their students to be able to process additional information related to the lesson topic on their own, and saw IBL mainly as a means to increase students’ content knowledge. Teacher 1 argued that: “It is part of transferring the knowledge, that is how I use it. For example, I give them descriptions of the different stages of how bread is made, and then ask students to put them in the right order. That is often difficult for students today, so I let them look up the information. That is also a kind of inquiry.” (2) Sixteen teachers stressed that IBL should mainly focus on comparing and critically *evaluating*, so that students learn how to determine the trustworthiness of information sources. Curiously, they were not inclined to connect this to other aspects of historical research, such as formulating research questions and determine which information is valuable. Teacher 7 noted that: “We should not expect too much, but they should be able to criticize sources, pretty much basic skills. When a politician says that crime has risen, they should spontaneously ask which data he has used.” (3) Only four teachers expressed that IBL

should center around *investigating*, or learning to solve a problem by asking questions, analyzing information, and forming arguments. Teacher 14 explained that: “They should be able to conduct their own inquiries, meaning that they have to ask questions and find appropriate information sources, both historical and historiographical, although I will still point them in the right direction.”

5.1.3. RQ 3 and 4: The interplay between teachers’ beliefs and contextual influences

Figure 1 plots teachers’ beliefs about IBL against their beliefs about the nature of history. As can be seen in the graph, objectivist and subjectivist teachers, who were found to mainly focus on understanding or evaluating information, appeared to have more narrow conceptions of IBL compared to criterialist teachers, who emphasized either evaluating or investigating information. However, there were still considerable differences within each category. For instance, only a small number of criterialist teachers viewed IBL activities as full investigations, whereas most of these teachers mainly regarded it as the critical evaluation of evidence.

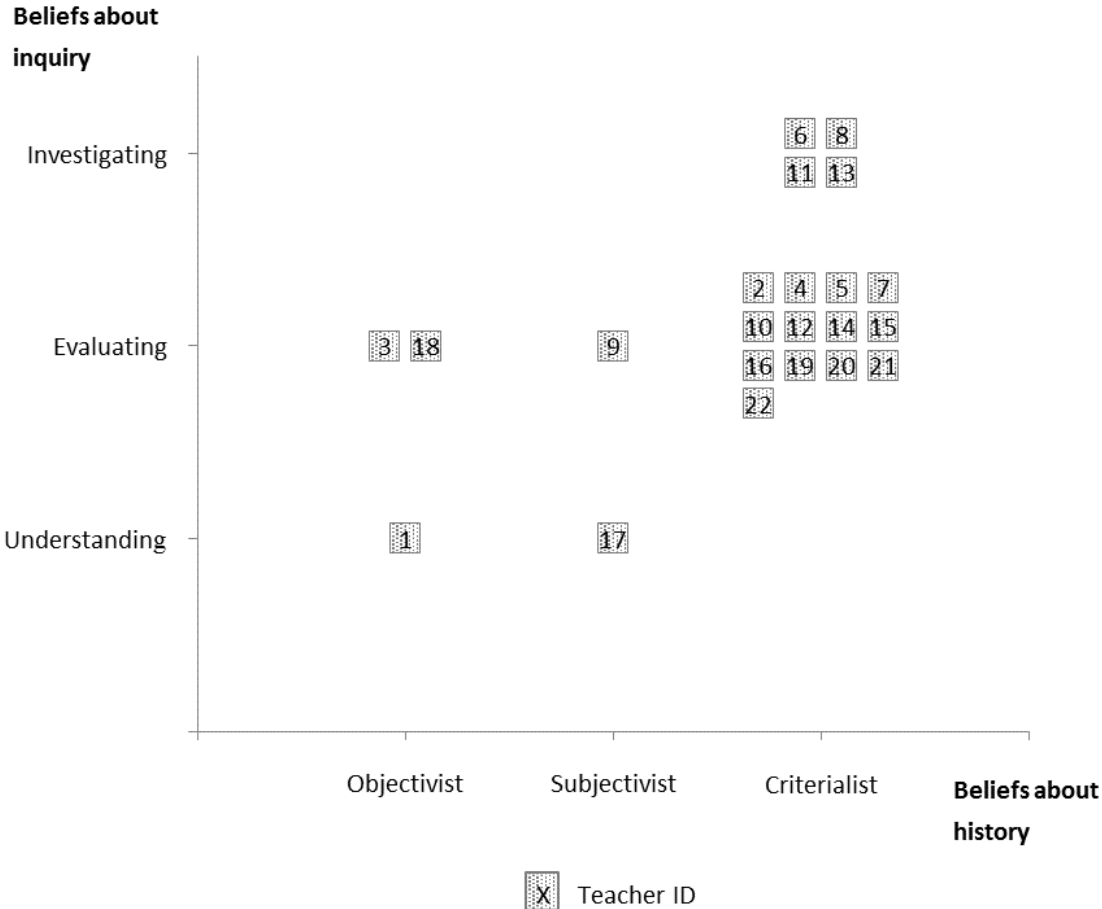


Figure 1. Teachers’ beliefs about the nature of history

appear to influence their conceptions of IBL

Figure 2 adds the context where teachers worked to the graph. Some teachers worked in general study tracks, which put an emphasis on general education and aim to prepare students for higher education. In these study tracks, the curriculum provided two 50-minute periods during each week to teach history. Several other teachers instructed history in technical study tracks, which combine general education with technical subjects, and prepare students to take on a specific profession (although students can also choose to enter higher education). In contrast to the other teachers, teachers in technical study tracks only received one 50-minute period to teach history during each week. Finally, a small number of teachers worked in both types of study tracks, having one 50-minute period for history in some of their classes, and two 50-minute periods in other classes.

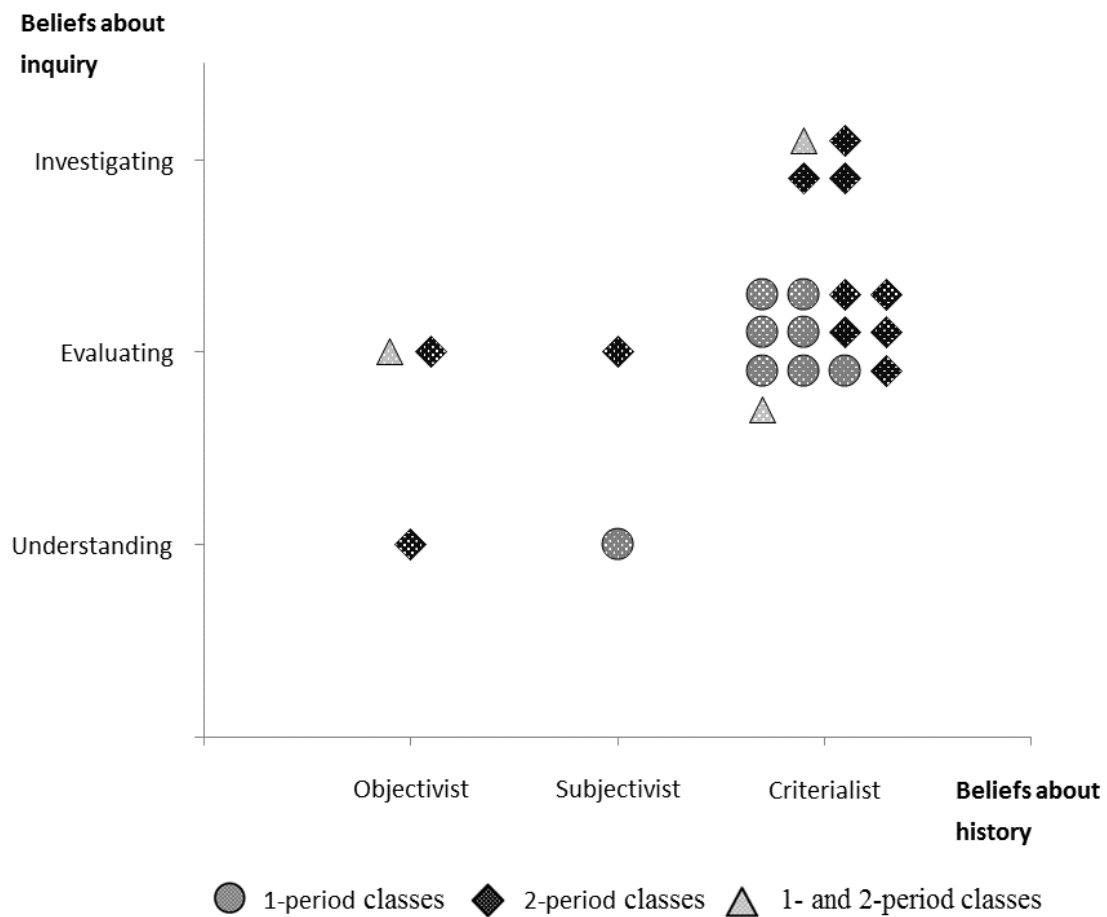


Figure 2. Contextual influences can also be linked to teachers' beliefs about IBL.

The graph suggests that this teaching context can also be linked to the differences between teachers, and particularly within the group of criterialist teachers. More specifically, criterialist teachers who were inclined to organize full investigations taught in two-period classrooms, whereas all criterialist teachers instructing history in one-period classrooms fell within the category of evaluating information. Thus, having more time available for teaching history seemed to stimulate these teachers to consider full historical inquiries. Next to the context where teachers worked, the analysis also took their degree and teaching experience into account, but these did not appear to be connected to the remaining differences.

During the interview, the teachers also mentioned a number of contextual factors that obstructed the implementation of IBL activities in their particular teaching context.

Similar to the findings related to teachers' ideas about learning goals, the first two – and most frequently cited – issues indicate that knowing history appeared to dominate teachers' thinking about the subject. In line with what Figure 2 suggests, the time available for teaching history was the largest problem, and was brought up by 18 teachers. These teachers often argued that setting students to work takes up a lot of teaching time. However, as teachers further talked about this issue, it became clear that a need to cover the content was the real issue for most of them. For example, teacher 15 stated that: "If you still have to cover another chapter, you need to go a little faster. Not by really going faster, of course, but by dropping student work." A second important issue that was mentioned by 17 teachers, was that students have insufficient procedural knowledge to conduct full inquiries, and generally deliver poor results. Trying to explain this, teacher 12 argued that: "They really find it difficult, because they are simply used to getting everything presented to them."

The next two issues suggested that a significant part of the teachers also found it difficult to implement full investigations in the classroom. A group of 12 teachers said that they had trouble with organizing IBL activities or lacked the necessary pedagogical knowledge to do so. As teacher 5 put it: "I know how to do it myself, but how to handle it with students is another matter." A fourth issue, also mentioned by 12 teachers, was related to finding 'good' information sources. In particular, these teachers maintained that it is not easy to find and adapt sources to students' level. Although textbooks generally contain a fair amount of sources, most teachers disapproved of using them. As teacher 21 expressed: "These fragments are so obvious that you can answer the accompanying questions at first glance. Whereas you should teach students that, sometimes, you have to read a lot before finding the answer somewhere in between."

Finally, 11 teachers also experienced difficulties due to students' limited knowledge about historical concepts and terminology, and 9 teachers believed that students were not keen on carrying out their own inquiries. Classroom infrastructure, and in particular the

availability of computers for looking up information, appeared to be only a minor issue, and was mentioned by no more than 3 teachers.

5.2. An in-depth look at three illustrative cases

In this second part of the results section, an in-depth description of three characteristic teacher cases is used to further clarify the findings of the previous section. These cases were selected because they were particularly illustrative of the distinct views that teachers held about the nature of history and IBL, as well as differences between these beliefs. By presenting these three cases, the aim is to provide further insight into variations among teachers' beliefs about history education, as well as how these come to exist.

5.2.1. Teacher 1: Objectivism - IBL as understanding

Teacher 1 was 50 years old and held a degree of master in history. Overall, he had about 16 years of experience in teaching secondary school history. Although he started out teaching in technical schools with one-period classrooms, he had spent most of his career teaching history to two-period classrooms in general study tracks.

When this teacher talked about history's general nature, he described it as an endless pursuit of the correct representation of the past. This quest for truth, he believed, was marked by continuous scientific progress, made possible by the discipline's use of increasingly sophisticated tools developed by hard science. In addition, teacher 1 maintained that: "A good historian is the one who is best able to present the truth, that is the most important. Those are the ones that make the news." He explained that historians should take care to discard their own ideas as much as possible, and although it was understandable that some of them would use innovative ideas to sell their work, he cautioned that they should at the very least inform their audience about what parts are their own interpretations. As such, he was convinced that, if they did their work right, historians would inevitably draw the same conclusions as the ones before them. Thus, conclusions could only change when new evidence presented itself.

Teacher 1's view of history as an accumulation of knowledge appeared to result in a firm belief that history education was about transferring this knowledge to students. As the teacher put it: "This may be very traditional, but to me, history is knowledge. You may agree or disagree, but this means that history education comes down to acquiring knowledge or a certain baggage." Although the focus lay on the transfer of content knowledge, students were not expected to remain passive in the classroom. The teacher explained that: "My history teaching is similar to MTV, full of short and powerful activities, with a lot of variation. I use group work, 5-minute movie fragments, lectures, but none of them longer than 10 minutes." Still, due to his preoccupation with content knowledge, the teacher paid little

attention to historical reasoning skills. He stated that the process of creating historical knowledge was only briefly covered during the first lesson, and regarded IBL activities mainly as a means to let students actively process the lesson content. Spending additional time on the investigation of historical information was out of the question, as the teacher argued that: "I have to cover the story from 1500 to 1815, so then I would have to cut a lot of the content." In addition, teacher 1 was convinced that students first had to learn the content before attempting to conduct inquiries, stating that previous attempts at IBL had always failed due to students' lack of content knowledge.

In short, the case of teacher 1 clarifies why objectivist teachers were generally less inclined to cover historical reasoning skills in their classroom (see Figure 1). Teacher 1 appeared to have little familiarity with the constructed nature of history, and, instead, regarded historical research as a process of knowledge accumulation that is driven by scientific progress. As a consequence, his ideas about history teaching focused solely on transferring the content. In line with the finding that the context also had an important impact on teachers' educational beliefs, the case of teacher 1 demonstrates how several factors further strengthened his beliefs about history teaching. The fact that time for teaching history was limited, gave teacher 1 the impression that it was a matter of choosing between theory and practice, and led him to the conclusion that the teacher's task is to make sure that students at least get the content. This belief was further reinforced by disappointing student results during the teacher's previous experiences with IBL, which had convinced him that students' success related to IBL was mainly determined by their content knowledge.

5.2.2. Teacher 9: Subjectivism – IBL as evaluating

Teacher 9 held a bachelor degree, which enabled him to teach the subjects of history, English, and economics. He had worked as a history teacher during the first five years of his teaching career, and, after a few years of teaching other subjects, had again been teaching history for the past five years. His school offered a number of general study tracks, meaning that each of his classes had two periods of history each week.

This teacher described a good historian as someone who creates an account of the past based on a comparison of numerous information sources, but did not add any criteria for identifying good historical research. Instead, he argued that, although historical accounts are based on sources providing information about the past, they are inevitably biased. As part of his explanation, he said that: "I just told my students about a historical fact, but, in reality, I gave it color through my choice of words, which could have put it in an either positive or negative light." To teacher 9, history was largely a matter of opinion. As such, determining the plausibility of a historical theory was, above all, a matter of personal belief and feeling.

Clarifying his reasoning, he stated that: “We cannot really know the past because we did not live in it. You can try to understand it, but you cannot really know it. I do not believe that is possible.”

His belief that history is largely matter of opinion, seemed one of the reasons why teacher 9 put a heavy emphasis on developing a critical understanding when he talked about the aims of history education. He maintained that: “The most important goal is that they learn to think critically about everything that is presented to them, instead of uncritically accepting things. Knowledge is important, but critical thinking skills are even more important. However, you need knowledge to be able to think critically.” As such, the teacher was in favor of an approach that combined storytelling with question-asking and assignments in which students had to critically examine information sources. The teacher explained that: “Sometimes we analyze an information source, but it depends on the lesson and on the available sources. If we are able to talk about a source from time to time, I think that is enough.” The teacher also felt that he did not have much time to let students examine information sources, as his colleagues expected him to cover the textbook by the end of the year. In some instances, he was also reluctant to do so, as he felt that most students did not know how to analyze a source, even when he presented them with a step-by-step plan.

Similar to the case of teacher 1, the case of teacher 9 can explain why subjectivist teachers do not pay full attention to historical reasoning skills in their classroom (see Figure 1). Teacher 9’s beliefs about history as making up one’s own opinion appeared to result in a focus on developing critical thinking skills and covering the content of history, as he thought that the latter was fundamental for being able to think critically. Apart from the evaluation of information sources, he paid little attention to other historical reasoning skills. The fact that he was unable to name a number of criteria for distinguishing good historical research further suggests that he was not completely familiar with the work of historians. As was the case with teacher 1, contextual influences, such as students’ difficulties with applying procedural knowledge during previous IBL activities, or the fact that teacher 9’s colleagues expected him to cover all of the content, may have been another reason why this teacher paid less attention to historical reasoning skills, apart from the evaluation of information.

5.2.3. Teacher 11: Criterialism - IBL as investigating

Teacher 11 was 41 years old, and had been teaching history for 16 years. She started her studies at university, but was unable to obtain a master degree. She then went to university college, and got a bachelor degree, preparing her for teaching history, English, and geography. Like teacher 1 and 9, she instructed history in two-period classrooms, in a school that provided general study tracks.

As teacher 11 talked about history, she stressed the importance of facts, but at the same time realized that historical accounts cannot be created with facts alone. As she put it: “The fact are black or white, and you cannot change them, but you always have to interpret them. Interpretation is inevitable and highly personal. However, I think that every interpretation should be grounded in good arguments, so that you are able to affirm your conclusions.” As such, she believed that there exist clear criteria for making a distinction between historical accounts. Above all, she believed that a historian must subject each information source to a number of critical questions, an approach that she referred to as the historical method. After she had finished explaining her ideas about history, she remarked that: “I often think about what history is to me, and how I can teach it to my students in a way that is interesting to them. That is something I think about every day.”

That teacher 11 appeared to spend a lot of time thinking about the subject, seemed to encourage her to center her teaching around historical reasoning skills. She stated that: “Although students should have a basic knowledge about what happened in the past, being able to recount these historical facts cannot be the end goal. They should be able to do something with them. They should be able to draw interpretations, to reach conclusions based on certain information sources.” Contrary to what might be expected, she also believed that lectures were still an important part of history, as her experiences had shown her that she could really captivate students with vivid narratives about the past. However, she clarified that lectures should never be limited to the content, stating that: “During my lectures, I try to demonstrate how students should do the work. For example, if you receive this source, then you need to do this or that.” Similar to the other teachers, teacher 11 also felt that the time for teaching history was scarce, but maintained that IBL is really something that teachers have to make time for, and that she did not feel obliged to cover every chapter in her textbook. In the same way, she noted that students sometimes have difficulties with certain aspects of inquiries, but then remarked that these often disappear with extra training or additional help from the teacher.

To conclude, the case of teacher 11 illustrates the finding that only some of the criterialist teachers were inclined to conduct full investigations in their classrooms (see Figure 1). The case demonstrates how teacher 11’s frequent reflection on the subject resulted in an emphasis on teaching historical reasoning skills. However, this did not make her lose sight of the story of the past, as she argued that more teacher-centered approaches, like storytelling, were still very important to history. As such, her thoughts about teaching history reflected a delicate balance between knowing and doing history. What was most remarkable, however, was that this teacher experienced the same negative contextual influences as the other teachers, but appeared to have found a way around them, and did not allow these barriers to deflect her from carrying out full investigations with her students.

6. DISCUSSION

The present study sought to explore teachers' conceptions of inquiry-based learning (IBL), through an investigation of (1) beliefs about the nature of history, (2) views regarding history education, and IBL in particular, (3) the interplay between these two types of beliefs, and (4) contextual influences. In this section, the findings are discussed and compared to earlier research on teachers' beliefs.

In line with previous work, it was found that teachers' beliefs about the nature of history could be categorized across three different types: objectivism, subjectivism and criterialism (see Maggioni, VanSledright, & Reddy, 2009). Most of the participating teachers appeared to hold criterialist beliefs, stressing that although historical accounts are based on an interpretation of evidence, there exist clear criteria to judge their plausibility. In contrast, only a few teachers exhibited objectivist or subjectivist beliefs, respectively emphasizing a neutral report of the facts, or an inability to judge accounts that are regarded as mere opinions. Within this smaller group, teachers' ideas about the general nature of history often deviated from current academic assumptions, suggesting that these teachers might not have been very familiar with scholarly work in history. These findings are important, as teachers can only teach students about disciplinary thinking if they themselves have a solid understanding of the nature of history (Martin & Monte-Sano, 2008). As such, it appears that most teachers' beliefs about the nature of history were conducive to an instructional approach that focusses on learning to reason with historical information. This conclusion is similar to the findings of Maggioni, VanSledright and Alexander (2009), but contrary those of other studies (e.g. McCrum, 2013). Possibly, this contrast might be explained by differences between teacher education programs, and, more specifically, the degree to which they focus on issues in historiography (Yilmaz, 2010).

When it comes to teachers' beliefs about instruction, the most common learning goals seem to indicate that most teachers' ideas about the subject were governed by a focus on content knowledge, even though many of them were in favor of a student-centered approach. Next to this, there were considerable differences between teachers' conceptions of IBL. It was possible to separate teachers' beliefs into three categories. For most teachers, IBL in history remained limited to a critical evaluation of information sources, in order to determine whether information was trustworthy or not. Only a few teachers considered doing full historical inquiries, and connected a critical evaluation of sources to a particular research question, and other historical reasoning skills, such as formulating arguments. For another small group, however, IBL was mainly another, more student-centered, way to help students process and understand the story of the past. In general, the latter group paid little attention to historical reasoning skills, or the constructed nature of history in general. To summarize, these results do not reflect a dominance of teacher-centered beliefs in history

teachers' thinking about the subject, in contrast to earlier research (e.g. McDiarmid, 1994; Virta, 2002). They are, however, similar to more recent findings suggesting that teachers are generally inclined to focus on the content of history, rather than the way in which this body of knowledge is constructed (Van Nieuwenhuysse, Wils, Clarebout, Draye, & Verschaffel, 2015). What is most worrisome, is that the present study indicates that most history teachers' conceptions of IBL misrepresent the practices of inquiry that lie at the core of the discipline. As such, engagement in IBL may give their students the false impression that historical reasoning is mainly a matter of looking up information, or mechanically assessing the reliability of sources.

Compared to previous research (e.g. Bouhon, 2009; McCrum, 2013), the results provide further evidence that teachers' beliefs about the nature of history are connected their beliefs about teaching. In particular, an in-depth look at three of the cases indicated how varying beliefs about the nature of history led to different teaching approaches, focusing on transferring knowledge about the past, developing critical thinking skills while relating the story of the past, or combining narratives and demonstrations with opportunities for training historical reasoning skills. At the same time, however, there also appears to be a certain disconnect between a significant group of teachers' beliefs about learning and teaching, and their own beliefs about the discipline. It is, for instance, peculiar that although most teachers held criterialist beliefs and described history as a scientific discipline, only a few of them mentioned learning goals that focused on the development of historical reasoning skills. As McDiarmid (1994) suggests, a possible explanation might be that teachers are, to some extent, prisoners of their own experiences during their time as students, which are generally dominated by observations of history lessons that were primarily content-oriented.

Furthermore, the results provide an indication of the power that contextual influences hold over teachers' beliefs about their subject. Part of the differences between teachers' conceptions of IBL could be linked to the study tracks in which they worked, next to their beliefs about the nature of history. In short, the results suggest that teachers in general study tracks, who taught history for two 50-minute periods each week, were more inclined to organize full historical inquiries, compared to teachers working in technical study tracks, where the curriculum provided only one 50-minute period for teaching history. This may be due to the limited amount of time that teachers in technical study tracks had to cope with, but may also have had something to do with differences between the student population in general and technical study tracks. Next to this, it appears that differences between teachers' conceptions of IBL could further be related to the extent to which each of them felt obstructed by a number of contextual factors, such as curriculum demands, students' abilities, or the availability of instructional materials. This seems all the more likely, as the case of teacher 11, who was in favor of conducting full classroom investigations, showed

that she experienced the same issues as the other teachers, but appeared to have found a way to cope with them.

Finally, a number of limitations remain with regard to the present study. The first one is that participants were not selected randomly, but that they were the first teachers to respond to the call for participation, and thus may have been particularly concerned with the teaching of their subject. It is possible that this study therefore presents the thoughts and ideas of a group of the most innovative history teachers, even though the results seem to indicate that this is not the case. The second, and most important limitation is that, next to the interviews, no other form of data collection was organized. Although previous studies about teachers' beliefs were able to reach viable conclusions based on interviews alone (McCrum, 2013; Yilmaz, 2010), it would be particularly interesting if future research could compare insights gained through interviews with observations of teachers' classroom behavior, or an analysis of the learning materials that teachers use within their classroom. This would, for example, allow researchers to check for the possibility of a social desirability bias occurring in teachers' answers to interview questions. Furthermore, as the present study is mainly explorative in nature, more large-scale research could help to validate these findings.

Nevertheless, the present study shows that teachers' conceptions of IBL are connected to their beliefs about the nature of history and the context in which they work. By taking an integrative approach to four research topics that have often been investigated separately, the study provides a more comprehensive framework of history teachers' conceptions of IBL, which can guide future research.

7. IMPLICATIONS AND FUTURE RESEARCH

The present study investigated history teachers' beliefs about IBL, while also considering general beliefs about the subject, as well as contextual influences. The results support two main conclusions, that are of relevance to both teacher educators and educational policy makers in the national context, but might also inform researchers and government agents at an international level.

Firstly, the findings suggest that, although most teachers' beliefs about the nature of history appear conducive to teaching students about the ways in which historical knowledge is constructed, they are generally not considering inquiry-based learning activities that draw on a range of historical reasoning skills. In addition, a significant number of teachers mentioned a lack of pedagogical knowledge and difficulties with organizing inquiries as issues obstructing them from implementing IBL in their classroom. Therefore, teacher education programs should take care to evaluate whether the teaching of historical reasoning skills and organization of IBL activities are sufficiently covered by the courses that

are offered to future history teachers. In this light, recent work on developing history teachers' pedagogical content knowledge (e.g. Bain, 2006; Monte-Sano, 2011b) could serve as a framework for developing a balanced approach that pays attention to both knowing and doing history.

Secondly, the findings indicate that influences within the school context, such as the history curriculum, collegial interactions, or students' abilities, also play an important role when it comes to teachers' thoughts and ideas about teaching the subject. As such, further development of teachers' beliefs should not be seen as the sole responsibility of teacher education programs. Educational policy makers can help to create an environment that stimulates the teaching of historical reasoning skills, by organizing specific professional development initiatives for passing on good practices to teachers, or by creating mentoring programs within schools (e.g. see Achinstein & Fogo, 2015) that can support beginning teachers in carrying out these complex activities.

Finally, future research could help to achieve these aims by further investigating these or other factors that might also influence teachers' beliefs, such as the grade in which teachers work. In particular, more large-scale investigations appear to be well suited for validating and extending the findings of the present study.

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9. APPENDIX A: INTERVIEW PROTOCOL

9.1. Introduction

- Thank the teacher for participating in the study.
- Explain that the goal of the research is to investigate teachers' beliefs about history.
- Emphasize our interest in the teacher's own opinion, and that there are no right or wrong answers.
- Ask permission to tape the interview, and explain that all data will be treated confidentially.

9.2. Background

- What is your age?
- How long have you been teaching history in secondary school?
 - How long have you been teaching the subject in grade 4?
- What higher education courses did you follow prior to teaching?
- Why did you ultimately become a history teacher?

9.3. Beliefs about the nature of history

- How would you describe history as an academic discipline?
- *[Show drawing of a line with 'art' and 'science' opposite to each other]* Where on this line would you place history and why?
- How would you describe a good historian?

- What is he/she able to do?
- Does he/she follow a certain procedure? Why (not)?
- Is he/she allowed to draw on imagination and creativity? Why (not)?
- Is there, according to you, a difference between a historical theory and an opinion? Why (not)?
- Do you think that one historical theory can be superior to another? Why (not)?
 - *[If yes]* Can you explain what criteria can be used to determine which theory is preferable?
- Historians studying the same remains of the past sometimes draw strikingly different conclusions. How would you explain this phenomenon?

9.4. Beliefs about the teaching of history

- According to you, why should pupils be taught history?
 - What are the most important goals of the subject?
- Which competences should students attain during the history course?
 - What kind of knowledge should they acquire?
 - What type of skills should they become proficient in?
- Which pedagogical approach is most fit for teaching history, and why?
 - What is the main strength of this approach?
 - What are weaknesses of this approach?
- Can you describe your own teaching approach during a 50-minute period of history?
 - Which phases can be distinguished in each lesson?
 - What are you doing during each phase?
 - What are the pupils doing during each phase?
- How do your pupils view the subject of history?

9.5. Beliefs about inquiry-based learning

- How does school history differ from historical research?
 - Are there also similarities between school history and historical research? Please explain why you think so.
- Should teachers explain to their students how the information in textbooks and task sheets was created?
 - *[If yes]* How do you try to do this in your own classroom?
- Do you think school history should make students proficient in applying the reasoning skills that historians use to investigating the past? Why (not)?
 - *[If yes]* What should students know and be able to do?
 - *[If yes]* How do you teach these skills in the classroom?

- According to you, is an inquiry (e.g. with multiple information sources) a good approach for teaching knowledge and skills? Why (not)?
 - Do you use this approach during your own lessons?
 - *[If yes] Please describe how you implement inquiry in the classroom*

9.6. Contextual influences

- What factors stimulate the implementation of inquiry-based learning in the classroom? These factors can be both personal or situated at school level.
- What barriers obstruct you from using inquiry in the classroom? Again, these can be both personal or situated at the school level.
 - Which difficulties do students experience during an inquiry?
 - Which issues have you encountered when preparing, organizing or facilitating inquiry-based learning activities?

9.7. End

- Say that this concludes the interview, and ask whether the teacher has additional comments related to the topics of the interview, or more general remarks or questions.
- Again, thank the teacher for participating in the study.

10. APPENDIX B: CODING SCHEME

DIS: beliefs about the nature of history

- DIS_GOAL: goals of historical research in general (e.g. explaining the present, finding patterns).
- DIS_CHAR: general nature of history (e.g. science versus art).
- DIS_KNOW: nature of historical knowledge (e.g. absolute or constructed).
- DIS METH: methods and procedures that historians use.
- DIS_CRIT: criteria that can be used to evaluate historical accounts.

EDU: beliefs about the teaching of history

- EDU_GOAL: general goals of history education.
 - **Consisted of 6 subcodes, corresponding to the goals mentioned in section 5.1.2.*
- EDU_KNDO: relative importance of knowing versus doing history.
- EDU_INST: ideas about teaching history in general (e.g. teacher- or student-centered).
- EDU_KNOW: focus on constructed nature of knowledge in daily teaching (e.g. explaining how sources are used, how historical theories evolve).
- EDU_STOR: opinion about story-telling in history.
- EDU_INQU: approach to inquiry-based learning activities.

MOT: motives for (not) implementing inquiry-based learning

- MOT_STIM: reasons why teachers integrated inquiry-based learning activities in class (e.g. external pressure, development of critical thinking)
- MOT_BARR: obstacles to preparing/organizing inquiry-based learning activities. **Consisted of 7 subcodes, corresponding to the barriers mentioned in section 5.1.3.*