CHAPTER 14

Why an Integrated Approach Matters: Searching for a Way to Understand the Formation of Prospective History Teachers' Epistemological Beliefs

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Introduction

Drawing on theoretical considerations and empirical studies, this chapter argues for an integrated approach to epistemological beliefs in order to illustrate what avenues of research in history education might be fruitful in exploring how prospective history teachers' epistemological beliefs are shaped during history teacher training. This seems important because scholars since the 1970s have articulated goals for history education at the

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epistemological[1] level, calling for an interpretive or constructivist understanding of history, a mastery of epistemic concepts such as evidence or accounts, and of epistemic procedures like historical thinking and reasoning (e.g., Stoel et al., 2017b). In short, it was about learning the logic of the historical discipline. One associated hope is to prepare students for democracies that require "citizens to know how to weigh evidence before they participate in democratic decision making" (VanSledright, 2011, p. 57). For this purpose, these goals need to be addressed in the context of history teacher education so that teachers can achieve them in the classroom. To do so, they need to reflect on the process of historical knowing and characteristics of historical knowledge, since research in science education found that epistemological beliefs related can influence teaching and learning (e.g., Voss et al., 2013). Many history educators assume that beliefs associated with an interpretive or constructivist understanding of history should be developed because they form the basis of the above goals (Stoel et al., 2022; VanSledright & Maggioni, 2016).

However, the existing literature at the school and university levels indicates that epistemological development is a challenging task. For example, the groundbreaking "CHATA" project with British school students showed that the "ideas that some seven year-olds have […] will be the same as those found among most fourteen year-olds […], while a few will already be at the level we would expect our A2 students to reach." This suggests that epistemological progression is not simply age-related (Lee & Shemilt, 2003, p. 16). Following the "CHATA" framework and literature from educational psychology, Maggioni was the first to study the extent to which the epistemological beliefs of students in the context of U.S. high school history classes changed over the course of one semester. Using her "Beliefs about History Questionnaire (BHQ)", she aimed to explore students' epistemological development from copier (e.g., history as a copy of the past) to borrower (e.g., people choose their preferred facts) to criterialist stance (e.g., history as a process of inquiry). Although she was able to detect changes in the students' beliefs, they were not statistically significant. Maggioni attributed this to the fact that learners' epistemological beliefs were inconsistent, as they held contradictory beliefs or wobbled between the stances. She also suggested that history teachers in the classroom failed to reflect on epistemological aspects with their students.

[1] "Epistemological" means here regarding a theory of knowledge and knowing, while "epistemic" means regarding knowledge (Gottlieb & Wineburg, 2012, p. 88).

Finally, she pointed out "that the culture at large and the specific culture in which each student lives play an important role in epistemic development" (Maggioni, 2010, p. 333). Consequently, Maggioni concludes that appropriate tasks and interventions need to be constructed to support students' epistemological development. However, she does not draw any theoretical conclusions for revising her model of developmental stances in relation to the context.

Meanwhile, several studies have modified Maggioni's BHQ to show that it is possible to intentionally promote epistemological beliefs in the context of history instruction (Stoel et al., 2022). One proposes theoretical conclusions. The intervention by Stoel, van Drie, and van Boxtel with Dutch students in Grade 11 showed that explicit teaching of epistemological ideas in the context of a writing tasks led to higher agreement with both subjectivist—the borrower stance of Maggioni—and criterialist beliefs. The authors, therefore, suggested "that development in epistemological beliefs in history is more adequately conceptualized as a movement along two dimensions—[…] weak or strong emphasis on disciplinary criteria—instead of in three distinct stances" (Stoel et al., 2017b, p. 330). Thus, they indicated that epistemological development in the context of history classes cannot be understood solely on the basis of a developmental model, but also in terms of specific dimensions, as previously pointed out in educational psychology (Hofer, 2016).

At the higher education level, few studies had highlighted the importance of domain-specific courses as a contextual factor. For example, VanSledright and Reddy (2014) found challenging shifts of U.S. preservice history teachers during a one-semester course in history education. Some students wobbled between subjectivist and criterialist stances, while others switched between objectivist and subjectivist ones. Comparable results exists for experienced teachers in the U.S. (VanSledright & Maggioni, 2016). Contrary, Mierwald et al. (2016) found that German master's students hold fewer objectivist and more criterialist beliefs than first-semester students. In addition, their study points to a more systematic development, as it suggested that the group difference is related to the learning opportunities during the teacher education program in history.

Overall, previous research suggested that the formation of epistemological beliefs cannot be described solely as a development in stances. Rather, it can also be interpreted in terms of epistemological dimensions. In addition, the intervention studies, and inconsistent findings at the higher education level from different national contexts suggest that the

instructional context may be important. Finally, research from a variety of fields has suggested that further characteristics, such as the educational level or age, may influence the formation of epistemological beliefs (Hofer, 2016).

Against this background, this chapter argues for an integrated approach of developmental, dimensional, and contextual perspectives to understand, through empirical research, how the epistemological beliefs of preservice history teachers might be shaped during history teacher training. For this purpose, an integrative framework of epistemological beliefs is presented along with related empirical studies to highlight strengths and weaknesses of the approach. A discussion of challenges and future directions concludes the chapter.

An Integrated Framework of Epistemological Beliefs in History

It was Hofer (2016) who systematized the research on epistemic cognition in the field of educational psychology into the three approaches mentioned above: developmental, dimensional, and contextual. In the field of history, the *developmental approach*, has been elaborated by Maggioni and colleagues (VanSledright & Maggioni, 2016). It posits, as mentioned above, a progression of epistemological beliefs from naive (e.g., history as a copy of the past) to sophisticated (e.g., history as interpretation) and is the most common in history education research today (Stoel et al., 2022). However, in addition to the challenges mentioned above, Maggioni's approach could be problematized on a theoretical and methodological level. Theoretically, the authors conceptualized the stances in terms of educational psychology (e.g., criterialist), even though they contrasted them with a domain-specific stage model of the CHATA project. Later, they contextualized their framework within discussions of historical theory, but without revising it (VanSledright & Maggioni, 2016). However, a domain-specific framework should not rely only on research in history education and educational sciences if history education aims to learn the logic of the discipline. Since historical theory is that part of historiography that aims to reflect on the logic of history in epistemological terms, its discussions should be included. They have indicated that epistemological aspects should be seen as a matter of perspective rather than distinct stances, because even historians hold different epistemological positions.

For example, Lorenz (2011) pointed out that at least three ideal-typical positions can be distinguished, which should be used to construct positions closer to the logic of the discipline: positivism, skepticism, and narrative constructivism (see the framework below).

Methodologically, Maggioni's approach also proved challenging. The problem was that the three stances could not be clearly distinguished empirically using the BHQ because only two factors representing the stances were found. This was also the case in other language contexts (e.g., Stoel et al., 2015). In addition, she used consistency instead of mean scores in her studies to assess the degree to which students hold coherent stances. Such an approach suggests that there are correct and incorrect answers. This only seems plausible if epistemological assumptions would be defined as knowledge because "a claim to know is a special type of claim, different from a claim to believe and requiring justification in ways that beliefs do not" (Fenstermacher, 1994, p. 30). Thus, it seems questionable whether it is plausible to describe and assess the formation of epistemological beliefs in history in terms of distinct stances.

The *dimensional approach* has been proposed in educational psychology to describe naive and sophisticated epistemological beliefs in detail. For example, Hofer and Pintrich distinguished beliefs about the nature of knowledge (certainty of knowledge, simplicity of knowledge), and the nature of knowing (source of knowledge, justification for knowing) (Hofer, 2016). Stoel and colleagues followed this approach in the field of history, applying a revised version of the BHQ. Based on survey responses from Dutch high school students and historians, they divided epistemological beliefs into naïve and nuanced beliefs regarding the three dimensions of historical knowledge, knowing, and methodological criteria. However, the authors found that the "experts varied strongly on these items—possibly as a result of real differences in philosophical thought about the nature of history" (Stoel et al., 2017a, p. 131).

Another reason for this variation—and the "epistemic wobbling" of students and teachers—may be explained by the *contextual approach*. Because of the methodological difficulties mentioned, numerous learning psychologists have argued that the activation of certain epistemological assumptions may depend on the experiences that subjects have had in different sociocultural situations and on the present context of activation (Hofer, 2016). Gottlieb and Wineburg (2012) also demonstrated this fact for history in their think-aloud study and showed that religious historians switched between academic (e.g., plausibility) and religious beliefs (e.g.,

personal faith) when they were asked to interpret of historical or religious sources, while non-religious historians did not. It became clear that the situatedness of epistemological beliefs in context must also be considered in the field of history education.

Based on the literature discussed, epistemological beliefs in history are defined as subjective assumptions about historical knowledge and knowing (Nitsche, 2017). Inspired by the contextual approach (e.g., Gottlieb & Wineburg, 2012), the construct was differentiated not in terms of stances but as perspectives or positions that individuals are likely to hold in relation to or activated by different contexts. To address the conceptual and measurement issues discussed, three epistemological perspectives were elaborated by revising Maggioni's work with the help of historical theory, and the dimensional approach (Table 14.1).

From a *positivist perspective*, history and the past are synonymous terms and knowledge is directly accessible in sources and accounts. Therefore, the structure of knowledge is conceptualized as a picture of the past while knowledge seems certain and objective. Consequently, there is no need to

Table 14.1 Model of epistemological beliefs in history

Domains & Positions, and Dimensions (e.g., Hofer, 2016)	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

Note: Adopted from Nitsche (2017, p. 95)

justify historical knowledge. Moreover, knowledge is used to explain what the past was like and how changes occur through general laws. In contrast, from a *skeptical perspective*, history is a construct of the present and therefore indicates an individual understanding of historical sources and accounts. It follows that history is a matter of opinion and that there is no method for justifying historical knowledge. History, thus, appears to be an individual narrative that is uncertain. It is used as a vehicle to express individual opinions. From a *narrative-constructivist perspective* history is distinguished from the past. It assumes that individuals structure their knowledge of the past as a historical narrative. However, because humans develop narratives based on individual and joint interpretations of historical sources and accounts, historical knowledge is expected to be a reconstruction of the past that can be justified through argumentative reasoning in the context of sources, theories, and values. In doing so, socially shared perspectives justify the certainty of knowledge that provides both individual and social orientation in time.

A Series of Studies

To test the framework an interview study was conducted with a German history teacher in 2013. In the same year, 105 prospective history teachers in German-speaking Switzerland were asked in an open-ended task to explain how historical knowledge is created and can be characterized. Both studies stressed like Stoel et al. (2017a) for school students that also prospective teachers' beliefs could be interpreted in terms of dimensions (e.g., concept of history, origin of historical knowledge). In addition, some participants tended to hold beliefs associated with a particular position, while others expressed the beliefs of different positions in terms of dimensions. This illustrates the analytical potential of the framework for qualitative research, as it helps to go beyond the developmental approach in terms of stances, because the particular beliefs about the origin of knowledge, etc., their relation to the positions (e.g., positivism), and their coherence became visible (Nitsche, 2017).

Because this approach could not be used to assess the effects of the teacher training context on prospective teachers' beliefs, the "Epistemological Beliefs Questionnaire in History (EBQH)" was developed, which

included modified items from Maggioni's BHQ[2] and new ones related to the dimensions of the framework (Table 14.1). However, a first pilot study with 49 prospective Swiss German history teachers in 2014 indicated that no clear structure of their beliefs could be found. Based on the literature of educational psychology, it became clear that it was necessary to decide whether the questionnaire should measure positions or dimensions (Hofer, 2016). This indicates that it is difficult to capture epistemological dimensions *and* positions at the same time with statistical methods. Due to the lack of a domain-specific dimensional questionnaire at this time, the EBHQ was revised in terms of positions. Following feedback from experts in history didactics, 194 prospective history teachers from four Swiss and one German university completed the questionnaire. In contrast to Maggioni, responses were treated as means rather than as coherence scores because this allows participants to hold multiple positions simultaneously, which is more consistent with the definition of beliefs described above. Statistical analyses suggested that the three expected positions could be modeled, but the corresponding scales still showed insufficient reliabilities (Nitsche, 2017).

After the final revision, the EBQH was used in the main study to estimate effects of context aspects of history teacher training on the epistemological beliefs of 177 prospective history teachers from all universities in the German-speaking part of Switzerland that offered history teacher training during the academic year 2014–2015 (Nitsche, 2019). The study proofed construct validity and acceptable reliability of the questionnaire. The Fig. 14.1 summarizes the effects of courses in history and history didactics after controlling for background aspects (e.g., age). The analyses indicated contradictory results because the number of history courses the students took did affect their agreement with the positivist *and* narrative constructivist position. Moreover, no effects of courses in history didactics could be found. One possible explanation is likely rooted in specific course contexts and may involve university teachers' epistemological perspectives. In history courses, students may have been influenced by historians, since even experts disagree about whether historical knowledge is objective or uncertain (e.g., Lorenz, 2011). The lack of course effect in history didactics can perhaps be explained by the fact that Swiss German history didacticians do not seem to share a common narrative-constructivist

[2] Items not related to historical learning were chosen because beliefs about learning and teaching history were also examined in a second questionnaire.

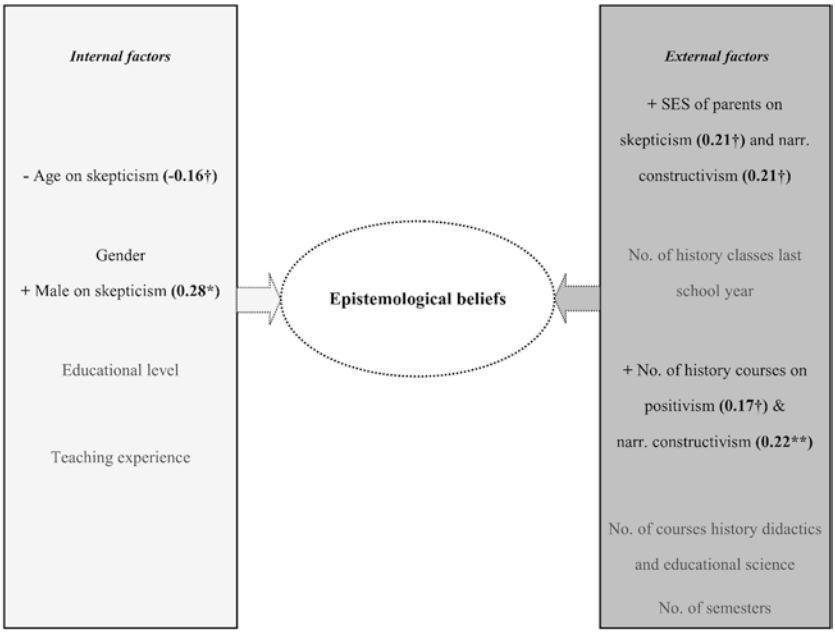

Fig. 14.1 Impact of courses in history and history didactics. (Note: Adopted from Nitsche (2019, p. 278); †$p < 0.10$, *$p < 0.05$, **$p < 0.01$; Printed coefficients = standardized coefficients of a structural regression model (0.1–0.3 = small effect); SES = socioeconomic status)

understanding, as a recent study suggests, even though it is the most common approach in German-speaking history didactics (Ziegler & Nitsche, 2021).

To go beyond these findings and to relate students' shifts to concrete course contexts in history didactics, a group comparison was conducted between six introductory courses in history didactics which based on data collected before (t1) and after (t2) the summer or winter semester of 2018. Due to panel dropout (Table 14.2), the final sample consisted of four courses[3] taught by four history didacticians at two Swiss-German universities of teacher education and one German university.[4] Students and

[3] Course 1 was taught by the author.

[4] For one course, data were completely missing at t2. Therefore, only complete cases were used.

Table 14.2 Descriptives of Scales

Scales	*No. Items*	M_{t1}	SD_{t1}	α_{t1}	M_{t2}	SD_{t2}	α_{t2}
N_{total}				109			
$n_{t1, t2}$		103			56		
Positivism	4	1.84	0.53	0.67	1.55	0.52	0.75
Skepticism	4	2.66	0.60	0.77	2.78	0.65	0.73
Narrative Constructivism	6	3.37	0.34	0.60	3.54	0.32	0.58
Course quality (structure, classroom management)	5				3.12	0.56	0.72
Constructivist design of courses	6				3.34	0.64	0.85
Topic: theory	4				3.24	0.57	0.86
Topic: instructional strategies	3				3.16	0.64	0.78

history didacticians were asked to answer the EBQH (see Nitsche & Waldis, 2022 for the English translation), questionnaires about the degree of constructivist design (adapted from Braun & Hannover, 2009), and the topics of the courses. Students were also asked to complete a survey on course quality (adapted from Wagner et al., 2013). All questionnaires based on a four-point scale coded between 1 to 4. Students' characteristics such as age, number of semester or visited courses in history and history didactics were requested. To obtain qualitative insights into course design and topics, history didacticians were asked to provide their course syllabi, which were paraphrased. To check the quality of the questionnaire data, statistical analyses (e.g., *Scale Analyses*) were conducted (Table 14.2).

The differences in the raw means of students' epistemological beliefs between the beginning and the end of the semester ($n_{t1 \& t2 =}$ = 49, M_{Age} = 23.64, SD_{Age} = 4.45; female = 28) show trends in the expected direction: A small decrease in positivist beliefs (M_{t1} = 1.87, SD_{t1} = 0.54,, M_{t2} = 1.56, SD_{t2} = 0.54) a small increase in skeptical beliefs (M_{t1} = 2.61, SD_{t1} = 0.60, M_{t2} = 2.77, SD_{t2} = 0.67), and in narrative constructivist beliefs (M_{t1} = 3.42, SD_{t1} = 0.33, M_{t2} = 3.54, SD_{t2}). To examine the statistical effects of the course context, analyses of covariance were applied with epistemological positions as the dependent variable, adjusting for repeated measures for the longitudinal data and controlling for constructivist design, topics, and course quality. Background characteristics (e.g., age) were also included.

Even before the semester began, a group difference between the courses for narrative-constructivist beliefs indicated that students held different

Table 14.3 Effects of courses in history didactics ($n = 49$)

Variables	*Positivism*		*Skepticism*		*Narr. Constructivism*	
	F(53, 1–3)	η_p^2	*F(53, 1–3)*	η_p^2	*F(53, 1–3)*	η_p^2
Model	3.67	**0.82*** **	3.91	**0.83*** **	4.79	**0.85*** **
Groups	1.97	0.14	0.44	0.04	0.80	0.06
Time *t*1 & *t*2	17.26	**0.28*** **	4.47	**0.09***	7.41	**0.14** **
Group by time	7.04	**0.32** **	1.82	0.11	3.69	**0.20***
Constructivist course design	0.39	0.01	17.14	**0.28*** **	10.92	**0.20** **
Courses in history	2.03	0.04	4.89	**0.10***	9.78	**0.18** **
Teaching experience	7.88	**0.15** **	6.27	**0.13***	3.39	*0.07*†
Age	0.07	0.00	0.33	0.01	0.16	0.00
No. of semester	1.60	0.04	0.48	0.01	0.92	0.02
Teaching diploma (sec. I, II)	1.62	0.04	2.05	0.05	2.95	*0.06*†
Courses in history didactics	0.05	0.00	0.57	0.01	0.28	0.01
Course quality	0.05	0.00	0.89	0.02	1.19	0.03
Theory	0.34	0.01	1.88	0.04	0.05	0.00
Instructional methods	0.54	0.01	0.01	0.00	0.18	0.00
Adj. R^2	0.59		0.61		0.67	

Note: †$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

beliefs before coming to the courses ($F(3, 3) = 2.9$, $p < 0.5$, $\eta_p^2 = 0.16$). The results of the longitudinal group comparisons (Table 14.3) show moderate to large effects (η_p^2) between the beginning and the end of the semester, indicating significant changes for all epistemological positions. Moreover, the changes of positivist and narrative constructivist beliefs are related to the courses that the students attended. In addition, the results of the control variables show that the constructivist design of the courses perceived by the students was important for the change in skeptical and narrative constructivist beliefs. Finally, the number of history courses attended was a significant predictor for the change of skeptical and narrative constructivist beliefs, while teaching experience seems to affect the responses regarding positivist and skeptical beliefs. Regression analyses based on the same variable design suggest positive effects of constructivist

Table 14.4 Differences in course effects in history didactics ($n = 49$)

	Positivism		*Skepticism*		*Narr. constructivism*	
Course	*F(45, 4, 1)*	*t2 - t1*	*F(44, 4, 1)*	*t2 - t1*	*F(44, 4, 1)*	*t2 - t1*
1	0.65	-0.11	0.32	-0.09	2.33	0.11
2	7.72	**-0.39***	3.67	0.30	14.96	**0.29*****
3	0.40	0.10	0.23	0.08	1.01	-0.09
4	31.81	**-0.81*****	5.66	*0.38*†	1.89	0.11

Note: †$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$; Bonferroni-adjusted

design and history courses, while the amount of teaching experience had a negative effect on positivist beliefs and a positive effect on skeptical beliefs.

While these analyses indicated effects of the course context in general and of additional contextual aspects (constructivist course design, history courses, teaching experience), the results of the post hoc tests, provided insight into the differences between the courses between the beginning and end of the semester (Table 14.4). The results show the strongest significant shifts in course 2: a decrease in agreement with positivist beliefs of about 0.4 points and an increase in agreement with narrative constructivist beliefs of about 0.3 points. The largest decrease in positivist beliefs is seen in course 4, by about 0.8 points, with a small, almost significant increase in skeptical beliefs. Students in course 1 shifted in the indented direction, however, all tendencies are mild to tiny and not significant as in group 3, where no systematic changes could be found.

How can these trends be explained beyond the effects mentioned? Arguing from a developmental perspective, and as the above analyses of group differences in students' narrative constructivist beliefs at the beginning of the semester indicated, it depends on the individual formation of beliefs of students when they enter the courses. Moreover, a comparison of raw means of t1 suggests that students in course 2, who showed the greatest shifts, were less likely to agree with narrative constructivism ($M_{t1} = 2.23$, $SD_{t1} = 0.29$) than students in the other courses ($M_{t1} \geq 3.39$). Thus, the changes depend on the beliefs the students have developed when they come to the courses. Arguing from a contextual perspective, the beliefs of the history didacticians in the context of courses also seem to be important. They tended to agree on narrative constructivism and reject positivism. However, unlike the history didacticians of courses 1 and 3 ($M \leq 2.5$), those of the courses 2 and 4, where students' changes were

significant, not only strongly agreed with narrative constructivism, but also moderately agreed with skepticism ($M \geq 3.0$). Perhaps a more balanced approach to narrative constructivism *and* skepticism is helpful in activating students' beliefs and supporting their changes. This is emphasized by the fact that no significant correlations were found between students' beliefs and history didacticians' beliefs at the beginning of the courses, while at the end of the courses there are moderate positive correlations between students' and history didacticians' skeptical beliefs ($r = 0.39$, $p < 0.01$) and negative correlations between students' positivist beliefs and history didacticians' skeptical beliefs ($r = -0.50$, $p < 0.001$).

Further contextual aspects become apparent when course design is related to students' shifts. A look at the syllabi of history didacticians' (Table 14.5) reveals three aspects. First, it seems to be important to combine topics from history theory and history didactics, because only in such courses significant shifts could be found (*italics in* Table 14.5). Second, it

Table 14.5 Topic design of courses in history didactics

Course 1	*Course 2*	*Course 3*	*Course 4*
(1) *Students' concepts of history and history education* (2) *Historical competences: models and diagnostics* (3) *Historical learning: goals and principles* (4–13) Topics regarding lesson planning (e.g., curriculum, learning tasks)	(1) *What is history? What is history didactics?* (2) *Basic concepts* (3) *Narration, construction, interpretation* (4) *Historical knowledge, pre-concepts, and consciousness* (5) *Historical culture and politics* (6) *Essay* (7–14) Topics regarding lesson planning (e.g., goals, example lesson planning)	(1–14) Topics regarding lesson planning (e.g., unit of lessons, assessment, internet services)	(1) *Time, history, narration, and construction* (2) *History, living environment and historical culture* (3) *Historical consciousness, competency, and historical learning* (4) *Multiperspectivity, controversy, plurality* (5) *Alterity and present references* (6) *Essay,* Learning requirements and conditions (7–14) Topics regarding lesson planning (e.g., topic selection, goals, learning tasks, lesson intros)

Note: Session of courses 1 & 3 = 90 minutes; 2 & 4 = 180 minutes. *Italic* = topics related to historical theory

seems that students' shifts depend on the amount of content on historical theory, since most of the time spent on such topics was in courses 2 and 4, where changes became significant. This suggests that more time spent on historical theory may also allow more time for epistemological reflection. Third, the total time of the courses seems to be important, since the Swiss-German courses, where no significant changes were found, lasted 90 minutes per session, while the German courses lasted 180 minutes per session. This indicates that the effects of the courses depend on structural aspects such as the length of the courses, which is related to the curriculum of each German-speaking university. Thus, the broader institutional context of teacher education may also be important.

The last study presented is limited by panel mortality, the small number of courses and participants and some statistical issues (e.g., low reliability of one scale, lack of control for the different course length (180 vs. 90 min per session)). Nevertheless, it provides initial evidence to support the assumption that the context of teacher training also matters in the field of history education. The series of studies generally shows that an integrated approach of developmental, dimensional, and contextual perspectives could be fruitful for understanding the forming of epistemological beliefs of (prospective) history teachers, although combining all approaches in one research instrument proved challenging.

Discussion and Future Directions

Theoretically, the chapter argued for integrating the developmental, dimensional, and contextual perspectives to better understand how epistemological beliefs are formed by prospective history teachers in the context of teacher education. It has been shown that conceptualizing the formation of epistemological beliefs in terms of coherent stances based on concepts from educational psychology is not theoretically plausible, because historical theory shows that even historians have different positions (Lorenz, 2011), which is also known from empirical research in history education (Stoel et al., 2017a). Rather, if the goal of teacher education in history is to prepare teachers to improve their students' understanding of the logic, concepts, and methods of the discipline (VanSledright, 2011), it seems more appropriate to ground epistemological perspectives also in historical theory. In addition, studies in educational psychology and history education have shown that a dimensional approach clarifies epistemological beliefs in detail, for example, regarding the structure of (historical)

knowledge (Hofer, 2016; Stoel et al., 2022). Research on the contextual approach showed that epistemological beliefs are formed based on experience and activated in specific situations related to context, such as the inquiry of sources (Gottlieb & Wineburg, 2012). Since the developmental and dimensional approaches do not take this into account, it has been proposed here to conceptualize epistemological beliefs as subjective assumptions about historical knowledge and knowing in terms of perspectives (e.g., positivism, narrative constructivism) rather than stances that individuals are likely to hold in relation to or activated by different contexts. With the help of dimensions such as the concept of history, positions can be contoured more precisely.

Empirically, the qualitative studies showed that participants' epistemological beliefs can be mapped using the integrated framework in terms of positions, related dimensions, and their coherence (Nitsche, 2017). The results of the studies could be interpreted as an argument against a purely developmental view that assumes fixed stances. Since the study of context-relatedness in terms of effects is a challenge when using qualitative methods, the EBQH questionnaire was developed with the aim of assessing the construct combining positions and related dimensions. However, during this process, it became clear that linking both approaches in one questionnaire is challenging for methodological reasons (e.g., survey design). Thus, the EBQH was revised in terms of positions and used to study the context effects of teacher training courses in history and history didactics on prospective history teachers' epistemological beliefs. On this basis, the first study with German-Swiss participants showed conflicting effects of history courses and none of history didactics courses (Nitsche, 2019). To go beyond these findings, a longitudinal group comparison was conducted using a sample of participants who had taken courses in history didactics at universities in Germany and German-speaking Switzerland. The results showed that the epistemological positions that individual students hold when they enter the courses and the specific contextual characteristics of the courses (e.g., topic, design, didacticians' beliefs) are important. However, due to the challenges mentioned above, the studies presented here have not yet combined the developmental, dimensional, and contextual approaches in a single study.

In general, this approach could be applied to address what is probably the most important task for the future: To prove the assumption of the introduction that epistemological beliefs are relevant to the teaching of history, and thus to teacher education, as suggested by studies in other

fields (e.g., Voss et al., 2013), but disputed by history education research, which has found gaps between teachers beliefs and history teaching (Stoel et al., 2022). Future research applying the integrated approach can address this issue in three methodological ways.

To investigate the role of (prospective) history teachers' epistemological beliefs in learning of teaching with the help of qualitative methods, a design such as Gottlieb and Wineburg's (2012) could be used. The aim would be to examine teachers' epistemological beliefs in action while they were asked to complete common teacher education tasks for learning teaching strategies (e.g., planning, reflection on lesson videos). Interpreting the results with the integrated approach would not only allow for a detailed analysis of the beliefs, but also prove whether the developmental or dimensional aspects of the framework are more helpful in understanding the contextual relationship of the construct.

For the same purpose, existing developmental or dimensional questionnaires could be modified along the lines of contextual instruments for school students (Stoel et al., 2022). For example, the questionnaires could be combined with the same or different teaching situation (e.g., lesson planning, preparing source-based material) to examine whether the dimensional or developmental survey provides a better insight into the contextuality of epistemological beliefs or which beliefs are activated by different scenarios. Afterward, perhaps, ways could be found to make the integrated approach fruitful for the development of a combined single questionnaire.

To examine the relationship between the individual beliefs with which students enter the courses, the overall course design, changes in students' beliefs over time, and the specific learning opportunities in the courses, quantitative and qualitative methods may also be combined. For example, and as in the last study presented, students' changes in epistemological beliefs over the course of a semester could be compared and related to course design. At the same time, participants would be selected based on their questionnaire responses at the beginning of the course (e.g., extreme values, percentiles) to observe them as they are asked to solve different tasks from the course contexts.

It may sound trite to conclude that focusing on one approach and its associated methods likely to depend on the research questions of future studies. Nevertheless, it seems most fruitful for future studies to integrate the approaches when trying to understand the role of the formation of (prospective) history teachers' epistemological beliefs in the context of history education.

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