

# Epistemological understanding of history in lower secondary education, and its influence on historical reasoning skills

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**Abstract:** Although epistemological understanding plays a major role in students' reasoning, limited research is conducted. Hence, we examined the epistemological understanding of history of 942 students in lower secondary education using a pencil-and-paper test, and its influence on their historical reasoning skills. Results show that only half of the students have an advanced epistemological understanding and that students' epistemological understanding has a significant influence on a number of core historical reasoning skills.

**Keywords:** historical reasoning skills, epistemological understanding of history

## Theoretical background

Students' epistemological understanding of history can be defined as their insight into the nature and construction of historical knowledge (Kuhn et al., 2000). Studies generally distinguish between three levels of epistemological understanding; the absolutist, multiplist, and evaluativist level (see, Voet & De Wever, 2016). At the *absolutist* level, students associate history with a search for an absolute truth. At the *multiplist* level, students understand that there may exist different interpretations about a historical event but perceive those interpretations as equally correct. At the *evaluativist* level, students also acknowledge the existence of different interpretations in history, but in addition, they are aware that some have stronger evidentiary support than others. This kind of nuanced epistemological understanding is an essential prerequisite for students' historical reasoning skills, as different studies have shown that epistemological beliefs influence students' academic performances (Stoel et al., 2017).

Although the comparison of historical sources and the way argumentation is constructed, depends on students' epistemological understanding (Kuhn et al., 2000; Voet & De Wever, 2016), there is a lack of research that investigates students' epistemological understanding and how it affects the different core historical reasoning skills of students. Historical reasoning can be seen as the act of reasoning with historical information (van Drie & van Bortel, 2008) and consists of different components. In this contribution, we will use the framework of Voet and De Wever (2017) which outlines five core historical reasoning skills that are required to draw conclusions on historical information: (1) sourcing, (2) appraising, (3) specifying, (4) constructing, and (5) arguing. Here, we will focus on sourcing, appraising and arguing as those historical reasoning skills can be measured using a pencil-and-paper test. *Sourcing* is checking the nature of a source, by considering the author's background and credentials, period of the source production and type of the source. *Appraising* requires assessing the content of a source, by evaluating the author's perspective, reasoning and evidence, and requires comparing information across sources. *Arguing* means to formulate and weigh arguments in support of different conclusions (Voet & De Wever, 2017).

The main aim of this study is to investigate students' epistemological understanding of history and its influence on the core historical reasoning skills sourcing, appraising, and arguing.

## Method

### Participants

This contribution is situated within a larger research project that aims to investigate the impact of an inquiry lesson unit for history in the second year of Flemish (Belgium) secondary education. 942 students from 52 classes in 26 schools participated. This sample consisted of 525 boys and 417 girls. Their average age was 14 ( $SD = 0.45$ ).

### Instruments

Data were collected through a pen-and-paper test during the history-lesson, under the supervision of the teacher. Prior to the data collection, the teacher received a training about how to collect the data. Students had 50 minutes to complete the pen-and-paper test and they completed the test anonymously.

The first part of the test contained three authentic historical sources about the death of Emperor Claudius. In each source, information about the author and the context was given. After reading the sources, students had

to assess the value of each source (*sourcing* and *appraising*) and had to give a substantiated answer to the question “Was emperor Claudius murdered by order of his wife? Explain why you think he was or wasn’t.” (*arguing*).

For the second part, a paper-and-pencil instrument that Kuhn et al. (2000) used to measure epistemological understanding, was adapted. This original instrument presents students with two contrasting claims about the nature of knowledge across different domains. After reading the claims, students are asked to judge whether only one claim could be right, or both could be correct. Students who opt for the latter, are asked whether they believe that one judgment might be regarded as having more merit than the other or both claims are equally correct. To fit the original instrument in the context of history, students were presented with two claims that were firmly embedded in a research on Emperor Claudius (see above). First, students were asked to read the sources. Then, they read the two opposing claims based on the authentic sources. Finally, students judged the claims and argued what the existence of such different claims meant for decision-making in historical research.

## Data-analysis

To answer the research question, frequencies of all variables were calculated, and a multivariate regression was carried out with *sourcing*, *appraising*, and *arguing* as dependent variables and epistemological understanding as a fixed factor. Dependent variables were scored from 0 to 2, using a rubric and this data was blind double-coded.

## Results and discussion

Looking at students’ epistemological understanding of history, most students (51.70%) are evaluativists ( $n = 487$ ), 35.90% are absolutists ( $n = 338$ ) and 12.40% are multiplists ( $n = 117$ ). This suggests that only half of the students in lower secondary education acknowledge the existence of different interpretations in history, and are at the same time aware that some interpretations have stronger evidentiary support than others. This is in line with other research that shows that students often see history as fixed and equate history with the past (Stoel et al., 2017).

Looking to *sourcing*, students’ epistemological understanding seems to have a significant effect ( $F_{(2, 939)} = 4.73$ ,  $p = .009$ ) on their *sourcing* competencies. More specifically, *absolutists* ( $M = 0.14$ ,  $t_{939} = -2.20$ ,  $p = .028$ ) and *multiplists* ( $M = 0.10$ ,  $t_{939} = -2.68$ ,  $p = .008$ ) seem to score significantly lower on *sourcing* competencies compared to evaluativists ( $M = 0.19$ ) who have a more nuanced epistemological understanding.

On *appraising*, only *absolutists* ( $M = 0.19$ ) have significant lower results ( $t_{939} = -2.01$ ,  $p = .038$ ) compared to evaluativists ( $M = 0.23$ ). Being a *multiplist* ( $M = 0.21$ ) showed a non-significant negative relation with the *appraising* capabilities ( $t_{939} = -0.86$ ,  $p = .391$ ) compared to evaluativists. This means that only students who associate history with a search for an absolute truth (*absolutists*) assess the content of a source significantly worse, compared to students who acknowledge the existence of different interpretations in history (*evaluativists*).

As to *arguing*, only *multiplists* ( $M = 0.33$ ) have significant lower results ( $t_{939} = -2.06$ ,  $p = .039$ ) compared to evaluativists ( $M = 0.37$ ). Being an *absolutist* ( $M = 0.36$ ) showed a non-significant negative relation with *arguing* capabilities ( $t_{939} = -1.01$ ,  $p = .315$ ) compared to evaluativists.

In sum, students’ epistemological understanding of history seems to have mainly a significant effect on the core historical reasoning skill *sourcing* and a differentiated effect on *appraising* and *arguing*.

## Theoretical and educational significance

Only half of the students in lower secondary education are evaluativists and therefore only 52% probably possess an essential prerequisite for historical reasoning. Moreover, differences in epistemological understanding can partially explain the differences in students’ core historical reasoning skills. So altogether, it can be argued that more explicit attention for students’ epistemological understanding in history is needed (Stoel et al., 2017).

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