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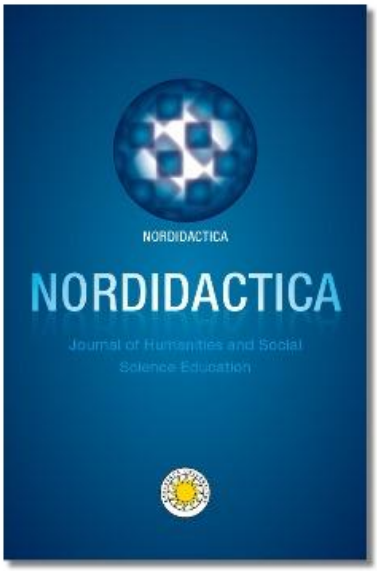

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Why differences in national test results are critical beyond the grades: Historical knowledge as (un)equally distributed prerequisites for societal participation

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Abstract: Historical knowledge, along with knowledge acquired in other subjects, is crucial for individuals to make sense of and engage with the world around them. Evidence suggests that educational systems fail to adequately support disadvantaged groups in accessing the knowledge conveyed through education. This article presents a study comparing the historical knowledge of students attending lower-secondary schools in varying socio-economic environments. Using regression analysis and concept analysis, we examine responses (n=100) to both selected- and constructed-response items from the Swedish national test in history. The sampled items address factual, conceptual, and procedural knowledge types, and the results indicate consistent differences between students from low SES and high SES schools across all types of knowledge. Findings also show that socio-economic status has a larger explanatory value than gender or mother tongue. The differences regarding historical knowledge are discussed in relation to Biesta's three dimensions of education, providing a philosophical perspective on the broader implications of these disparities in educational success.

KEYWORDS: LARGE SCALE ASSESSMENT, KNOWLEDGE TYPES, DIMENSIONS OF EDUCATION, HISTORY EDUCATION, SOCIO-ECONOMIC STATUS

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History as a school subject has the potential both to provide individuals with an understanding of past events and processes and be a subject that provides students with increased opportunities to act and influence their own and others' life situations (Barton & Levstik 2004). History education can also provide students with the knowledge they need to progress in the school system. However, if these potentials are to be realized, schools need to provide the relevant knowledge. When we use the term knowledge in this study, we refer to three different types of knowledge whose characteristics are formulated both on a more generic level in educational sciences (Anderson 2001) and in history education research (Lee 2004): factual knowledge, conceptual knowledge, and procedural knowledge.

Educational policies in many countries prescribe that schools have a compensatory mission, meaning they should work towards closing achievement gaps between disadvantaged students and other students (Muench et al. 2023). In Sweden, this compensatory aspect of education is prescribed in the first chapter of the curriculum. Despite these intentions, it seems that schools in Sweden, as in other countries, fail to fulfil this aim to compensate for differences between different groups in society, such as those pertaining to gender, language skills, and socio-economic status (SES) – aspects that affect the likelihood of educational success (OECD 2018). In Sweden, this applies to both average grades, history grades, and results on national tests in history (National Agency for Education 2018).

These quantitative differences between groups of students can undoubtedly be used as indicators of educational equity and to formulate strategies to address issues of inequality. However, the information that is embedded in the statistics is highly abstract. Consequently, there is a need for qualitative data to unpack the underlying factors behind the quantitative results, thereby providing a more comprehensive and nuanced understanding of the differences in students' historical knowledge

The purpose of this study is thus to examine the extent to which there are differences on a group level between students regarding what historical knowledge they have acquired at the end of compulsory school. Therefore, the following two research questions are addressed:

- How do the factors of gender, language proficiency, and socio-economic status impact the extent to which students from these groups acquire different types of knowledge?
- To the extent that there are differences between groups, how do these differences manifest themselves?

Theoretical considerations

Different types of historical knowledge

The history subject can be said to consist of different types of knowledge, which have the potential to contribute to increasing students' abilities to relate in constructive ways to phenomena with historical connotations. These types can be termed differently

depending on the context, and we will use labels from educational psychology to describe the knowledge types addressed in this study: factual knowledge, conceptual knowledge, and procedural knowledge (Anderson et al. 2001). First, we define these concepts, followed by an explanation of how they are applied within the context of history education. *Factual knowledge* here corresponds to what in the history subject is represented by historical content knowledge, which is specific to a certain time and place; events, processes, and actors are examples of such historical content. *Conceptual knowledge* corresponds to more complex knowledge that often can be applied to different historical phenomena, different time periods, or different geographical locations. It can involve more concrete concepts like power, revolution, or middle class, but also more abstract concepts like continuity and change or cause and consequence. The third type of knowledge within this conceptual framework is procedural knowledge, and in the history subject, it corresponds to knowledge about the methods used to construct and validate historical knowledge, such as how to interpret, evaluate, and draw conclusions based on a historical source material. Knowledge with varying degrees of complexity have been discussed also in history education research. Here, the labels of substantial knowledge and first- and second-order concepts have been used to differentiate between different knowledge types (Lee 2004). Substantial knowledge shares characteristics with factual knowledge. In this study we use the term content knowledge to refer to this type of knowledge. First-order concepts are more complex than content knowledge as they are characterized by both general features and refer to actual historical phenomena. One example of this is democratization, a concept that is possible to use in relation to several time periods and geographical areas, while it is relevant only when it comes to issues of societal power distribution. The first-order concepts are thus closely related to the type of conceptual knowledge with lower complexity presented above. Second-order concepts in history education research encompass both the more abstract part of educational psychology's conceptual knowledge as well as procedural knowledge. We acknowledge that these knowledge types in many cases are interrelated and thus dependent on each other, but we find it necessary to distinguish between them for analytical reasons.

In the history subject in Sweden, these types of knowledge are represented in the history curriculum, in the objectives and learning goals, central content, and grading criteria (Skolverket 2011). It thus becomes the school's task to educate students so that they have the opportunity to acquire these different types of knowledge.

The role of historical knowledge in education

One fundamental argument that is brought forward for including more complex knowledge types in history education is a democratic one. The idea is that it is important to make this kind of knowledge accessible to students who do not have opportunities to encounter such types of knowledge outside of education (Young 2014). Acquiring the types of knowledge described above that are part of the subject conception of history, dominant both in academia and history didactics, seems to require participation in formal history education. The reason for this is that the two types of knowledge,

conceptual and procedural knowledge, have characteristics that define what Bernstein labels as vertical knowledge discourses. Vertical knowledge discourses have emerged in universities over a long period and are therefore difficult to acquire outside the educational system (Bernstein 2000). In history, conceptual and procedural knowledge have the characteristics of a vertical knowledge discourse (Bertram 2016). This type of specialized knowledge has been termed "powerful knowledge" to signal the value inherent in mastering it; it is characterized by being both (a) general and not situation-specific, in the sense that it can be applied to several historical periods and geographical areas, and (b) by providing the possessor with an opportunity to understand the world in a more qualitative and nuanced way than would otherwise be possible (Young 2014).

There is a discussion among educational researchers about how including more complex types of knowledge in curricula and teaching may discriminate against underprivileged groups of students. One starting point for this discussion is with indications that certain groups of students find it difficult to acquire more complex types of knowledge because they encounter abstract thinking to a lesser extent in their home environments (Beck 2013). One example of this kind of complex knowledge is a conceptual pair like agency and structure, and how it can be used to understand historical processes. Research also shows that students from socio-economically weak backgrounds have access to a smaller base of historical content knowledge and that these represent fewer perspectives than students from socio-economically stronger areas (Rosenlund & Persson 2023). Similar conclusions show that boys have more difficulty handling conceptual knowledge (Rosenlund 2021) than girls and that students who learn Swedish as a second language have more difficulty handling procedural knowledge (Rosenlund 2019).

The discussion about vertical types of knowledge and the education it requires can also be understood in relation to the functions attributed to education in a society. Biesta suggests that education always has an impact on students within three different but interrelated dimensions: qualification, socialization, and subjectification. *Qualification* refers to what is most often visible in educational contexts, where students are given the opportunity to acquire the knowledge and skills relevant within a certain subject. Simultaneously, as they are given this opportunity, Biesta argues, they are socialized (*socialization*) into a set of norms and values – aspects that are not always as visible as those within the qualification dimension. The third dimension, *subjectification*, involves the extent to which students are provided with the tools and the opportunity to act as real subjects in relation to both the education itself and in relation to society at large (Biesta 2020).

In this study, we want to address how students' access to the content of history education influences them within each of three dimensions. How then, have these dimensions been discussed among history educators? The dimension of qualification is often used to express that the subject of history provides students with a certain set of knowledge and skills (Bertram 2019). Often, this discussion is held on a generic level, which means that it is not specified what knowledge and skills this could or should be. Given that the subject of history to a small extent prepares students for a profession, the qualification aspect has been argued to be more related to preparing students for how to

cope in society (Elmersjö 2021). When Biesta's dimensions have been related to the concept of powerful knowledge (PK) and history education, the dimension of qualification is characterized differently depending on how PK is interpreted. When intercultural competence is regarded as PK, qualification is exemplified with knowledge that highlights migration as a motor for historical processes (Nordgren 2017). When PK is understood as disciplinary knowledge, it has resulted in a characterization of qualification as the methods and strategies used by historians (Bertram 2019). Regarding socialization, scholars connect this dimension to a heritage approach to history education, focusing on a transmission of facts and a collective memory (Bertram 2019; Puustinen & Khawaja 2021). When discussing socialization in relation to history education for interculturality, Nordgren (Nordgren 2021) suggests that two abilities should be considered: (a) the ability to deconstruct "myths of homogeneity" and to connect the past with the present and the future.

Among history educators, the dimension of subjectification has been interpreted as the subject's potential to empower students to become more emancipated and deliberative (Elmersjö 2021), critical (Puustinen & Khawaja 2021), and able to make reasonable and informed judgments (Bertram 2019). These qualities are often used to show how disciplinary aspects play a key role in history education (Bertram 2019; Puustinen & Khawaja 2021). The supporting argument is that such knowledge provides students with the ability to understand the interpretative nature of historical knowledge and thus are also able to relate to and use knowledge in more constructive ways. Subjectification in history education has also been discussed in terms of what the overarching aim regarding history education could or should be. Åström-Elmersjö argues that the inclusion of historical consciousness as a central concept in Swedish history curricula results in a focus on subjectification. This is because the concept directs attention to the history subject's potential to help students relate to society in a constructive manner (2021). Similarly, a meeting between contemporary issues and specialized historical knowledge has been suggested as a means to address the dimension of subjectification (Nordgren 2021). Elmersjö (2021) argues that the relationship between history education and Biesta's dimensions must be understood in relation to the specific context in which the education is embedded. He illustrates this by emphasizing that if history education is conducted in an individualistic society, its focus on individual rights might be perceived as mainly addressing socialization; however, when history education is conducted in a more collectively organized society, it may be interpreted as addressing the dimension of subjectification. This discussion on subjectification in history education resonates with suggestions that have been brought forward to include also third-order concepts into history education. It is argued that this could be a way to address a perceived absence of strategies to handle the relevance of history education (Edling et al. 2022). Relevance is here understood from the perspective of the student (Löfström 2023) and examples of third order concepts that have been proposed include identity (Jarhall 2020) and historical culture (Alvén 2021).

Our reason for discussing the empirical findings in the light of the categories suggested by Biesta is that a focus only on empirical data risks limiting our

understanding of what differences in historical knowledge mean in a broader sense, both individually and societally. While test scores and knowledge assessments offer valuable insights into disparities, they do not address why such differences matter for the development of students as learners and citizens. Biesta's framework provides a lens through which we can explore how differences affect students' educational trajectories in broader terms — whether they are effectively prepared to contribute to society (qualification), integrated into societal norms and values (socialization), or supported in developing autonomy and critical thinking (subjectification).

Methodological considerations

In this study, we use a combination of quantitative and qualitative approaches to further our understanding of the relationship between students' historical knowledge (factual, conceptual, and procedural knowledge) and the demographical variables of socio-economic status (SES), gender, and language proficiency. The latter is operationalized by what Swedish language course they take, with two courses available: Swedish as a Second Language (Sva), offered to students who do not have Swedish as a mother tongue, or Swedish (Sv), for students with Swedish as a mother tongue and students with another first language but whose proficiency is evaluated to be on a sufficient level for the Sv course.

We use responses on the national test in history that are sampled from two types of schools. The first group of schools is characterized by students with low SES parents and located in low SES environments. The second group is characterized by students with high SES parents and located in high SES environments.

The empirical material

To capture students' proficiency in handling each of the three aforementioned knowledge types, we use responses from the national test in history in Sweden. History is taught as a discrete subject in the last six years (4-9) of primary school, and the test is taken in Grade 9 when students are aged 15–16 years. The test is intended to be a corrective complement to the classroom assessments conducted by the teachers throughout the school year. Responses are collected from a total of 101 students of whom 45 attend high-SES schools and 56 attend low-SES schools. The responses are archived at each school, and we conducted a random sampling of tests at each of the sampled schools. The responses were photocopied, transcribed and imported into the Nvivo software. We have analyzed responses on two types of items: selected response items (SR), where students respond by choosing one of several alternatives, and constructed-response items (CR), where students construct their responses themselves. We have collected responses on one CR item to address conceptual knowledge and procedural knowledge respectively. To address factual knowledge, we use responses from one CR item and two SR items (see Appendices). One limitation of using these responses in the study is that they only provide us with fragments of the knowledge held by these students. We cannot, based on the responses, draw conclusions about

knowledge held on an individual level. However, we can use the responses to discuss patterns on a more general level and thus address possible differences between groups of students. The methodological procedures will be elaborated on in the following sections.

Sampling of schools

We do not possess specific information regarding the socio-economic backgrounds of the individual students at the schools. However, we do have data on each school's social and educational standing relative to other schools, which can be organized hierarchically, with schools exhibiting strong resources and academic performance at the top and weaker ones at the bottom. At both ends of this hierarchy, the socio-economic makeup of students is uniform (Dannefjord et al. 2022); therefore, in the selection process, we used the schools' positions in this hierarchy to ensure sampling from both high and low socio-economic status (SES) schools. While we cannot guarantee that every individual test comes from a student of either low or high SES, the likelihood is extremely high due to the social homogeneity of the selected schools. Furthermore, we lack information regarding the specific instructional methods, teaching strategies, teacher experiences, and social and disciplinary issues prevalent in each school. Nonetheless, we can confidently assert that our sample includes tests from students attending schools positioned at both the highest and lowest ends of the school hierarchy.

The selected-response items

To assess the students' pool of factual knowledge, we used two selected-response items (SR). In the first of these (see Appendix 2), the students are given the opportunity to select from a set of three historical processes of change. Each question presents a historical scenario, prompting the students to associate it with one of these three processes. The second SR item follows a different format (see Appendix 3). Here, the students are tasked with arranging their selection of responses within a matrix, with five time periods provided in the leftmost column as a reference. Within the item, students are presented with four lists containing (a) years, (b) individuals, (c) events, and (d) significant regions/states, respectively. Each entry in the lists is assigned a letter (A–F). The students' objective is to match each entry with a specific time period by placing the corresponding letter in the cell where the intersection occurs between the time period and category.

The constructed-response items

The students' responses on the CR item were transcribed and imported into Nvivo. The coding was completed using concept analysis, a variant of content analysis where a deductive approach with predefined categories is applied to the material (Schreier 2012, pp. 84– 86). The categories we used are based on previous research on history education and the types of knowledge that we address in this study. For each of the

items, codes were used to identify the extent to which each of the responses met qualities defined in previous research. Regarding students' access to factual knowledge, we scanned the documents looking for historical examples and what perspectives these could be related to (Rosenlund & Persson 2023). Regarding students' use of conceptual knowledge, we were looking for whether continuity and change were used separately or in relation to each other, as research indicate that to use them in relation is a sign of increase in quality (Counsell 2011). Also, we wanted to determine whether students characterized the examples of continuity and change that we identified in the responses (Rosenlund 2021).

Regarding procedural knowledge, we examined the responses, looking for evidence regarding students' understanding of the relationship between the source, the historical question, and the source's creation process (Rosenlund 2019). First, we counted the number of examples of historical content knowledge that we identified in the responses. In this process, we also coded each example according to what perspective it represented. An inter-rater assessment was made, using the percentage method (Stemler 2004), and there was agreement in 86% of the coded examples. After a consensus discussion, the remaining 14% was resolved, and the codebook was clarified in accordance with the discussion. Also, deviant cases (i.e., students who answered in an original way) and ambiguous cases (i.e., students whose answers were hard to interpret) were discussed among the researchers of the paper.

Statistical methods

To allow for a statistical analysis, the results from each student on the SR items were added together to create a total point (between 0 and 31). The points were then arranged into four groups. In a similar manner, each response on the CR items was arranged in four qualitative levels based on previous research.

To test the relationship between the three background variables – socio-economic status (SES), gender, and Swedish course – both simple linear and multiple linear regression analysis was conducted. To be suitable for these statistical procedures, the values were recoded into ordinal scale dummy variables (0/1). Thereafter, linear regression analysis was used to test the relationship between the three background variables – socio-economic status (SES), gender, and Swedish course – as well as the students' historical knowledge.

All items were tested using simple linear regression. In two cases, a bivariate linear model was tested. The two models combine (a) socio-economic status and gender, and (b) socio-economic status and language proficiency. The regression variables are presented in Table 1 below.

TABLE 1

Regression variables

Socio-economic status		
	N	%
SES1 (weak)	56	55.4%
SES2 (strong)	45	44.6%
Gender		
	N	%
Girls	53	52.5%
Boys	47	46.5%
Missing	1	1.0%
Swedish course: Swedish (Sv) or Swedish as a second language (SvA)		
	N	%
Sv	74	73.3%
SvA	26	25.7%
Missing	1	1.0%

Results

Results from quantitative analysis

The quantitative analysis is used mainly to address the first research question, namely, whether the factors of gender, language course, and socio-economic status have an impact on students' historical knowledge. It is important to note that the sample size is limited (n=101), which affects how the results can be interpreted. Moreover, the sample is not randomly selected, which limits what conclusions can be drawn. Caution should also be observed regarding how significance levels are interpreted. These should first be interpreted as indications rather than definitive results. A larger, randomized sample would be needed to draw more reliable and generalizable conclusions. The adjusted R2 value is used in the regression analysis to compensate for the small sample (Pallant 2020, p. 166). However, statistical significance is present in several cases, indicating a relationship between background factors. The threshold for statistical significance is drawn at the .05 level. This means that the probability that results are due to random factors is at most 5 percent. Tables presenting the statistical data can be viewed in Appendix 1.

Simple linear regression

All results regarding SES are significant on the .001 level, while no results regarding gender are significant. Results about language proficiency are significant regarding the three knowledge types – conceptual knowledge, procedural knowledge, and the aspect of factual knowledge we label as perspectives – but here, the explanatory values are notably lower when compared with SES.

First, regarding conceptual knowledge, the SES has an R2 value of .305 (indicating that SES has a large explanatory effect), while both language course and gender have much lower R2 values, and the results regarding gender are not significant. Regarding procedural knowledge, SES is still the most influential factor for explaining differences in historical knowledge R2=.277, but here, the Swedish course has a larger effect than it had in relation to conceptual knowledge (.102). When it comes to factual knowledge, SES has an explanatory R2 value of .477 for the results on SR items, .348 for number of examples in the CR item and .399 (reflecting the number of perspectives included in the CR item). In all these instances, gender has very low explanatory values, between .004 and .035.

Multiple regression

When comparing the degree to which gender, language proficiency, and SES impact students' understanding of the knowledge types, the results show a negative connection between lower socio-economic status and historical understanding. The results are similar regarding all three types of historical knowledge. The multiple regression analysis shows that the models' explanatory power decreases by adding language proficiency and gender to socio-economic status. However, there is one exception regarding procedural knowledge, where inclusion of gender slightly strengthens the model. When SES is compared with language course, the results are similar; the regression results show that the explanatory value of SES increases.

Conclusions from the statistical analysis

The numbers presented above indicate that SES has a stronger impact than language and gender on students' knowledge in history, and this pattern is the same regardless of the type of knowledge. Put differently, this means that difficulties that the students in the low-SES schools have, seem to be mostly connected to the socio-economic status of the school population, and not to the same extent to their gender or the language course they take. The language course is of some importance, but not at all to the same extent as SES.

In the following, we present the results from the qualitative analysis to provide a description of how the statistical differences between students play out when it comes to what they actually can and cannot do in history.

Results from the qualitative analysis

Having established that there is a difference in historical knowledge between students belonging to low and high SES groups, we now turn to a qualitative analysis of how these differences are manifested. Here, we present examples of student responses to the items in the national test. These items correlate with the different forms of historical knowledge presented in the theoretical framework (Anderson et al., 2001), so that in the first item, we present address factual knowledge, the following one conceptual knowledge, and the last is procedural knowledge. In the following section, we highlight both the similarities and differences between students in the high and low SES groups (i.e., high and low socio-economic status).

Qualitative analysis of student answers from high and low SES schools

The qualitative analysis is mainly used to address the second research question regarding how the factors manifest themselves in the student responses. Here, we illustrate the differences in historical knowledge that are identified between students attending high and low SES schools. To do this, the responses from two students have been selected, one from each SES group. The students are given the names Hiram and Louise; Hiram represents high SES schools while Louise represents low SES schools. The inclusion of the example of these two students is meant to provide a picture of the knowledge profile of an individual as it comes to light in their responses on the history test. Hiram and Louise were chosen as representative examples for the respective groups because each of them encapsulates the broader trends observed in the groups. This means that the differences between their responses on each of the items allow us to explore multiple and subtle nuances in historical knowledge. By focusing on these two representative students in relation to the three knowledge types, the qualitative analysis offers a coherent, contrasting, and in-depth comparison of how students' understandings of historical knowledge may vary depending on their socio-economic context. Moreover, focusing on students' answers strengthens the ethical dimension of the study by highlighting students' agency and giving space for their voices to emerge as a complement to the statistical analysis.

Factual knowledge – Explaining the consequences of the Industrial Revolution

To capture the students' factual knowledge, we use responses on both CR and SR items. The student's responses on CR items are presented with quotes, after which, we present how the qualities in the responses were coded. The results of the SR items are presented in Table 2.

TABLE 2

Result on SR items

Student	Item 4	Item 8	Total
Hiram (High SES)	11	19	30
Louise (Low SES)	8	12	20

As shown, Hiram has 50% more correct answers than Louise, which indicates that he has access to a larger pool of historical content knowledge. The title of the CR item that addresses factual knowledge is "Consequences of the Industrial Revolution". The instructions asked the students to write and reason about the consequences of the Industrial Revolution with the help of historical examples. Included in the instructions was an illustration of a locomotive (see Appendix 4) with the following text: "A drawing of Stephenson's locomotive *Rocket* in an American technology magazine from 1829". The instructions also explained that the answers will be evaluated according to the number of consequences, the type of consequences (e.g., political, economic, etc.), and finally, the duration of the consequences, for example, if the consequences were temporary or more permanent. One answer comes from Hiram, who belongs to the group with high SES:

> *One consequence was that there was greater urbanization and that more and more people moved into the cities to work as most new jobs were there. Another consequence was that farmers now could take care of larger fields and more and more people moved into the cities so that instead of before when there were maybe 50 people on 500 square meters, there were maybe now 10 people on 500 square meters. Another consequence of the industrial revolution was that things became cheaper, such as clothes which was good for people, as they were now mass-produced in factories instead of being produced by hand. One consequence of the industrial revolution that happened but continues was that Sweden got a better economy as Sweden had raw materials such as iron and wood that many other countries wanted to buy from us to use for their mass production and this continued for a long time as iron ore is a popular raw material in Sweden for other buyers and even today iron ore is important for the Swedish economy. One consequence that affected then was that it was difficult for farmers to take care of as much land as they had been given and then had problems keeping up with the harvests. But this was not such a big problem for very long as new methods and tools were quickly developed thanks to the industrial revolution.* (Hiram)

The answer from Louise reads like this:

> *There were many consequences during the industrial revolution you could lose power and lose your stuff during wars. If you had good machines and industries, other countries wanted them so they attacked those countries and took their stuff. But if you were rich it was difficult so you never went against them. But the rich went against the poor who went to Africa and invaded the whole country and made them slaves and took their stuff and the triangle trade started. The people from the USA and sold people from Africa to other countries.* (Louise)

Hiram's answer stands out as more knowledgeable, elaborate, and nuanced. In contrast to Louise's unidimensional, and in parts, historically problematic, response, Hiram shows three perspectives. For example, he provides an economics perspective when he addresses Sweden's export of iron as raw material to underpin the Industrial Revolution. He also shows a technological perspective when he mentions that new machines were invented that made harvesting more efficient. Hiram also applies a social perspective when he states that cheaper products affected people's living conditions.

This use of several perspectives reminds us of the higher levels in Denis Shemilt's event-space model, Drinking an ocean (p. 187).

Louise's response contains some parts that are problematic, for example, that countries were invaded because of their supreme industrial level. This and other similar statements in her response is an indication that her understanding of the Industrial Revolution is not in accordance with the agreed-upon knowledge regarding the Industrial Revolution. In conclusion, the answers from Hiram and Louise show that answers from high and low SES schools share some similarities, but the differences between the answers are more salient, for example, in the way that the answer from the high SES schools showed a range of different perspectives and examples, making the ramifications of the Industrial Revolution more complex.

Understanding continuity and change – Conceptual knowledge

The title of the last assignment analyzed here is "The view on homosexuality in Sweden – continuity and change". The instructions asked the students to use examples from different periods on a timeline when writing about continuity and change regarding attitudes towards homosexuality/homosexuals in Sweden. Included in the instructions was a timeline with connected boxes of pictures and text describing the view on homosexuality/homosexuals during five time periods: 1300–2000, the Middle Ages, the 1600s, the 1800s, the 1900s, and the 2000s (see Appendix 5). Finally, the instructions explained that the evaluation of the answer will focus on reasoning about continuity and change and the number of references to different periods. An answer from Hiram, who belongs to the group with high SES, is shown below.

> *If we start by looking at the change, we see that in the Middle Ages it was considered a sin and almost no one wanted to be homosexual as everyone wanted to go to heaven. In the 17th century, it became a major crime, when it was still not so appealing given that you could end up in prison. So up until now, homosexuality is not something you go out with. And that's how it remained for the most part during the 19th century, when it was considered a disease instead, which was a successful change as opinions on homosexuality became milder and milder. Then during the 1900s and 200s, the biggest change comes only in 1944 when the parliament decides that homosexuality is no longer a crime, this is then a big change as more and more people "dared to come out of the closet" the more time passed. And in 1974 there was another change and this was that the social board no longer labeled homosexuality as a disease. So now you could be homosexual without being sick, being a criminal or sinning. This meant that more and more people became homosexual as you could almost live just as you would have done if you were straight. 2008-2015, hate crimes against sexual orientation were the most reported. But there is no mention of it being the most reported in 2016, which means that there must have been a change as homosexuality became more and more accepted. Then in 2009 it became legal for same-sex couples to marry in church which was another change which meant that a gay couple could almost exactly live like straight couples. Moving on to continuity, we see that in the 14th century homosexuality was considered negative as it was a sin and continued to be negative in the 17th century as it was considered a crime. In*

> *the 19th century, homosexuality continued as something negative, in this case a disease. Homosexuality was continuously seen as something negative until the 20th century. Then in the 20th century it was not considered a disease or a crime and in the 21st century homosexuals were even allowed to marry. However, there were a lot of hate crimes against homosexuals so the continuous pattern of thinking homosexuality is bad or dangerous is still there, but it is disappearing. That these negative thoughts about homosexuals have some ... continuity and homosexuality therefore continue to be seen as something bad* (Hiram).

In contrast, we show the answer from Louise, who belongs to the group with low SES:

> *It has always been the case that homosexuals have been hated and murdered because of their orientation and in the church you were not allowed to marry if you were gay because it was a sin. Time goes by and it gets worse for homosexuals, it becomes a crime to be gay and in the 19th century people started to see homosexuals as a disease, if you were gay you could be killed or go to prison. But in 1944 the Swedish Parliament decided that it was no longer a crime to be gay and you could go out on the streets and keep your word and in 1979 the National Board of Health and Welfare decided that you could not call homosexuals a disease and that you could not be against them, they are now like ordinary people but in the 21st century the same orientation can get married in church and it is not just men and a woman who should get married in church or go out and hold hands. (Louise)*

The analysis of the answers is guided by the previously presented codes. In line with the requirements of the assignment, both Hiram's and Louise's answers consider continuity as well as change when reasoning about the different periods. For example, both answers comment on how homosexuality has been an important issue for the church but that the view on homosexuality has changed from intolerance to acceptance. However, there are also some important differences between the answers. First, Hiram's answer provides a more well-developed and detailed response than Louise's. Second, Hiram's response shows a more varied way of expressing continuity and change, giving different examples of how the view on homosexuality/homosexuals has both changed and continued throughout history. For example, Hiram interpreted changes in the way that homosexuality is viewed as progress, pointing to how the treatment of homosexuals became milder in the 19th century and onwards, but he also shows how the change could be interpreted in terms of size ("a big change").

Additionally, Hiram also demonstrated a nuanced understanding of continuity, pointing to how it could be interpreted as stagnation, given that the status quo held a discriminatory view on homosexuality which has persevered over the centuries. In conclusion, the answers from Hiram and Louise show that answers from high and low SES schools share some similarities, for example, in the way that both answers consider change and continuity, but some differences stand out, for example, in the way that Hiram (high SES) was able to give a more well-developed and nuanced answer.

Evaluating historical source material – Procedural knowledge

The title of third CR item in this analysis is "A source about woman's right to vote from 1905". In the instructions, students were asked to answer the following question: A historian is writing a paper about a woman who fought for women's right to vote in Sweden. She evaluates the book, *Why Should Women Wait?*, as both **trustworthy** and **relevant.** How could she **argue for/motivate** that?[1] Included in the instructions is a text with the following information: "Frida Steenhoff wrote in the year 1905 a book with the title, *Why Should Women Wait?*. The picture shows the front cover of the book" (see Appendix 6). The answer from Hiram, the student belonging to the group with high SES, is given below.[2]

> *The book is credible because it was written at the same time they were fighting for the right to vote, so it is written from the same time so it is a first-hand source so it hasn't been told in several stages and words the story then changed. Another thing that makes the source credible is that it is written from a woman's perspective, whereas if it was a guy he might think it wasn't so bad that they didn't have the right to vote and not change it. The book is relevant because it was written in the same period as this. It's also relevant because it's a woman talking about women's right to vote. And because it is written from a talk about women's right to vote.* (Hiram)

The answer from Louise (low SES):

> *The book is credible, because it is credible because the book above on the front page clearly states that the speech was given in Stockholm on May 23, 1905 and it looks old and blurry. It must be true because in Sweden long ago no women were allowed to go to school or work so someone must have stood up for women as it has been in many countries. The book is relevant, because many people should know what happened during that time and take up knowledge about it.* (Louise)

Both answers tie the book to a specific time, which is important to emphasize when evaluating historical source material. However, the rest of the answers point to differences in how the historical source material has been evaluated. The response from Louise, representing low SES students, uses less relevant information when evaluating historical source material, for example, with the comment that the book looks old and blurry and that people must stand up for women since they, historically, have not been able to go to school or work. We argue that this information is less relevant to include in the response, as it is less useful when evaluating the trustworthiness of the source material in relation to the historical question (Wineburg 1994).

In contrast, the response from Hiram (high SES schools) demonstrates a more nuanced way of evaluating the source material, pointing to several perspectives in the evaluation that could be seen as relevant for understanding the source material. For example, Hiram interprets the characteristics of the author and their relevance for the

[1] The words in bold appear as bold in the original text.
[2] The answers in this section, represented by students Hiram and Louise, were originally written in Swedish. The extracted quotes have been translated into English by the authors of this paper.

historical question, resulting in a statement on the importance of the female perspective. Also, Hiram describes the context surrounding the book, commenting on women's struggle to facilitate women's right to vote in Sweden. Finally, he uses a concept related to the evaluation of historical source material, "a first-hand source", thereby showing an understanding of the book as an original source. In conclusion, the answers from Hiram and Louise show that answers from high and low SES schools share some similarities in that both answers located the historical source material to a specific time in history. However, the differences here emerge more clearly, in that the historical source material is evaluated concerning the author, the context, and its origin.

Concluding remarks regarding qualitative differences in students' answers

An overall analysis of the similarities and differences between student answers shows some trends that persist throughout the three assignments, thereby facilitating an overall conclusion about the differences in the historical knowledge of students belonging to high and low SES schools. The analysis of the responses from the two SES groups, as exemplified with Hiram and Louise, show that students in high SES schools express factual knowledge in a more extensive and multifaceted way, while their peers in low SES schools seem to have access to a more limited pool of factual knowledge.

Knowledge type	High SES schools	Low SES schools
Factual	Many and multifaceted examples	Few, simplistic, and some problematic examples
Conceptual	Bridging the concrete and abstract in nuanced ways	Difficulties in balancing between concretion and abstraction
Procedural	Ability to execute disciplinary strategies	Difficulties in execution of disciplinary strategies

Students in the high SES schools use conceptual knowledge in nuanced ways to bridge concrete and abstract elements while low SES students' use of concepts are more simplistic. Finally, the high SES students apply procedural knowledge in ways that indicate an awareness of the disciplinary strategies necessary for constructing historical knowledge, while students in low SES schools seem to have great difficulties in executing such strategies. These differences are consistent between the groups, although there are some variations within each group.

Conclusions

We have examined students' proficiency regarding three types of knowledge: factual, conceptual, and procedural knowledge. We have established that there are

substantial differences between students from high and low SES schools regarding the extent to which they are able to show proficiency in different aspects of historical knowledge. In the following, we discuss possible implications resulting from these differences using Biesta's three dimensions of education: qualification, socialization, and subjectification. We argue that the identified differences affect the possibilities for students to relate constructively to each of the dimensions and that each of the three knowledge types are important for an individual's ability to grow within each of the dimensions. In Table 3, we present tentative suggestions regarding how historical knowledge from the items presented above representing the three types of knowledge can be related to Biesta's three dimensions.

In terms of qualification, the knowledge to which students are exposed depends on the content selected by the teacher. In this discussion, we hypothesize that the content of education reflects the intentions in the formal curriculum. This means that the students whose responses we have analyzed should have met a historical frame of references including various perspectives, conceptual knowledge (including the conceptual pairs of continuity and change, and cause and consequences). Lastly, they should also have met procedural knowledge, learning how sources can be used to construct historical knowledge. This way to view the role of history education in the dimension of qualification falls in line with how it has been addressed previously (Bertram 2019; Nordgren 2021). On average, students like Hiram, who represent high SES schools in our sample, have acquired the knowledge types prescribed in the curriculum, meaning that they can navigate the dimension of qualification well and thus have the potential to act in accordance with the higher levels described in history education research regarding each of the knowledge types. This could be to view the past as a kaleidoscope (Shemilt 2009), characterize interrelated patterns of continuity and change (Rosenlund 2021), or take subtext into account when interpreting a source material (Wineburg 1994). Louise and other students attending the low SES schools struggle with all three types of knowledge, address the lower levels described in history education research, and thus risk being excluded from the dimension of qualification.

Regarding socialization, educators have discussed that having acquired common historical frames of reference, students have access to a public memory and thus have the potential to participate in discussions with historical connotations (Puustinen & Khawaja 2021). Also, we argue, they have been exposed to the norms and values that are, implicitly or explicitly, conveyed in the educational content, which is an aspect not explicitly addressed in previous research. In addition to the more common approach to socialization – that it is about internalizing norms and values like democracy and equality – also argue that conceptual and procedural knowledge have their own socializing impacts. This is because it is likely that students, when confronted with conceptual and procedural knowledge, are socialized into a way of thinking and relating to knowledge in a more complex manner. Nordgren's (2017) call for the deconstruction of myths touches on this, but we see the socializing aspect more as a disposition than as having specific skills.

TABLE 3

Historical knowledge types and their functions in educational dimensions

	Factual knowledge E.g., Describing consequences of the Industrial Revolution	**Conceptual knowledge** E.g., Discussing continuity and change regarding attitudes towards homosexuality	**Procedural knowledge** E.g., Evaluating a historical source about women's right to vote
Qualification	Access to the historical content prescribed in the curriculum. Knowledge about the Industrial Revolution, its causes and consequences.	Knowledge to use specific concepts and a conceptual (2nd order) understanding. Continuity and change.	Knowledge about how historical knowledge is created and validated. The relationship between a source, its creation a historical question.
Socialization	Factual knowledge helps students to participate in democratic conversations with other members of society, sharing a common cultural heritage and outlook on the development of society.	Conceptual knowledge invites students to participate in contexts where abstract thinking is commonplace.	Procedural knowledge brings the potential to participate in a community of historical disciplinary practice.
Subjectification	Factual knowledge helps students to an extended repertoire of possible actions and outcomes.	Conceptual knowledge allows for ways to organize a complex reality into manageable constructs. Conceptual knowledge is often transferable between contexts. This provides students with the potential for more nuanced understanding of the world.	Procedural knowledge provides the potential to understand that knowledge and narratives are constructed and (should be) based on facts. It can also lead to the understanding that there are various ways to interpret and understand the subject matter and accept temporal confusion and that which remains undetermined, leading to the student postponing premature judgments for more reflective ways to engage with the world.

Regarding the dimension of subjectification, the historical content has not attracted any greater interest among history educators. Elmersjö highlights the need to connect the past with the present, something that requires a historical frame of reference (2021), but the content's role in in the subjectification process as such is not addressed explicitly. We argue that students, through historical content, have the opportunity to understand what historical achievements have been possible and less possible. Through conceptual knowledge, they have the opportunity to identify and problematize patterns and structures in processes with historical connotations in society. Conceptual knowledge also makes it possible to acknowledge the complex interplay between phenomena like agency and structure, and cause and consequence. With access to procedural knowledge – the knowledge type that has been most frequently connected to this dimension (Bertram 2019; Puustinen & Khawaja 2021) – they can critically and constructively engage with historical knowledge and phenomena, and perhaps with knowledge in other domains as well. Additionally, a student can learn that there are various ways to interpret and understand a subject matter, thus accepting the confusion that entails from encounters with historical narratives that goes counter to one's previous beliefs. Such understandings can also enable the student to postpone premature judgments and open up for more reflective ways to engage with the world.

Hiram, and his peers in high SES schools, have the possibility to use the acquired knowledge to engage actively and in nuanced ways with the issues that he meets that have historical connotations. It is also likely that he will be able to decode the socialization process that he and his classmates are subject to. Louise, not having command over the knowledge types, will have greater difficulty acting in reflective ways when being confronted with issues related to history. Using the terminology of Jörn Rüsen (2005), she is likely to act in society using a *traditional historical consciousness*, which is likely to hinder her in becoming an autonomous subject in her own life. Moreover, she is unlikely to be able to decode the socialization process in education, which also diminishes her possibility for autonomy.

We acknowledge that the examples presented in Figure 1 are simplifications; therefore, we use it for analytic purposes only. As indicated above, combining Biesta's suggested dimensions of education with an understanding of historical knowledge as consisting of factual, conceptual, and procedural knowledge results in not just nine possible interactions but crossover alternatives as well. As indicated above, how a student is affected in the dimensions of socialization and subjectification is conditioned by, for example, her understanding of factual knowledge about the time period of an event, her conceptual understanding regarding important aspects of the event, and also her understanding regarding how our knowledge regarding this event has been constructed and validated.

In conclusion, we want to draw attention to not only the differences that are identified between the students attending the low and high SES schools, as exemplified by Louise and Hiram, but also that, by using Biesta's dimensions as an analytical lens, these differences are likely to accompany the students into the dimensions of socialization and subjectification. Based on this, we argue that students in environments characterized by low SES will struggle with two aspects relevant for them as individuals

and also, by extension, for society as a whole. On an individual level, low SES students will have problems relating constructively to issues involving the dominant historical culture. On a societal level, first, a substantial share of individuals will be at risk of both feeling and being detached from important discussions with historical connotations. Second, a substantial share of individuals will not have developed into their full potential as autonomous historical beings, meaning that a valuable source for democratic development will remain unused.

Implications and discussion

We argue that through an increase in access to the three knowledge types addressed in this study (factual, conceptual, and procedural knowledge), the possibility of becoming autonomous subjects also increases. This is because the key to emancipation lies in education, and history education bears with it knowledge that can help students to develop into autonomous subjects. By using examples from two individual students, Hiram and Louise, we are able to move from the concrete, empirical level to a more abstract, philosophical realm to reflect on the consequences of the identified educational inequality, which is mainly the result of socio-economical differences. In the following, we discuss two interrelated aspects: one on a meta, structural level and one on micro, educational level.

Research indicates that there has been an increase in the gap between high- and low performing students in Sweden (Löfstedt 2019). On a structural level, this is a factor that must be addressed. While much of the societal discussion regarding educational (un)equality has been related to the factors of gender and ethnicity (in this study, operationalized by the language course), our results indicate that socio-economic status (SES) is a more influential factor. Unfortunately, there seems to be an increasing trend of student segregation based on SES (Fjellman & Hansen 2024) and it is crucial that this issue is addressed to improve the possibilities for students attending low SES schools to become autonomous subjects.This is at its core, an ideological and political issue, and as we see it, there are two courses of action: either measures are taken to increase the heterogeneity of student populations, meaning that pupils from both low and high SES households are taught in the same classrooms, or actions that increase the educational impact in low SES environments are put into place.

To increase educational impact, students need a history education that can better provide them with factual, conceptual, and procedural knowledge than what currently is the case. One course of action that could be beneficial is if teachers were made aware of the potential inherent in history education, namely, that it can empower their students to become autonomous subjects who are able to be agents in their own lives. What classroom practices that could, or should, characterize such education is not within the scope of this study. However, we would like to use the conclusions presented here as the foundation for a call for increased research on history education in classrooms characterized by low SES and other factors that have negative influences on educational attainment. This call is the result of our perception that much important and successful

research regarding history education is carried out, but mainly in more privileged classrooms. This needs to be complemented by research that can increase our knowledge regarding what teaching strategies can be helpful for providing disadvantaged students with similar possibilities to develop into historically autonomous subjects.

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