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Research article

Sticking to tradition: history content distribution in Czech school curricula

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Abstract

This study examines the distribution of historical topics within Czech school curricula. Following a pre-registered methodology, a randomised sample of 321 Czech schools was selected, and history topics were extracted and coded according to categories outlined in the Czech National Curriculum. The analysis indicates that schools predominantly adhere to established curricular patterns, with over 95% incorporating broader themes and 80–90% including specific topics. To explore the relationships and patterns of topics classified as 'other', t-distributed stochastic neighbour embedding was used for dimensionality reduction. This approach enabled a detailed visualisation of high-dimensional vector representations of topics. Subsequently, k-means clustering was applied to identify distinct groupings of history content, providing insights into additional content adopted by schools beyond the prescribed framework. Despite strong adherence to the curriculum, there is a noticeable trend of shifting content to earlier grades, with additional topics often aligning with textbook content, focusing on the Czech lands in prehistoric times and historical events in England, France and the USA.

Keywords history education; Czech school curricula; content distribution; national curriculum

Introduction

At the end of 2024, the Czech Ministry of Education ratified a new National Curriculum for primary and lower secondary schools, marking the most significant reform of the Czech educational system since the adoption of the previous National Curriculum in 2004. The new framework continues the tradition of constructivist principles and competency-based learning objectives. However, despite growing support in recent curriculum research favouring knowledge-rich approaches (Surma et al., 2025) and the integration of powerful knowledge into history education (Chapman, 2021a), the revised Czech curriculum does not align with this trend. Instead, it adopts an even more pronounced constructivist stance than its predecessors, omitting detailed subject content and focusing solely on expected learning outcomes. This approach reflects the prevailing views among Czech history education scholars and practitioners. As Janková (2022) notes, there appears to be a broad consensus within the Czech educational community in favour of competency-based and enquiry-led teaching.

This study engages with the process of implementing new curricula by aiming to document and describe the current state. It seeks to assess the level of alignment between the National Curriculum and school curricula concerning history topics, to examine the distribution of these topics across different grades and to identify additional topics introduced by schools that are not included in the National Curriculum. The goal is to create a snapshot of the current state to facilitate future comparisons regarding the influence and implementation of the new curriculum.

Context and background

Over the past 20 years, constructivist national curricula have been in place in Czechia, replacing the previously unified teaching plans. The Czech National Curriculum was initially approved in 2004, implemented in 2005, and most recently revised in 2023 to incorporate advancements in computer science and computational thinking. Labischová and Gracová (2016) argue that the primary purpose of these national curricula is to overcome the lingering influence of communism and to cultivate democratically minded citizens. Educational goals have shifted from mere knowledge transmission to constructivist approaches and a skills-based curriculum. The National Curriculum defines key competencies, which are broader transferable skills, and obligatory subject-specific expected outcomes. Subject content is mentioned, but only as a recommendation (RVP, 2023).

The National Curriculum introduced in 2004 established a new educational system operating on a two-level curriculum model - national and school-based. The National Curriculum outlined obligatory expected outcomes and key competencies in broad terms, while the school curricula provided more precise specifications and defined subject content, which became mandatory for schoolteachers. Schools have the flexibility to adapt the national framework to their context and to align it with their specific needs and orientation. Although this curricular design has been accepted among scholars, it has not been as well-received by teachers and the public (Beneš, 2005; Beneš and Gracová, 2015).

Compared to other European and post-socialist countries, the Czech curriculum system shares certain similarities. Slovakia, due to its long-shared history with Czechia, follows a comparable two-level model, incorporating both national and school-level curricula. A high degree of school autonomy characterises both systems. However, some distinctions exist – for example, Slovakia enforces a more prescriptive allocation of instructional hours per subject and a more centralised process for textbook approval (Eurydice, 2024b). Given these structural similarities, findings from one system are often relevant to the other, and they tend to be reflected in policy discussions and educational practice. This is particularly evident considering Slovakia's recent curriculum reform, with the latest national framework being introduced in 2023.

Poland also employs a two-level system, combining a national core curriculum (Podstawa programowa) with school-level planning. However, in contrast to Czechia, the Polish framework is significantly more prescriptive, specifying compulsory subjects and exact weekly lesson hours from Grade 4 onwards. This leaves Polish schools with far less curricular autonomy. While Czech schools can tailor content, subjects and time allocation within the outcome-based Rámcový vzdělávací program pro základní vzdělávání (RVP), Polish schools focus primarily on implementing centrally defined content and structure (Kolanowska and Górowska-Fells, 2024). This contrast reflects differing national approaches to balancing standardisation and school-level flexibility.

Estonia follows a two-level curriculum model, similar to Czechia, with a National Curriculum for Basic Schools that emphasises general competencies and defines clear learning outcomes. Unlike the Czech RVP, the Estonian framework is more structured, specifying compulsory subjects and weekly lesson hours. However, Estonian schools retain flexibility, designing their own curricula and adjusting subject structures and timetables, provided that they meet national learning outcomes (Eurydice, 2024a). This blends national guidelines with school-level adaptability, distinct from both Czechia's high autonomy and Poland's rigid structure.

Given these similarities, the methods used in this study to analyse school curricula are highly relevant for researchers in other countries. The findings can be applied to other contexts to explore how curriculum frameworks balance centralised standards with local autonomy, offering valuable insights for curriculum development and policy reforms worldwide.

Regarding the implementation of the Czech 2004 curriculum, Jireček (2023a, 2023b), Janík et al. (2018) and Kostolanyova et al. (2023) observe that teachers adopted the new curricula with reluctance, partly due to the lack of methodological support and partly because of its constructivist approach. Although the National Curriculum anticipated that teachers would focus on achieving the expected outcomes, in practice, teachers remained more concerned with the content itself. The absence of methodological support, coupled with teachers' reluctance and the significant inertia within the Czech educational system, along with a general wariness of change, meant that Czech schools did not transform as extensively as the authors of the curriculum had hoped. School curricula often merely replicated the old content in new documents, rather than applying the expected constructivist outcomes.

In recent years, the Czech Ministry of Education has initiated the implementation of the Strategy for the Education Policy of the Czech Republic up to 2030+ (Jindřich et al., 2020). This strategy aims to modernise Czech education by shifting the focus to competency-based learning, reducing inequalities and supporting teachers, ultimately creating an adaptative system that prepares individuals for the twenty-first-century world. This involves transforming educational content and methods, promoting digital literacy and fostering collaboration between schools and experts.

As part of the implementation of this strategy, a process was initiated to create new national curricula. The primary goals were to eliminate redundant and unnecessary content, enabling schools to focus on the most important areas, and to teach them in depth (NPI, 2023; see also https://prohlednout. rvp.cz/). The approach continues to be based on constructivist principles with competency-oriented expected outcomes, adopting an even more radical stance by omitting subject content entirely. Content is intended to be specified at the school level within their curricula.

However, in 2024 the process of creating new national curricula faced criticism from two directions. A small number of scholars and professional groups - for example, High (2025) and Orság (n.d.) advocated for a more knowledge-rich curriculum, in line with current trends (Surma et al., 2025). Nevertheless, this perspective remained in the minority, as the majority of Czech scholars continued to support a constructivist framework. The major criticism centred on the implementation process critics highlighted the reassignment of nearly completed curricula without sufficient public and expert discussion, as well as the lack of consideration for the practical context of Czech schools. They argued that imposing unrealistic conditions on schools would only perpetuate the current state, and would widen the gap between the intended and implemented curriculum (Asociace pro didaktiku dějepisu, 2024). Notably, some of the critics were themselves co-authors of the revised curriculum, underscoring that their concerns were directed primarily at the process rather than at the content of the reform.

Both issues are linked to the lack of data from schools that map the current situation. The Ministry of Education lacks an analysis of the curricula implemented in schools, making it difficult to evaluate changes to the National Curriculum. Due to the absence of a requirement for schools to upload their curricula in an easily analysable format, it is challenging to determine how schools specify the national framework and what content they prioritise.

Objective of the study

Considering the recent revision of the Czech National Curriculum for elementary and lower secondary education, and the absence of detailed subject matter specifications, the following research questions were formulated:

- RQ1. To what extent do schools adhere to the history content recommended by the current Czech National Curriculum?
- RQ2. To what extent do schools maintain the traditional distribution of history curriculum content as outlined in widely used textbooks?
- RQ3. What history content topics, absent from the current Czech National Curriculum, are incorporated by schools into their curricula?

Literature review

Curricular documents are among the most influential tools available to governments and policymakers for shaping education. Consequently, it is unsurprising that scholars have devoted considerable attention to curricula and their impact. Over the past two decades, constructivism has been the predominant approach in curriculum design (Biesta and Priestley, 2013). However, there is a current trend towards more knowledge-based and content-rich curricula (Surma et al., 2025), which is also gaining traction within the history education community (Chapman, 2021b).

Similarly, the Czech National Curriculum is frequently a subject of research. Both qualitative and quantitative studies have a long-standing tradition among Czech scholars. Kaleja (2019) examined the role of schools in implementing state-level curricula while adapting them to their specific contexts. He highlights the crucial role of teachers in cultural and social transmission through the application of the curriculum.

Research frequently concentrates on specific subjects or areas within the curriculum. For instance, Spurná et al. (2020) have analysed the ongoing revision of the geography curriculum in Czechia, identifying inconsistencies between educational objectives and their implementation. Employing Catling's (2014) typology, they discovered a predominance of the globalist perspective at the secondary level, a misalignment of curriculum perspectives across different school levels and discrepancies between stated objectives and expected outcomes.

Kostolanyova et al. (2023) investigated the experiences and feedback of Czech primary school teachers (N = 142) following the first year of a two-year transition period implementing a new informatics curriculum centred on computational thinking. The results indicated increased support for the new curriculum and improvements in school equipment. However, they also revealed ongoing concerns among teachers about their subject knowledge and didactic skills, underscoring the need for more tailored and individualised training.

Kácovský et al. (2021, 2023) conducted comparative analyses of science and mathematics curricula across multiple countries, focusing on learning outcomes at the lower secondary level (ISCED 2). Their findings reveal significant differences in the number and structure of obligatory learning outcomes, with Slovak and some other European national curricula being more extensive than the Czech curriculum. Despite these variations, cognitive demands, as assessed using the revised Bloom's taxonomy, were similar. However, higher-order cognitive processes and metacognitive knowledge were under-represented. Additionally, the studies highlight a lack of explicit learning outcomes related to scientific inquiry, ICT use, experimental work and data analysis, suggesting a need for stronger integration of these elements into national curriculum documents.

Research on history curricula largely remains within the Czech academic sphere, being predominantly published in Czech. However, this article presents the most significant findings. Labischová and Gracová (2016) analysed the state of history didactics in the Czech Republic, exploring its evolution post-1989, national curriculum priorities, university-level didactics and international collaborations. They note a shift from ideological narratives to interdisciplinary and inquiry-based teaching, although structural issues persist, such as insufficient didactic research, limited empirical studies and a lack of specialised academic journals. The study also identifies challenges in curriculum design, particularly the cyclic repetition of historical content without fostering deeper skill development. Empirical research indicates that traditional teaching methods prevail, with limited use of historical sources, and suggests that actual teaching conditions may be worse than reported due to selection bias in research participants.

Jireček (2023a, 2023b) examined changes in history education in Czech lower secondary schools following a minor revision of the National Curriculum (RVP) in 2022. It finds that the total number of history lessons has decreased from eight to seven, and that modern history remains under-represented, with the ninth grade expected to cover over a hundred years of history. The author highlights the stability of history as a standalone subject, refuting concerns about its integration into broader curricula. The research also reveals that teachers tend to resist curriculum changes due to lack of preparation, bureaucratic burden and reliance on textbooks. Despite minor shifts, the study concludes that the coverage of contemporary history has remained largely unchanged over three years, raising questions about whether a greater focus on modern history could make the subject more engaging for students.

Methodology

Dataset description

To obtain a representative sample of history curricula from lower secondary schools, we defined the school population using the following criteria:

- The school is listed in the Czech Ministry of Education School Register, and it is therefore required to adhere to the national curricula. This requirement applies to all school types, including public, private and religious institutions; hence, we did not limit schools by type.
- 2. The school is fully organised, encompassing both elementary and lower secondary grades, corresponding to ISCED Levels 1 and 2.
- 3. The school had a non-zero student enrolment in the most recent academic year.
- The school qualifies as a standard institution within the Czech educational system (that is, the school type in the M3 report is B10), excluding practical schools for students with intellectual disabilities.

Data on schools were sourced from the spring 2024 edition of the M3 report, which is published biannually by the Ministry of Education. This report was accessed through the Czech Law on Free Access to Information (Act No. 106/1999 Coll.), and it is included in the dataset available to facilitate replication of our findings. Based on these criteria, the final population comprised 2,486 schools.

The study employed proportional stratified sampling based on the number of students enrolled at each school, as it was hypothesised that school size could significantly influence the curriculum due to varying human resources. The aim was to include an equal number of small, medium and large schools in the sample. To create strata based on school size, Jenks natural breaks were utilised, minimising variance within strata and maximising variance between them (see Figure 1). The required sample size for each stratum was calculated using Cochran's equation, ensuring that population parameters could be estimated with a specified level of precision, confidence and variability. An R script was used, with a fixed random seed to select the sample of schools, ensuring reproducibility (Field et al., 2012). Details of the strata distribution, including the number of schools and sample sizes, are presented in Table 1.

Stratum	Number of schools	Sample size	Median students
1 (small schools)	1,182	158	164.0
2 (medium schools)	864	116	400.5
3 (large schools)	440	59	641.0
Total	2,486	333	

The Czech School Act mandates that school curricula be publicly accessible. However, this often means that access is limited to offline availability in the school office, which was found to be impractical for mass processing. To obtain the curricula from the sampled schools, the following steps were employed: (1) a search was carried out for publicly accessible curricula on school websites, succeeding with 59% of schools; (2) unofficial email requests were sent for the curriculum or relevant sections, achieving success with 13% of schools; (3) finally, official requests were submitted under Czech Act No. 106/1999 Coll. on Free Access to Information, with a success rate of 24%. This law requires publicly funded schools to provide remote access to requested internal documents, including their curricula. However, this obligation does not extend to private or religious schools.

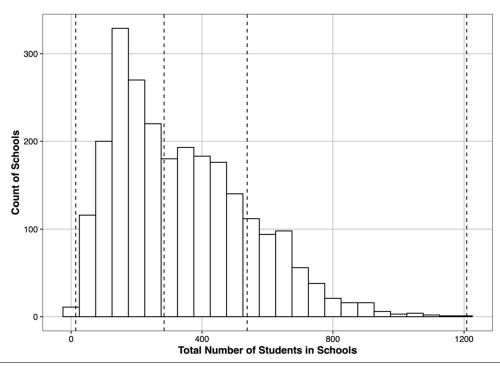


Figure 1. Distribution of student enrolment across schools in the population, with strata boundaries determined using Jenks natural breaks

From July to November 2024, 321 curricula accounting for 96.4% of the sample were obtained (Table 2). Two schools declined this request due to their status as non-public institutions, and ten schools did not respond to the official request. These cases were not escalated to a higher authority, as the proportion of returned curricula was deemed sufficiently high to ensure the reliability of the study.

Table 2. Sources of school curricula

Source	Count	Percentage
Website	198	59.46
Email request	43	12.91
Official request	80	24.02
Returned curricula	321	96.40
Refused	2	0.60
No response	10	3.00
Total	333	100.00

Schools provided their curricula in various formats, such as PDF, HTML, .docx, .doc and XLSX. Often, the curricula were divided into multiple files by subject or grade. To standardise the data for subsequent processing, all curricula were manually converted into PDF format, consolidating multiple files into a single document when necessary. To ensure the reproducibility of the study, these PDF curricula are included in the supplementary dataset accompanying this research.

Coding process: extracting and labelling

To process the input data, a subsequent study was conducted to identify the most effective method for extracting history content from various curriculum formats. Large language models (LLMs) were utilised to code this content, using the Czech National Curriculum as a reference table for broader themes, such as historical eras, and specific topics (see Table 3 for the coding).

Table 3. History topics defined in the Czech National Curriculum (Source: RVP, 2023)

Code	Theme/topic
A	HUMANITY IN HISTORY
A1	the importance of studying history, obtaining historical information; historical sources
A2	historical time and space
В	THE ORIGINS OF HUMAN SOCIETY
B1	humans and society in prehistory
С	EARLIEST CIVILISATIONS. ROOTS OF EUROPEAN CULTURE
C1	the oldest ancient civilisations and their cultural legacy
C2	ancient Greece and Rome
C3	Central Europe and its ties to the ancient Mediterranean
D	CHRISTIANITY AND MEDIEVAL EUROPE
D1	the new ethnic composition of Europe
D2	the formation of states in Eastern and Western Europe and their specific developments
D3	Islam and Islamic empires influencing Europe (Arabs, Turks)
D4	Great Moravia and the Czech state, their internal development and position in Europe
D5	Christianity, the Papacy, the Empire, the Crusades
D6	structure of medieval society, functions of individual social classes
D7	culture of medieval society – Romanesque and Gothic art and education
E	DISCOVERIES AND CONQUESTS. BEGINNINGS OF THE MODERN ERA
E1	Renaissance, humanism, Hussite movement, Reformation and their spread across Europe
E2	overseas discoveries and the beginnings of global conquest
E3	the Czech state and great powers in the fifteenth to eighteenth centuries
E4	Baroque culture and the Enlightenment
F	MODERNISATION OF SOCIETY
F1	the French Revolution and the Napoleonic era, their impact on Europe and the world; the founding of the USA
F2	industrialisation and its consequences for society; the social question
F3	national movements of large and small nations; the formation of the modern Czech nation
F4	revolutions of the nineteenth century as a means of solving political, social and national issues
F5	political currents (conservatism, liberalism, democracy, socialism), constitution, political parties, civil rights
F6	cultural diversity of the era
F7	conflicts between great powers, colonialism
G	THE MODERN ERA
G1	the First World War and its political, social and cultural consequences
G2	the new political order in Europe and the role of the USA; the formation of Czechoslovakia, its economic-political development, and social and national issues
G3	International political and economic situation in the 1920s and 1930s; totalitarian systems – communism, fascism, Nazism – consequences for Czechoslovakia and the world

Table 3. Cont.

Code	Theme/topic
G4	the Second World War, the Holocaust; situation in our countries, domestic and foreign resistance; political, power and economic consequences of the war
Н	A DIVIDED AND INTEGRATING WORLD
H1	the Cold War, division of the world into military blocs represented by superpowers; political, economic, social and ideological competition
H2	Internal situation in Eastern Bloc countries (with selected examples compared to the characteristics of Western countries)
H3	Development of Czechoslovakia from 1945 to 1989, creation of the Czech Republic
H4	Collapse of the colonial system, the non-European world
H5	Problems of the present
H6	Science, technology and education as factors of development; sports and entertainment

We discovered that LLMs were inconsistent in extracting data from PDF files, necessitating manual extraction of history content. However, the LLMs performed well in dividing the extracted content into individual topics and labelling these topics with codes derived from the Czech National Curriculum. The gpt-4o-2024-08-06 model yielded the best results, achieving an F1-Score of 0.90 for topic segmentation, indicating a good balance between precision and recall compared to a human coder. The content labelling results were evaluated using Fleiss' kappa to assess agreement with the human coder. For broader theme labelling, Fleiss' kappa was 0.90 (p < 0.001), indicating nearly perfect agreement, and 0.76 (p < 0.001) for more specific topic labelling, indicating substantial agreement (Kaleta, 2024).

Due to the strong performance of the gpt-4o-2024-08-06 model and the impracticality of manually coding the extensive amount of history content, we utilised the outputs of this model for our study. The splitting and labelling results from the apt-40-2024-08-06 model are included in the supplementary dataset accompanying this research.

Dimensionality reduction and clustering of history content

Principal component analysis (PCA) was initially considered to analyse the distribution of history topics classified as 'other' by previous coding (Field et al., 2012). However, to better capture the semantic relationships and underlying patterns, we employed t-distributed stochastic neighbour embedding (t-SNE) for dimensionality reduction. This approach allowed us to visualise the high-dimensional vector representations of topics in a two-dimensional space (Wattenberg et al., 2016).

The original topics from school curricula were converted into vectors using OpenAI's text-embedding-3-large model. This conversion enabled a semantic comparison of topics, facilitating the analysis of underlying patterns rather than specific forms (J. Wang et al., 2023; L. Wang et al., 2024).

Following dimensionality reduction, k-means clustering was applied to identify distinct groupings of history content topics. The number of clusters was varied to explore different configurations, and the Davies-Bouldin index was used to evaluate the quality of the clustering results. The clusters were then mapped back to the original data to assess the distribution of unique schools within each cluster

The t-SNE visualisations, along with the clustering results, provide insights into the thematic structure of history content topics labelled as 'other', highlighting distinct groupings and patterns within the educational curriculum.

To label each cluster with meaningful themes, we performed a collocation analysis on the text data within each cluster. Texts were aggregated, converted to lower case and cleaned by removing punctuation, numbers and common Czech stopwords. We generated n-grams (bi-grams to 5-grams) to identify frequent phrases. These collocations were used to derive labels for each cluster, reflecting the dominant themes or topics.

Textbook comparison

To our knowledge, there is no recent research on the distribution of specific history textbook sets used in Czech schools. For the purpose of content comparison, we reviewed the tables of contents from lower secondary history textbook series published by major publishers – Nakladatelství Fraus, Nová Škola, SPN and Taktik. For each series, we recorded the starting and ending topics for each school year to identify patterns in topic sequencing.

Results

Our analysis of school curricula revealed that most schools integrate the national curriculum content into their teaching plans, adhering to a traditional chronological approach to organising history topics. Schools incorporated only 12% to 15% of topics that were not related to any themes outlined in the Czech National Curriculum, while including more than 95% of the national curriculum themes (Figure 2). These findings align with previous research by Jireček (2023a), which also observed a strong adherence to established curricular patterns.

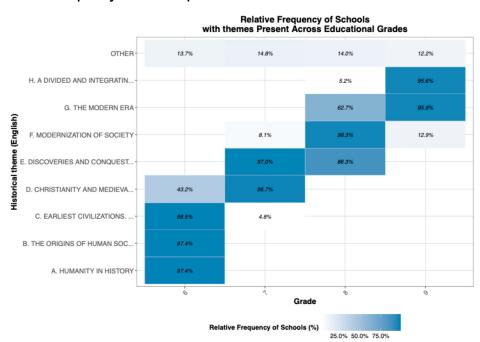


Figure 2. Relative frequency of themes present in schools' curricula

The distribution of themes (Figure 2) and topics (Figure 3) across grades closely mirrored the organisation found in textbooks (Table 4). In Grade 6, the curriculum typically began with an introduction to history studies, covering the origins of human society and ancient civilisations, and concluded with topics on ancient Rome or the early Middle Ages in the Czech lands.

Grade 7 curricula encompassed themes ranging from the Middle Ages to the beginning of the early modern era, marked by overseas discoveries and developments in the Czech state during this period. However, there was a significant overlap of topics between Grades 7 and 8, with 32% of schools covering Baroque and Enlightenment topics in Grade 7. Despite this overlap, most schools (78%) introduced these topics at the beginning of Grade 8.

Figure 3. Relative frequency of topics present in schools' curricula

Table 4. Overview of beginning and ending topics in textbooks by publisher for Grades 6 to 9

Relative Frequency of Schools (%)

25.0% 50.0% 75.0%

Publisher/grade	6	7	8	9
Fraus	Introduction to the Study of History	Beginnings of Christianity	The Baroque Era	The World and Czechoslovakia after World War I
	Ancient Rome	The Thirty Years' War	The formation of Czechoslovakia	The World on the Threshold of the 21st Century
SPN	Introduction to History	Early Middle Ages	Between the Thirty Years' War and the French Revolution	Between the World Wars
	Ancient Civilisations (China)	Early Modern Period (Thirty Years' War)	World War I	Postwar History (What happened next [after 1989])
Taktik	Introduction to History	The Early Middle Ages (Society in the Early Middle Ages)	The Second Half of the 17th Century and the 18th Century	Interwar History
	Ancient Rome	The Early Modern Period (Culture at the Dawn of the Modern Era)	World War I	History After 1989 (The Czech Republic up to 2004)
Nová škola	Introduction to History	Early Middle Ages	Europe after the Thirty Years' War	Europe After World War I
	Ancient Rome (The Legacy of the Roman Empire)	Beginnings of the Modern Era	The World Heading Towards 'World War' (the Czech Lands during World War I)	History Since the 1970s

In Grade 8, schools typically covered topics from the early modern era, including overseas discoveries, the Baroque and the Enlightenment. The greatest variation was observed in the transition between Grades 8 and 9. While 58% of schools began Grade 9 with the First World War, 61% incorporated it into Grade 8, with some (30%) even covering the interwar period. This pattern aligns with previous findings by Jireček (2023a), and it reflects a trend to reserve the final grade of lower secondary education for the most recent historical events.

In exploring the content topics labelled as 'other', we identified three distinct clusters for Grades 6 and 7, and four clusters for Grades 8 and 9 (see Figure 4). In Grades 6 and 7, there was significant agreement on certain topics, with incorporation in about 50% of schools, suggesting a consensus on their inclusion. However, topics in Grades 8 and 9 did not show such a level of agreement, with fewer than one third of schools incorporating even the most frequent topics. Each cluster was labelled based on thematic analysis (see Table 5), and a brief description of each cluster is provided in the following paragraphs.

In Grade 6, a portion of schools (9%, Cluster 1) include topics related to the origin of the world and the origin of the human species, which, according to the Czech National Curriculum, should be covered in biology rather than history. More schools focus on the Czech lands in prehistoric times (32%, Cluster 2) and explicitly mention the need for a summary and review of the year's content (34%, Cluster 3).

In Grade 7, half of the schools included broad topics covering extended periods of the Middle Ages (Cluster 1). A third of the schools (31%, Cluster 2) explicitly mentioned that alternative instructional approaches and pedagogical strategies, such as excursions, museum visits and the use of modern technologies, should be part of the subject. More directly related to history content were topics on the Hundred Years' War and the development of England and France, which were included by 48% of schools (Cluster 3).

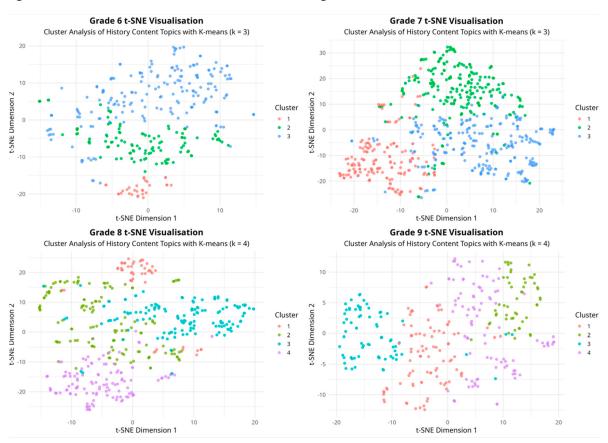


Figure 4. t-SNE visualisation of 'other' content for grades 6, 7, 8 and 9

Table 5. Clusters of 'other' content with description

Cluster	Description	# Schools	%	Cluster	Description	# Schools	%
	Grade 6				Grade	7	
1	Origins of the World	25	9.23	1	Overview of the Middle Ages	135	49.82
2	The Czech Lands in Prehistoric Times	87	32.10	2	Alternative Tools and Materials	84	31.00
3	Summary and Revision	92	33.95	3	England and France: The Hundred Years' War	131	48.34
	Grade 8				Grade	9	
1	Absolutism in Europe: France and Russia	34	12.55	1	20th-Century History	43	15.87
2	England and the USA	76	28.04	2	Alternative Tools and Materials	21	7.75
3	Overview of Early and Late Modern History	83	30.63	3	20th-Century Culture and Science	56	20.66
4	Alternative Tools and Materials	42	15.50	4	Summary and Revision	27	9.96

In Grade 8, topics related to the overview and revision of entire eras of the early and late modern era had the highest relative appearance in school curricula (Cluster 3), featuring in about 30% of schools. A similar proportion of schools included topics on England and the USA, such as the English Civil War, the American Revolutionary War and the American Civil War (28%, Cluster 2). Consistent with Grade 7, schools mentioned alternative instructional approaches and pedagogical strategies (16%, Cluster 4). Only 13% of schools incorporated specific topics related to absolutism in France and Russia (Cluster 1).

Alternative pedagogical strategies also appeared in Grade 9, but only in a small portion of schools (8%, Cluster 2). The most prevalent topics were those related to the culture and science of the twentieth century (21%, Cluster 3), as well as the revision of entire eras of the twentieth century (16%, Cluster 1). Approximately 10% of schools included topics related to the revision of the entire history curriculum (Cluster 4).

Overall, most clusters were related to distinct historical themes (five instances), pedagogical strategies (four instances) and the comprehensive review of entire historical eras (three instances). For further details, see Table 6.

Discussion and conclusion

In examining the adherence of schools to the history content recommended by the current Czech National Curriculum (RQ1), the findings indicate a strong alignment. More than 95% of schools incorporate the broader themes derived from the National Curriculum, and approximately 80–90% include most of the specific topics outlined. While about half of the schools supplement their curricula with additional specific topics or content reviews, these constitute a smaller portion of the overall history curriculum. Therefore, it can be concluded that schools largely adhere to the recommended history content, despite its non-mandatory status.

Schools generally maintain the traditional distribution of history content as outlined in widely used textbooks (RQ2). However, there are noticeable tendencies to shift content from Grade 9 to earlier grades, creating more space for very recent history. This adjustment primarily increases the amount of content in Grade 8, as shifts to Grade 7 are minimal. The content in Grade 6 remains the most traditional, closely adhering to the textbook outlines.

Grou	ıp	Grade	Cluster	Description
		6	2	The Czech Lands in Prehistoric Times
1	Distinct historical themes	7	3	England and France: The Hundred Years' War
	Distinct historical theries	8	1	Absolutism in Europe: France and Russia
	-	8	2	England and the USA
	-	9	3	20th-Century Culture and Science
2		7	2	Alternative Tools and Materials
	Pedagogical strategies -	8	4	Alternative Tools and Materials
	_	9	2	Alternative Tools and Materials

1

3

1

3

4

1

Overview of the Middle Ages

20th-Century History

Summary and Revision

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Origins of the World

Overview of Early and Late Modern History

Table 6. Summary of the most prominent topics in each cluster group

7

8

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9

6

Comprehensive historical

Historical content review

Interdisciplinary themes

summaries

3

5

The most frequently covered content absent from the current Czech National Curriculum (RQ3) aligns with widely used textbooks, particularly in promoting topics such as the Czech Lands in Prehistoric Times and specific historical events related to England, France and the USA. Additionally, schools often incorporate specific pedagogical strategies and conduct comprehensive reviews of entire eras and previously covered topics.

These findings are limited by the research methodology employed. The restriction of the sample to curricula with content divided into grades and those that treat history as an independent subject facilitated the study, but this may also have excluded more progressive schools. This limitation could skew the results towards a more traditionalist approach, which may not fully capture the current educational landscape.

Additionally, employing AI as a coder for historical content topics and themes, despite its demonstrated reliability and the presence of human oversight, may still result in errors and the omission of significant aspects of the topics. This reliance on AI could potentially overlook nuanced content that requires deeper contextual understanding.

The most significant limitation of this study is that the school curricula examined represent the *intended* curricula (Surma et al., 2025) and may not reflect the actual implementation in schools. Based on my understanding of Czech teachers, I hypothesise that school curricula are often not followed in practice, serving primarily for school inspectorate purposes, while teachers rely on voluntary syllabus breakdowns that are not publicly accessible. Consequently, there are no straightforward methods to determine the level of attention given to specific topics in classrooms.

In conclusion, this study indicates that schools strongly adhere to the history content recommended by the Czech National Curriculum. While some schools add their own topics, these constitute a minor portion of the curriculum. The traditional distribution of content, as outlined in textbooks, is largely maintained, although there is a trend to shift content from Grade 9 to earlier grades to accommodate recent history. However, topics absent from the curriculum often align with textbook content.

Based on these findings, I offer the following suggestions. First, the strong adherence to established curricular patterns – even where content is non-mandatory – suggests that such components of the national curriculum or model school programmes (mŠVP) can have considerable influence. Policymakers should therefore give careful consideration to the design of both mandatory and optional elements. The role of textbooks in shaping content selection should also be taken into account. Second, it is recommended that schools be required to publish their curricula in a standardised, machine-readable format. This would facilitate systematic monitoring of how both mandatory and optional curricular components are being implemented.

Data and materials availability statement

All input data, processing scripts and outcomes are publicly accessible in the following dataset: Kaleta, J. (2025, 10 February). Dataset for History Content Distribution in Czech School Curricula. https://doi. org/10.17605/OSF.IO/DUP59.

Declarations and conflicts of interest

Research ethics statement

Not applicable to this article.

Consent for publication statement

Not applicable to this article.

Conflicts of interest statement

The author declares no conflicts of interest with this work. All efforts to sufficiently anonymise the author during peer review of this article have been made. The author declares no further conflicts with this article.

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