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A computer simulation in the context of history teaching in Czech schools: Using the 'Czechoslovakia 38-89' educational simulation

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ABSTRACT: Educational simulations represent a substantial innovation in the formal learning process, mainly due to their dynamic structure, interactivity, and complexity. Nevertheless, these features could arguably simultaneously problematise the adaption of digital simulations to "traditional" forms of teaching. Educational simulations not only provide a concrete methodical approach but also create new educational environments ("problem spaces"), generating additional sets of goals in other areas of learning (for example, in personal and social education), thus moving beyond the limits of classical history teaching. In a case study of the *Czechoslovakia 38-89* educational simulation, we demonstrate how an educational simulation can extend educational goals from the reproduction of facts towards a deeper understanding of the multifaceted historical context. Stemming from a field survey that took place at 38 schools with more than 3500 students, this paper analyses the benefits and challenges related to the use of the above-mentioned digital simulation in the Czech formal schooling system and the acceptance of the simulation by Czech teachers and students.

The study also describes how an educational simulation benefits students in terms of reflecting on witness accounts, illustrates the benefits of using constructed memory for education, and reflects the problem of the authenticity of witness accounts in historical education.

KEYWORDS: educational simulation, teaching practice, simulation Czechoslovakia 38-89, acceptance

Introduction

While the current curriculum for elementary and high schools[1] which relies on the constructivist approach and last updated in 2017, emphasises the autonomy of schools and educators, history teaching in the Czech Republic often remains chronologically oriented and mostly focused on the reproduction of large quantities of dates. Methodological innovation in the form of an educational simulation (Šisler, Selmbacherová, Pinkas, & Brom, C, 2014) may have the potential to change this long-time trend. Educational simulation could help to reflect on the forms, methods, and goals of teaching in a broader context. This paper explores whether, and to what extent, an educational simulation can contribute to new approaches in history teaching.

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There is specific focus on the potential that simulations have in working with witnesses. Witness testimonies represent valuable historical sources, but just as is the case with other types of sources, historical criticism is necessary. As Bage (2012) notes, witness accounts, as they view the past in stories, are a common way of "consuming" history. The testimony of a witness tends not to be fully reflected on, so the authority of the witness can be an obstacle to a critical, dispassionate view and an analytical approach.

As creators of a pedagogical game and model lessons for schools, the potential that educational simulations have, using the example of "Czechoslovakia 38-89"[2] (later just CS) (see Šisler, V., Brom, C., Cuhra, J., Činátl, K., & Gemrot, J. 2012)

Pedagogic and didactic points of departure

In teaching for students' independence and to prioritise the development of students' competencies and higher cognitive knowledge over mastering encyclopaedically arranged facts, following a constructivist approach in pedagogic theory and practice can help History and sociology teachers to achieve stated learning outcomes. Such education is student-oriented, emphasising the formation, rather than mere adaptation of meanings and prioritising the democratic model of education over the authoritarian one (Henderson, 1996). Although this approach is in line with current teaching and learning theories, it is not always present in Czech teaching practice (see Strakova, 2010). Czech schools mostly rely on a traditional method of history teaching, based on the reproduction of a grand national narrative without problematising, or critically reflection (see Gracova & Labishova, 2004). For the most part, the need to reflect on traditional narratives has not yet come into practice in Czech classrooms, even though Czech history has many conflicting and traumatising situations that could be the subject of such reflections (Ahonen, 2014). With the development of the simulation *Czechoslovakia 38-89*, it is our aspiration to disrupt this traditional narrative and to show educators an alternative.[3] At the same time, we try not to differ too much from the dominant practice, and we offer solutions that will not be perceived as too radical or exclusive. We have presented innovations as 'evolutions within the system' rather than as a 'revolution' or a radical change, in order for them to be more acceptable for the more conservative teachers (see, for example, Straková 2010).

Many theoreticians (for example, Chapman, 2016; Šisler, et al., 2014) engaged in the use of digital applications in education see educational simulations as a type of constructivist learning environment. They emphasise that educational simulations support students in assuming responsibility for their learning, subject students to different experiences that may be quite varied, make educational activities more effortless and bring them closer to real life, and support social cooperation. All this is considered to be consistent with constructivist pedagogy generally, as well as with the principles of historical thinking (Reich, 2007, Wineburg, 2010). Historical simulations can also combine immersion in the historical context, more involvement in education, in addition to the cognitive uncertainty that the presentation of different perspectives evokes, with immediate feedback and a focus on problem-solving (Whitton, 2010). Furthermore, a good digital educational application not only provides a concrete pedagogical approach, but also creates a new educational environment, generating additional sets of goals in other areas of learning (for example,. in personal and social education) and going beyond the limits of classical history teaching (Watson, Mong, & Harris,2011).

Digital simulations typically have a broad approach to educational goals. They do not concentrate only on actual historical events, as would be typical in Czech classrooms, but go far beyond the general image of history as a sort of catalogue of events. This means that they are not only geared towards understanding, but also placing events in a wide framework of

memory culture or seeing historical events from multiple perspectives. In addition, there are other goals focusing on a student's self-reflection and ability to reflect on his or her position in the learning process; on his or her personality in the interaction with this application; on the learning process; and on the achievement of a metacognitive dimension of knowledge. The past in a digital simulation is no longer a verifiable grand narrative, a set of dates, stories and interpretations that are easy to test; instead it becomes a dynamic quantity consequentially built in a social context. As McCall (2011) argues, digital simulations that thematise the past illustrate reality in an accessible and attractive way. Besides this, digital simulations can also support a perception of the past as a social and cultural construct (Prensky, 2010).

A simulation is based on the principle of mediation. In our simulation, we chose to schematise historical reality in the form of model eyewitness narratives, which is the first level of representation. These testimonies are not authentic, but instead are formed out of a number of real life stories. Longer testimonies are introduced using comic strips, which are the second level of representation. Remembering thus comes in two alternative forms; it is either a "direct speech" of the witness, or a remembrance that takes the form of a comic strip, a form of a flashback. This is why the simulation includes elements that point out the "virtual nature" of the eyewitness environment. Some of the artefacts in the environment of an eyewitness are visibly 'artificial' animated, or referring to the comic environment in which a part of an eyewitness narrative takes place, thus creating a link between both spaces (the social space of an eyewitness in the *present* and the space of his memories in *the past*).

The pedagogical customisation of the witnesses' stories is driven by the effort to overcome student hesitation towards a critical assessment of the testimony of the witnesses. Students often tend to perceive everything told by the witness as being true to fact, simply because "he/she was there" or "he/she experienced it" (Foster & Yeager, 1999; Barton & Levstik, 2004; Havlujova & Najbert, 2014.). One of the aims of the *Czechoslovakia 38-89* simulation is to increase student ability to think critically and analytically about the witnesses' narratives. The principle of active learning is realised by the students' involvement in the simulation. The gaming simulation puts students in situations where they actively participate in negotiating the possible meaning of the past. This is especially the case as history is presented as an open problem to solve, rather than as a question that requires an answer. This creative involvement, where students express their viewpoints on the conduct of historical characters in historical situations, helps to develop skills that go beyond the framework of historical knowledge. Students learn to critically assess information and develop their abilities to analyse and interpret sources. This aspect of working with the simulation is based on the principles of historical thinking and inquiry-based learning (Wineburg, 2001; Levesque, 2008).

Understanding the behaviour of people in difficult historical situations is an important goal. This is a general problem of history teaching – students must overcome a double distance from the past – they must understand the completely different socio-cultural system in which the events take place, as well as (and perhaps especially) the behaviour of the adults involved. Pedagogical theory emphasises the need to know the context and to understand the different points of view; and in particular it emphasises continuity, a long-time stay in the system that facilitates this understanding. In view of this requirement, simulations seem to be an ideal tool (Husband & Pendry, 2002). Our simulation is constructed in a way that makes it possible to 'stay' in the story for a long time and to have control over its dynamics (for example, to stop the story if something is not clear), which aids in understanding the story. Students are inside the story, while also keeping their distance, due to the 'alienation elements' in the social space of an eyewitness. These alienation elements can be, for example, artefacts put into the style of the accompanying comic (for example, the yellow star that Jews were required to wear during the war is a paper cut-out rather than the real object), thus emphasising the fictional nature of these stories.

Learning history through eyewitness narratives not only supports cognitive capabilities (reflection on representations), but also affective capabilities. The simulation works as a powerful simulator of social competencies and socially desirable behaviour. The simulation can also be used as an example of the need to adjust communication to other people dependant on the context of communication. The need to be polite to eyewitnesses – elderly people – is demonstrated in a simple and spontaneous manner. The motivation stems from the gaming principle (insensitive behaviour ends the conversation), and the selection of desired communication strategies leads to a reward – the acquisition of requested information. However, the positive aspects of the affective goals are not necessarily exhausted by mere prosocial competencies but can also lead to the development of moral reflections, which is one of the most difficult goals for school education to attain. Ethical education in the Czech Republic is mostly oriented toward prosocial behaviour and lacks deeper, analytically oriented activities that help students to appreciate and reflect on values (see Lorenzová, 2011).

The theory of evaluating historical events is also developed in detail in the pedagogy of history. This evaluation has two phases. First, it is necessary to understand the historical context and to evaluate the conduct of people, using the moral vocabulary and value system of that period. Not until this phase is closed is it possible (and in fact necessary) to step out of the historical context towards our present and to evaluate the historical event, using the "present moral dictionary" (Peterson, 2011, p. 164). This is what legitimises working with the past at school (Barton & Levstik, 2004). Evaluating a historical event means charting our own standpoints; as every evaluation contributes to our own self-understanding. In the 1980s, Robert I. Smith designed a categorisation that was to remove the unclear nature of values and evaluations at school. He made a distinction among behavioural values (esteem, respect, order), procedural values (critical thinking, evidence assessment, argumentation skills) and finally, substantive values, which he defines as values in a narrow sense (Smith, 1986). He defines them as standpoints that create beliefs and value judgments. Smith asserted that school education should develop the first two value categories, while substantive values are beyond the reach of the public power represented by a school (in relation to a student). The simulation helps to develop both behavioural values (respecting communication with old people, having empathy, and understanding their opinions and perspective) and procedural values (conversation tactics, awareness of the goal, and the need to achieve it while respecting the eyewitness) (see McCall, 2011; Šisler, et al., 2014)

The characteristics of the *Czechoslovakia 38-39*" simulation

Czechoslovakia 38-89 falls under the category of "serious games"[4] (Woulters, van Nimwegen, van Oostendorp, & van der Spek, 2013, p.73), which belong in formal, non-formal, and informal education. Thus, it is primarily created as an educational, non-commercial game with a focus on content. Aspects such as playability and attractiveness played a relatively smaller role in its development than in that of commercial games. It is a series of educational simulations combining the elements of interactive comics and computer games. The simulation shows students key moments (symbolic centres, places of remembrance) of Czech and Czechoslovak modern history, allows them to 'experience' historical events from the point of view of different characters, and helps students to understand the political, social and cultural contexts. It has two variants – a single player version that emphasises gaming elements and is available through an e-shop, and a school version, designed for formal schooling. In our text, we will focus only on the latter version.

The simulation consists of three modules with the same gaming principles and overarching pedagogical goals. The elemental gaming concept is based on following the footprints of the past. The player is the one who puts together a story from the past, based on pieces of

information obtained mainly through an eyewitness narrative. In the WWII module, the player searches for the secrets of his grandfather. The story in the second module, which is about post-war Czechoslovakia, is about an old school building that witnessed many events. The future of this building with an imprinted history is being decided in this module (it is supposed to be demolished or reconstructed into a museum). The third module, which focuses on the 1950s and 1960s, is about a major public figure accused of denunciation.

The gaming principle of the first module (CS3889: Assassination) is based on the secret of the player's grandfather. The player searches in the past, taking on the gaming identity of a grandson who wants to fill in the blanks of his family's history. His grandfather was imprisoned during the war but it is unclear why. His conversation with his grandmother, and his reading of an encrypted journal that his grandfather carried during the war initiate his search. The player must obtain additional information from his neighbour, Mr. Málek, who was an activist journalist during the war, Mr. Krejcar, who participated in the resistance, Mrs. Marie Červeňáková, a Czech Romany woman imprisoned during the war, and Mr. Jakub Hein, a Czech who had Jewish and German ancestors.

Gaming principles and controls

The simulation is built on the principle of an adventure and resembles, for example, the educational game *Mission US* about US history. Unlike this game, the player does not directly participate in historical events; rather, they are communicated via an eyewitness narrative. The main gaming environment is a dialog with an eyewitness that the player can control through a selection of replications, answers and questions, thus considerably influencing the dialogue. The player can also use the back key to return to the previous game round, the skip key to move to the next game round or the stop key to stop the dialogue. They can also go to the encyclopaedia that we created, which contains basic facts concerning the story. They can also turn on subtitles if they cannot quite understand what an eyewitness is saying.

Comics, another simulation environment, capture memories that are too abstract or expansive to be expressed directly in a dialogue with an actor-eyewitness. The soundtrack in the comics is limited to sounds and noises; spoken words are shown in *speech bubbles* only. The historical reality is represented more dramatically, with a greater focus on emotional effects than in the direct dialogues with eyewitnesses. The last gaming environment of the simulation includes short activities in the form of a game related to the content of an eyewitness narrative. It is primarily about reinforcing the gaming elements of the simulation. For instance, the player must come up with such an answer to the Gestapo so that his wife would have time to hide illegal fliers. In another mini-game, the player taking on the role of the wife of one of the characters must find a suitable place to hide the fliers. Mini-games serve to focus the attention of players watching a lengthy eyewitness narrative. The student-players only have to pay attention to dialogue for limited periods of time before the mini-games renew their attention.

The design of the simulation

The structure of the simulation allows it to be used directly in the classroom. It allows for use in various ways; it is divided into many scenes representing a closed sequence similar to a movie scene. These scenes include fragments of dialogues with eyewitnesses (which always represent a meaningful thematic entirety), comics and mini-games. A scene is the lowest organisational unit of the school version and is coded for easier orientation. However, the basic organisational unit is a model lesson comprising of several scenes and usually also of other external material (audio-visual material, photographs, caricatures, and texts) outside the

application. A model lesson is a concept using the simulation as part of a regular 45-minute lesson. The additional materials are available online on a website that the teacher uses, and they mainly include audio-visual materials, caricatures, photographs, and more. The teacher usually projects and controls the simulation by means of a data projector, while reflecting on students' opinions and viewpoints. It is a form of classroom teaching that is hard to diversify, as it is necessary to keep up with the pace of the story.

Eyewitness constructions

As already indicated, all characters in the simulation are pedagogical constructions, which were created based on a synthesis of real stories. In designing the game, we opted for these constructions because we wanted to protect the privacy of real eyewitnesses, and because we were convinced that we should model the learning situations and compress the eyewitness narratives in order to include as many motives, perspectives, and historical events as possible. We chose the concept of memory constructions (based on the memories of actual eyewitnesses placed in a historical context) in view of the pedagogical goal of the simulation, which was to communicate to students model eyewitness perspectives of people from different social classes and ethnic groups. As we will show in the methodology section, the emphasis on analysis is supported by the use of other materials related to eyewitness narratives, such as videos, caricatures and photographs. In this case, the simulation is a tool helping students to create a moral dictionary and to adopt value frameworks. The construction of eyewitness identities is an advantage in this case because it allows for greater sovereignty in evaluation, as it eliminates the ethical problem of evaluating real people. In such a case, the simulation can also serve as a simulator of social skills, and of the ethical challenges of everyday life.

The construction of eyewitness identities in the simulation has another hard-to-detect implication, the pedagogical importance of which is yet to be discussed. It is about a transformation of the cultural situation resulting in a transformation of the collective way of remembering. Many theoreticians of media studies claim that one of the implications of growing connectivity is a transformation of collectively defining, among other things, the ways of relating to the past. Theoreticians, such as Zierold (2008) and Neiger, Nieyers & Zandberg, (2011) problematise Maurice Halbwachs' (1992) and Jan Assmann's (Assmann & Czaplicka, 1995) traditional concepts of reflecting on collective memory. They claim that the unprecedented media boom, and thus the general availability of visual images, has transformed the social frameworks of memory and collectivity. In their opinion, every form of collective memory is, due to this societal change, necessarily a media memory. The team of the social psychologist Harald Welzer reached the same conclusion when examining the family memories of Germans during the war. The researchers noticed that these memories were often contaminated or perforated, sometimes even performed by media representations (Welzer, Moller, & Tschuggnal, 2010). Landsberg (2004) has formulated a concept of prosthetic memory typical for the present post(modern) era characterised by high mobility, social atomisation and access to visual images. This type of memory does not depend on an immediate experience and especially, is not limited to biological kinship or social exclusivity. On the contrary, its use requires the accommodation of real, physical memory and its sharing in a virtual space. It is created based on a personal interpretation of a usually traumatic historical event communicated in media. There is no discerning between "authenticity" and "non-authenticity" with respect to memory.

Eyewitness constructions seem to be a typical example of this prosthetic memory. These are created based on traumatising events (war, dictatorship, genocide, violence, oppression, and so on) and synthesised with the goal of creating an environment for their sharing. However, prostheticity, memory artificiality, can also be an advantage in the simulation. Our media world

is in many ways similar to a hall of mirrors, where there is no difference between a real event and its image (Baudrillard, 1994). A sensible way to learn how to live in the world of mirrors is to realise a certain artificiality of these images. A continuous and multidimensional reflection encouraged by a pedagogical approach might protect young people against the prostheticity of seemingly authentic forms of memory. If they encounter dubious forms of commemoration with hidden political agendas in or out of school, they might be better prepared to deconstruct the message behind them. Paradoxically, this synthetic memory controlled by computer algorithms could open the door to an autonomous relationship of the listener to the eyewitness.

Working with time in the simulation

The CS simulation allows students to see various levels of time within the historical narration. According to Seixas (2016), orientation in time is an important outcome of history education. Ignoring or reducing this problem to mastering timelines, usually in onethematic line is, in our observation, one of the current problems of typical Czech education. Working with time is limited to mastering dates and to one-dimensional decisions about before and after (Seixas, 2016). The research of Barton and Levstik (2004) proved that younger school-age children were able to orientate themselves in historical time, although this ability stemmed from pop-culture elements rather than from school education. The simulation gives working with time the necessary depth. Eyewitness narratives are usually non-linear. Eyewitnesses mix together the different times of the past, reminisce in an undisciplined and uneven manner, compare events remote in time, or jump from one topic to another. This lack of structure of eyewitness narratives is limiting but can also be an advantage if we pay attention to their form and not only to their content. Of course, it is rather difficult to follow all the tangents of a real eyewitness. If we modify an eyewitness statement for use in school (for history education) such as, adopt (usually rewrite and edit) an eyewitness account for school purposes, we will lose this typical feature of eyewitness narratives. The simulation preserves this feature to some extent. When creating the dialogues, we paid attention to, and preserved, this element of eyewitness narratives even as we tried to save time.

It shows students the necessity of viewing the past as possessing depth and multidimensionality, and not as a series of separate, one-dimensional, chronological units implicating an inevitable causal nexus. Therefore, eyewitnesses speaking about the war also naturally talk about post-war events and often take their narratives all the way to the 1970s. Another level in time, demonstrated visually as well, distinguishes the strong memories displayed through comics from the social space of the narrative, which is staged in a similar way to current movies (an apartment and its furnishings, an eyewitness as a regular old person or another social space, like a cemetery). The comics can be considered a type of flashback.

Reflections of educators and students

We have been testing the simulation *Czechoslovakia 38-89* at state-run high schools in various regions of the Czech Republic since 2012. Thirty-eight educators have tested the simulation under our guidance, with more than 3500 students (15-19 years old).

Additionally, over 200 other educators discovered our simulation and pedagogical materials on our website on their own, but they have not been included in this research. All teachers signed up for the project voluntarily and received monetary compensation for it. The teachers were exposed to three hours of training, after which they were asked to integrate the simulation into their standard history lessons.

Five model lessons were designed, each using a specific part of the simulation, and we provided additional materials for each lesson (historical videos, caricatures, cartoons, activities for the students, historical texts). Taking the technical facilities available at the majority of Czech schools into account, the model lessons were structured using collective instruction, in which the teacher controlled the simulation and the students determined together which strategy to use with the witnesses.

The teachers' task was to:

a. Integrate *Czechoslovakia 38-89* into their regular teaching,
b. Follow the prescribed teaching methodology,
c. Fill out a detailed feedback report for each model lesson taught (questionnaire with 35 questions),
d. Collect the students' feedback to the simulation (questionnaire with 12 questions)
e. Invite a member of our development team to one school lesson,
f. Write a final report that comprehensively evaluates the use of the simulation in their school (questionnaire with 12 mainly open questions),
g. Have an evaluation Skype talk with a member of our development team.

Educators' reflections

We got feedback from the teachers through the two questionnaires. These included feedback from every model lesson taught (32 questions), and a final, concluding report on the whole testing process (11 questions). The goal of the feedback for each lesson was to rate: 1) how the lesson actually went (7 questions); 2) students' reactions (15 questions); and, 3) the model lesson that we had recommended (13 questions). Each question had two sections — quantitative and qualitative — using the six-point Likert scale, teachers chose the appropriate rating, and then were asked to comment on their answers. The teachers filled out the questionnaires immediately after the end of the instruction or at the end of school day. Teachers then filled out the concluding report on the whole testing process (11 questions). Five of these touched on the wider context of the use of simulations. As an example, for the first question: "Please give us a general evaluation and comparison of the model lessons (what worked well for you? Was anything too long? What worked for the students and what didn't?)," teachers were given a recommended length for their responses, about 400 words in total. Teachers filled in this questionnaire at the end of the whole testing process. Based on these sources of information from our three-year cooperation (2012-2014) with the educators who tested *Czechoslovakia 38-89* during their lessons, we defined four key themes that represent the benefits of using our simulation in school classes, as follows:

Understanding the deeper context of historical events

In open questions, teachers defined the ability of the simulation to reinforce the understanding of the deeper context of historical events as the most important theme. Educators very positively evaluated the alternations of an eyewitness' authentic testimony, which students could influence with their questions, and the black-and-white comics, which were not possible to influence. The dynamics created there facilitate a direct connection between the present and the past, which helps students to better understand the historical events that are being taught.

> **Teacher:** The simulation contributes considerably to a deepened understanding of historical links and to an increased fixation of the teaching materials.

Engaging students who are not interested in history

As many researchers have found, external differentiations among students largely prevail in Czech schools, and teachers' opinions on more individualised instruction are markedly contradictory. While they verbally declare the need for greater individualisation, they are often unable to put this into more concrete terms (Mouralová, 2013: Straková, 2010). These observations, which come from questionnaire-based research, also confirm our own observations.. The simulation offers space unmotivated students, and one of its effects is the reality that teachers realise that these students' passivity might be caused by an improper choice of teaching methods.

The engagement of students is a general feature of simulations, often thanks to the novelty effect, that is, the fact that something new is happening. The way educators evaluate students who are silent during history lessons is rather interesting. The following statement from one of the teachers summarises this very well:

> The student is active even if he does not want to be. He looks for more details to make his own opinion and respects the perspective of different characters while realizing that he himself creates his own interpretation that stems from, among other things, the experience of his family and thus his upbringing.

The simulation as an educational medium is able to engage many passive students (of course, not all of them), and to make stimulate interest in the given topic.

Historical contextualization

The simulation makes it possible to perceive the historical contexts of current societal events. It is not only that the event is placed into a wider historical context, but also that the value of its significance for the present is also reflected upon.

> **Teacher:** They (the students) mainly realized that we now see the migration in the 1940s in retrospect and so we are able to evaluate what was good and what failed. We are now in a situation when we do not know what to do and a solution is not simple and we may not know until later whether or not our decision was good. Students understood not only the relativity of an individual memory but also the relativity of present decisions.

The historical significance, however, is difficult to simulate because it is hard to predict which historical theme will be relevant by the time the simulation is ready for school distribution. Students who are now 17 years old were relatively indifferent toward some topics (such as, the expulsion of the Sudeten Germans) three years ago. The situation in Europe has since changed, and teachers must teach in this new context.

As Reisman and Wineburg (2008) note, the problem in considering historical events from the students' perspective often comes down to a lacking ability to place them into a wider historical context, and gauge them by import and meaning. This is exactly where the simulation's strong point lies. It does not give students a huge number of facts; instead, it tells a story that is a part of Czech cultural memory and that belongs among the most well known moments in Czech history. It does not place emphasis on the factual details, but rather on the surroundings in which they play out and on the inconspicuous details that illustrate the specificity of this period, and through the narrative arc of the story, it thoroughly historicises it.

Reflections of students

Feedback was collected from students via a questionnaire. The questionnaire included 14 questions: 12 closed questions measured on the six-point Likert scale, focused on evaluating

the work with the simulation; and two open-ended questions, focused on defining the main benefits and shortcomings of using the simulation.

Students provided less information than the teachers. Since students filled out the questionnaires at the end of the history lesson, they did not spend much time on it, and generally used only a few words rather than whole sentences as the teachers did. However, based on more than 3000 pieces of feedback, following trends in students' perceptions of the game were garnered:

- Students consider the simulation *Czechoslovakia 38-89* as an attractive and modern medium that makes it possible to imagine the era in which the simulated historical events take place, and to better understand the situation.
- Students describe the advantages of the educational simulation in the history lesson as follows: *"*I can imagine what it was like to live at that time,*"* *"*I like that we can decide (choose the question) ,*"* *"*I like the atmosphere of that era,*"* *"*I like it, we pay attention.*"*
- Students positively evaluated the opportunity to control the simulation through their own or collective decision-making: "I *can influence the course of the simulation."* Students liked that the simulation reacted to their decisions.
- Students using the simulation in class saw it as beneficial in the extent of the knowledge that they gained: "I learn and remember [the schoolwork] with it," "I take more away from the simulation*."*

Students see the following weaknesses of the simulation: The simulation has a limited number of questions, the simulation gets old after a while, some of the dialogues are too long, and there are technical problems.

The students state that the biggest advantage for them is that thanks to the simulation, they are better able to imagine the historical period in which the simulation plays out. Here, we once again refer to the need for a thorough contextualisation of historical events, or their "historicisation." The simulation works towards this historicisation not only through differentiations in facts and customs, but also in a formal division in the time of the past, in which the witness recollections played out, from the time of their telling, which takes place in the "present."

Authenticity and emotionality

Our testing has also confirmed the emotional effect of the simulation and thus our efforts to create as much room for analytical work as possible. The majority of students chose a videotaped dialogue with an actor that played an eyewitness (just like in a documentary movie) over very good artistic animation. They provided the following reasons:

> **Student 1:** The animation was very well done. But when the actor was animated, we could not see his real emotions.
>
> **Student 2:** I prefer the version with the videotaped eyewitness because I feel that the actor is talking to me.
>
> **Student 3:** The version with the videotaped eyewitness draws my attention more.

An important conclusion for us as the simulation creators, is that contrary to natural sciences where animation and schemes are preferred, the level of authenticity is very important for students in their approach to eyewitness accounts in history.

Although one of the project's ambitions was to emphasise the necessity of approaching witnesses critically, it was exactly the witnesses' authenticity that the students appreciated. The piloting thus proved Rainer Wirtz's (2008) thesis, that the concept of authenticity is one of the most important tools in the historical imagination.

Limits of the study

The information that we collected from the teachers and students was self-reported. We asked (through questionnaires and interviews) the teachers to evaluate the simulation, in particular whether the simulation has achieved the declared learning goals, but we did not directly verify whether this was actually the case. The students used the questionnaires (not tests) to evaluate the simulation, but we did not verify their statements either.

Conclusion

Communicating the past through an adventure, such as *Czechoslovakia 38-89*, brings many changes to the traditional concept of history teaching. Lessons could be more dynamic, which improves students' motivation and involvement. The simulation offers eyewitness perspectives of history and does not present the past as an abstract history of systems, or large national or international narratives. Instead, it focuses on the anthropological dimension of history presented in the simulation as a space where ordinary people lived and had to make decisions.

The simulation uses narratives that do not just retell the past in an attractive form and offers the possibility to systematically analyse eyewitness narratives. The reflection on eyewitness narratives should develop students' awareness of multi-perspectivity, as well as understanding that each narrative is constructed within the social, cultural, and political frameworks surrounding historical events.

One of the surprising results from the testing was the finding that students trusted the witness narrations. The testing thus did not entirely fulfill the pedagogical ambition that we had connected with the simulation. Students were able to identify the positions of the various actors who appeared in the simulation and the reasons for their positions, but they did not perceive the contradiction in the fact that the testimonies marked as authentic are synthetic constructions. Thus, the simulation primarily developed an awareness of the multiperspectivity of historical events (Stradling, 2003), and potentially even the ethical dimension of historical interpretation (Seixas, 2013), but it did not contribute to a more critical reflection on witness testimony.

The simulation testing with over 30 teachers has confirmed our expectations that it would change the form of teaching. The teachers who tested the simulation were skeptical about the broad concept of the educational goals at first, but came to appreciate the advantages of the simulation, such as, students' greater involvement, interest, and communication, even though it reduced the content of the subject-matter and disturbed the normal teaching practice.

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Endnotes

[1] General education program for elementary schools, Prague 2017, available online: http://www.msmt.cz/file/43792/ , General education program for gymnasiums, Prague 2017, available online: http://www.nuv.cz/file/159

[2] The simulation has been developed at the Faculty of Arts and the Faculty of Mathematics and Physics of the Charles University in Prague and the Institute of Contemporary History of the Academy of Sciences of the Czech Republic. The development of the simulation was supported by the Czech Ministry of Culture in 2011-2014. For more see: www.cs3889.cz The simulation exists in both a commercial and a school version. In this article, we're discussing the school version.

[3] In the text we use the terms "history" and "the past." We view the difference in meanings between these two terms according to Pierre Nora's view, that is, as the difference between a structured story that is the result of expert research ("history") and an unstructured field of the past (Nora, 1989).

[4] We consider the phrases "serious game" and "educational simulation" to be synonymous.

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