Developing a Museum-in-a-box:
Experiences from the Project 17th-Century Student Chest[1]

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Introduction

To expand educational horizons and broaden cultural perspectives, three museums from Estonia, Finland and Sweden teamed up in 2020 to explore a shared heritage, despite societal tensions and social isolation caused by the COVID-19 pandemic, which threatened to impede such efforts. The University of Tartu Museum in Estonia, the Helsinki University Museum Flame and the Gustavianum Museum of Uppsala University collaborated to tell the story of the shared heritage of these three nations from the 17th century. This was a time when the three countries were all part of the Swedish Realm, and the University of Tartu (then Academia Gustaviana, founded in 1632) and the University of Helsinki (then the Royal Academy of Turku, founded in 1640) were established.

The three university museums developed an educational project titled „17th-Century Student Chest". It was created to help schools enhance the learning process of history by providing hands-on, heritage-based resources for classroom activities. The project was conceptualised during museum closures, and the initial motivation came

[1] The project was carried out from 2020 to 2023 and supported by Nordplus (project „Historical student stories for modern students – building bridges over the ages and between Nordic and Baltic countries", NPHZ-2021/10093).

from curators at Gustavianum, who were concerned about the resilience of museum education while the museum was closed for renovations. The outbreak of COVID-19 prompted other project partners (Helsinki and Tartu University Museums) to seek tools to reach one of their main target groups – students and schools in secondary education. In this way, inspiration was drawn from other museums that had developed the idea of *museum-in-a-box*: a collection of tasks and items that could be sent from the museum to schools.

The Student Chest was created as a way for pupils in these three countries to learn more about the shared history of Sweden, Finland and Estonia while promoting international cooperation between museums and schools and helping teachers create a bridge between the modern day and the past using replicas of historical artefacts and heritage objects in museums or elsewhere.

This article examines how the theoretical frameworks of contextual learning and culturally responsive teaching (CRT) shaped the design and implementation of the museum-in-a-box concept in the primarily practical „17th-Century Student Chest" project and contributed to its educational impact.

Theoretical background

Museum education is a broad field that includes not only learning within museums but also activities and programmes that extend to both physical and virtual environments. In museums, the learning experience is shaped by multiple factors influencing the visitor. According to the *contextual model of learning*,[2] visitors' experiences are affected by their personal, physical and sociocultural contexts, and these experiences evolve over time. This model has proved valuable in analysing museum education as an immersive experience that varies across time and space.[3] When designing museum education outside

[2] The Contextual Model is a framework for understanding a museum experience as a complex and dynamic process, developed by John H. Falk and Lynn Dierking – John H. Falk, Lynn Dierking, *Museum Experience Revisited* (New York: Left Coast Press, 2016).

[3] See e.g. Eunjung Chang, „Interactive Experience and Contextual Learning in Museums", *Studies in Art Education. A Journal of Issues and Research*. 47(2) (2006), 170–186; Judita Kasperiuniene and Ilona Tandzegolskiene, „Smart learning en-

the traditional museum setting, the personal and sociocultural backgrounds of learners become more important for the educator than the physical environment, which is usually the main focus and can at least partly be managed by the museum. Increasing attention is therefore given to learners' individual backgrounds and cultural contexts.

At this point, *culturally responsive teaching* (CRT)[4] offers significant potential. By focusing on social and cultural values and taking learners' cultural backgrounds into account, CRT tends to be effective across different contexts.[5] In museum education, CRT principles have been most notably applied in communities with a history of colonialism and racism, but this approach is increasingly adopted elsewhere amid globalisation. In the Baltic and Nordic countries, addressing multicultural classrooms and providing inclusive adult education for diverse community groups, including immigrants, is becoming increasingly important. Recent studies strongly recommend applying CRT approaches in both formal and informal education.[6]

The theoretical basis of the project is grounded in the contextual learning model and the culturally responsive teaching approach. The importance of CRT lies in its ability to increase engagement and em-

vironments in a contemporary museum: a case study", *Journal of Education Culture and Society.* 11, no. 2 (2020), https://doi.org/10.15503/jecs2020.2.353.375; Li Jingwen, „Traditional or Contemporary Art? A Study of Educational Approaches to Children in Two Chinese Art Museums", *Journal of Museum Education* 48:2 (2023), 167–180.

4 Culturally responsive teaching is relying on the theory of culturally relevant pedagogy conceptualized by Gloria Ladson-Billings proceeding from the principle, that the cultural background of the individuals is crucial element in learning processes that has to be taken as a starting point of learning process to enhance understanding and more meaningful learning processes (see: Gloria Ladson-Billings, „Toward a Theory of Culturally Relevant Pedagogy„. *American Educational Research Journal* 32, no. 3 (1995), 465–491).

5 Hassan Abdalla and Ahmat Moussa, „Culturally Responsive Teaching: Navigating Models and Implementing Effective Strategies", *Acta Pedagogia Asiana,* vol 3(2) (2024), 91–100.

6 Sandra Järv and Laura Kirss. *Kultuuritundlikku õpetamist toetav materjal õpetajale. [Material for teachers supporting culturally Responsive Teaching]* (Tartu Ülikool, 2019); Hanna Liis Kaarlõp, Anna-Liisa Jõgi, Katrin Poom-Valickis and Mare Oja, „Fostering complex historical understandings: a study of Estonian pupils' epistemic cognition and learning experiences", *Journal of Curriculum Studies* (2025), 1–22; Andreas Ahrens, Jelena Zascerinska, Julija Melnikova and Virginija Jurgaityt, „Culturally Responsive Teaching of Immigrants in Adult Education: a case study in Sweden", *Journal of Regional Economic and Social Development,* 1(12) (2020),18–27.

power both individual pupils and groups.[7] When learning material is presented from a perspective that includes and acknowledges them, pupils learn more effectively. This involves using the knowledge that learners bring to the classroom, incorporating examples related to their history and culture, taking their specific interests into account when designing activities, and making sure that no one has a poorer learning experience because they do not belong to the dominant ethnic or cultural group in their region.[8]

CRT can be particularly beneficial in history teaching. Michael Harcourt has outlined five fundamental principles for applying CRT in history lessons: recognising the identities and interpretive frameworks of teachers and learners; actively engaging with controversial topics; connecting the past to pupils' lived realities; acknowledging and evaluating historical agency; and being responsive to place.[9] According to Harcourt, these principles create an environment in which pupils ask questions about their ethnic identity and learn to see multiple perspectives on historical events. Carla L. Peck has likewise concluded that when students are asked to reflect on how their background shapes their understanding of history, they engage in metacognitive empathy – thinking about how others' experiences relate to their own and also develop critical consciousness by recognising and questioning systemic inequalities.[10] Presenting multiple viewpoints and providing historical context through various sources and narratives also enables museums to foster historical empathy. This crucial historical thinking skill allows learners to understand and contextualise the motives, beliefs and emotions of historical actors.[11]

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7 Gloria Ladson-Billings, „But that's just good teaching! The case for culturally relevant pedagogy", *Theory Into Practice*, 34(3) (1995), 159–165, http://www.jstor.org/stable/1476635.

8 Emmanuel O. Acquah and Nikolett Szelei, „The potential of modelling culturally responsive teaching: pre-service teachers' learning experiences", *Teaching in Higher Education* (2020), 157–172.

9 Michael Harcourt, „Towards a culturally responsive and place-conscious theory of history teaching", *Set: Research Information for Teachers*, 2 (2015), 36–44, https://doi.org/10.18296/set.0016.

10 Carla S. Peck, „'It's not like I'm Chinese and Canadian. I'm in between': Ethnicity and students' conceptions of historical significance", *Theory and Research in Social Education*, 38(4) (2019), 574–617, https://doi.org/10.1080/00933104.2010.10473440.

11 Geerte M. Savenije, Pieter de Bruijn, „Historical empathy in a museum: Uniting contextualisation and emotional engagement", *International Journal of Heritage Studies*, 23(9) (2017), 832–845, https://doi.org/10.1080/13527258.2017.1339108.

Context, therefore, matters not only at the level of the learner and the learning environment but also in the presentation and interpretation of historical sources and past events. Tim Huijgen has proposed a framework for teaching historical contextualisation comprising three key elements: reconstructing historical context; raising students' awareness of their potential present-oriented perspectives; and fostering historical empathy.[12] Empathy in teaching history is essential for cultivating empathy towards individuals and groups in the present, as well as pupils' appreciation of inclusivity, diversity, compassion and mutual understanding.[13]

Implementing an international educational project requires considering different perspectives and cultural backgrounds, such as addressing culturally and ethnically diverse school communities and navigating different national historical narratives. Culturally responsive teaching served as the theoretical foundation for the „17th-Century Student Chest" project, which aimed to foster a deeper understanding of shared pasts and, above all, to develop historical empathy as a means of cultivating critical and responsible attitudes towards history.

Problems and challenges

The project's initial steps began in early 2020, at a time when the team could not have foreseen the many changes and challenges society would face in the coming years. As COVID-19 left a profound and lasting impact on the world, events that once seemed confined to history books became an astonishing reality.

A pandemic that restricted people's freedom of movement served as a reminder of what disease outbreaks in the 17th century must have felt like. Russia's full-scale invasion of Ukraine also brought back the sense of proximity to war, which had previously seemed highly unlikely. Conflict in Europe, where neighbouring states dis-

[12] Tim Huijgen, *Balancing between the present and the past. Promoting students' ability to perform historical contextualization* (Groningen: University of Groningen, 2018).

[13] Hanneke Bartelds, Geerte Savenije, Jannet van Drie, Tim Huijgen and Carla van Boxtel, „Advancing the teaching of historical empathy in a Professional Learning Community", *Learning in Context, Volume 2, Issues 1–2* (2025), 1–12, https://doi.org/10.1016/j.lecon.2025.100005.

pute land claims and one side seeks imperial expansion, makes the wars of the 17th century feel much closer than before.

The social standing of museums was also affected during this period. Lockdowns and public health concerns caused a sharp decline in museum attendance worldwide, and institutions are still working to restore visitor numbers to pre-pandemic levels. COVID-19 affected the project partners in different ways. For example, visitor numbers at the University of Tartu Museum have not yet returned to 2019 levels, and development of new exhibitions and activities slowed down both in Gustavianum (already shut for renovations before COVID-19) and at the Helsinki University Museum. With museums closed to visitors and, in some countries, such as Estonia, schools also closed for extended periods, it became nearly impossible for classes to visit, even when museums could host groups. This prompted museum educators to find new ways to connect with their target audiences.

Methods and practical solutions

The methodological approach chosen to address these challenges relied on *object-based learning* (OBL). OBL is an educational method in which direct contact with physical objects stimulates curiosity and imagination, enabling teachers to introduce new or complex topics more effectively.[14]

Research shows that handling physical objects has a significant positive impact on learning and knowledge retention.[15] University museums have a long tradition in this regard, as teaching materials – including physical objects – have often formed the basis of university museum collections. Using this method in higher education has been shown to give students a deeper understanding of their subject matter, as demonstrated in a study conducted at University College London, where students wrote object reports and created virtual exhibitions in

[14] Lainie Schultz, „Object-based learning, or learning from objects in the anthropology museum", *Review of Education, Pedagogy, and Cultural Studies*, 40(4) (2018), 282–304, https://doi.org/10.1080/10714413.2018.1532748.

[15] Helen J. Chatterjee, „Staying essential: Articulating the value of object-based learning", *University Museums and Collections Journal*, 1 (2008), 1–6.

groups.[16] Sharing experiences and discovering new practices and meanings through the use of heritage objects is also a common approach.[17]

Teaching through physical objects outside the museum environment led to a practical solution – the museum-in-a-box. This efficient and accessible approach to raising interest and building emotional engagement has a long history.[18] Examples from other museums have shown that the museum-in-a-box concept is both viable and popular. Similar tools have been developed and used the Crawford College of Art and Design[19] and the History Trust of South Australia.[20] In Europe, comparable projects have also been successful: the Tartu City Museum and the Upplands Museum in Uppsala, Sweden, both feature versions of the museum-in-a-box, with the latter offering five thematic variants.[21]

From an educational perspective, this approach effectively combines traditional classroom learning with the more hands-on methods used in museums. A multisensory experience with historical replicas can inspire pupils to ask questions about the 17th century and the history of their home countries, helping them perceive people of that era as real individuals with complex lives. The goal was to help teachers cultivate empathy in learners by presenting different perspectives from people who lived in the past, allowing pupils to imagine what life was like at that time. Using physical ob-

[16] Thomas Kador, Leonie Hannan, Julianne Nyhan, Melissa Terras, Helen J. Chatterjee and Mark Carnall, „Object-based learning and research-based education: Case studies from the UCL curricula", *Teaching and Learning in Higher Education: Perspectives from UCL* (2018), 157–177.

[17] The Erasmus+ project „Teaching with objects", as an initiative of Universeum (the network of European University museums and heritage institutions), is a good example (see www.teachingwithobjects.org).

[18] Examples of museums circulating study collections date back to the early 20th century – see e.g. Rebecca Stiles Onion, „Picturing nature and childhood at the American Museum of Natural History and the Brooklyn Children's Museum, 1899–1930", *Journal of the History of Childhood and Youth*, 4(3) (2011), 434–469, https://www.rebeccaonion.com/wp-content/uploads/2013/01/JHCYoffprint.pdf.

[19] MTU Crawford College of Art and Design, Research Projects, Museum in a Box, accessed September 9, 2025, https://crawford.mtu.ie/museum-in-a-box.

[20] History Trust of South Australia, Experiences, *Museum in a Box*, accessed September 9, 2025, https://education.history.sa.gov.au/experience/museum-in-a-box; the Australian Museum has continued museum in a box practices for more than 50 years (see https://australian.museum/blog-archive/lifelong-learning/50-years-of-museum-in-a-box/).

[21] Upplandsmuseet, *Skola*, *Studiematerial*, accessed October 5, 2025, https://www.upplandsmuseet.se/stiftelsen-upplandsmuseet/skola/studiematerial.

jects creates a tangible connection between pupils and the past. The notion that a real student once wrote the diary entries they read or used a spoon similar to the one before them can evoke empathy for historical figures and situations. Pupils can see, touch and even smell the objects, which enhances engagement and creates favourable conditions for learning. Relating the items and tasks to pupils' personal lives and experiences was also essential. By choosing everyday objects used both in the past and today, it becomes easier for pupils to bridge the gap between the modern world and the 17th century.

In the „17th-Century Student Chest" project, one major challenge emerged: museum artefacts cannot be loaned to locations outside the museum unless curators or conservators are present to supervise them. In many cases, none of the three museums possessed an artefact similar to those intended for inclusion in the chest. It was therefore decided that replica items would serve as substitutes for the originals in educational settings. When educational programmes aim to inspire curiosity about the history and use of objects rather than to convey specific factual information, replicas have proved just as effective as authentic artefacts. A study of 3D-printed items in museum exhibits also found that the majority (93%) of participants felt that replicas enhanced their experience.[22]

The first step in applying this method was to design practical classroom tools that would support the project's goals and meet the needs of both teachers and learners. It quickly became evident that direct feedback from teachers and students would be essential to ensure the quality of the museum-in-a-box. The Finnish team also collaborated with pedagogy students, who conducted several test lessons and shared their experiences with teams from the other participating countries.

Another important aim was to contribute to the development of skills and competencies that appear in national curricula. Research on 17th-century history education in Sweden, Finland and Estonia shows that the three countries approach the period in different ways,

[22] Paula Wilson, Janet Stott, Jason M. Warnett, Alex Attridge, Paul Smith and Mark A. Williams, „Evaluation of touchable 3D-printed replicas in museums", *Curator*, 60 (2017), 445–465, https://doi.org/10.1111/cura.12244.

with varying emphasis on sources, graphic materials, maps, images (including historical photographs, paintings and artistic reconstructions) and timelines.[23] The curricula include traditional teaching methods alongside, to varying degrees, critical analysis of historical sources. One of the project's aims was to provide teachers with an additional approach. Museums enrich traditional learning, support the integration of different subjects and foster the development of general competencies. It was therefore necessary to create a bridge between classrooms and museums when pupils were unable to visit museums in person. The items and tasks in the chest thus needed to be engaging and distinct from conventional classroom activities.

The aim was to create a travelling chest resembling the possessions of a 17th-century student who moved from one university to another. The objects in the chest were chosen to present various themes and enable teachers to design different teaching scenarios. To guide teachers in applying OBL, the project proposed a range of tasks and lesson plans using the chest's contents as a starting point.

Creation and testing of the Student Chest

To achieve the project's aims, the partners agreed on a working plan that defined shared goals and objectives, outlined the workflow, and allocated tasks. Effective communication formed the foundation of this successful collaboration. The working group consisted of six museum professionals (two educators or curators from each country), who held regular online meetings and three in-person seminars, one in each partner country. When the Swedish team produced the prototype of the student chest, the partners gathered in Uppsala for discussions and joint visits to a local museum and a nearby school to observe the chest's use in a classroom setting, monitor pupils' reactions and reflect on the results with teachers. The visit to Helsinki provided further opportunities for exchanging experiences, and the project concluded with a two-day seminar in Tartu, featuring presentations by historians and researchers as well as practical workshops for teachers conducted by the project partners.

[23] Eva-Tiina Põlluste, *Varauusaegse Rootsi ajaloo käsitlus Rootsi, Soome ja Eesti põhikooli ajalooõpikutes* (Tallinn: Tallinna Ülikool, 2023).

Figure 1. Student Chest from Tartu, containing a cloak, beret, map, magnifying glass, books, compass, jars containing spices and herbs, and a small box (on the right, which can be placed inside the larger chest) with quills, ink, paper (Photo: University of Tartu Museum).

Selecting the topics to be covered in the chest was one of the key tasks during the initial phase. An online seminar was held, featuring presentations by historians on various aspects of 17th-century everyday life, travel and sociopolitical history. This helped the project team broaden their understanding of the period, compile a shared collection of sources and documents, and identify common areas of interest. The agreed topics were as follows: university life (living conditions, student culture and academic subjects); daily life (food, clothing, entertainment and travel); politics (rulers, governance and wars); religion (Protestantism, Bible translations and witch trials); and intellectual life (philosophy, medicine, alchemy and scientific discoveries).

Each team decided which topics would be most relevant and engaging for pupils in their country, resulting in three distinct collections of items and activities. Active discussion about the project's progress and the success of different activities meant that each group drew considerable inspiration from the others' work. The items chosen for the chest

were selected after reviewing the participating museums' collections. In the case of maps and letters, several examples were chosen and reproduced as printed copies on canvas or paper, while other objects were represented by modern replicas created or purchased specifically for the project. Inspiration for the clothing items came from images in the Uppsala University archives, and the letters were sourced from the Uppsala University Library Carolina Rediviva. Some objects – such as a copy of a 17th-century letter, writing implements, clothing, historical games and maps – were included in every national version of the Student Chest, while others appeared in one or two versions. The basic items included in all three student chests are shown in Figure 1.

While creating tasks for the Student Chest, it became clear that teachers and pupils would need access to additional background information. For the museum-in-a-box concept to work effectively with such a specific historical topic, teachers using it in their classes had to be equipped with the necessary tools to carry out the tasks and explain their context. To meet this need, a dedicated website was created – *studentchest.eu*.

In each museum, the first stage of development involved defining the nature of the activities and tasks. The initial versions of the chests and lesson materials were tested in schools in each partner country and then refined based on feedback from teachers and pupils. Feedback was collected mainly through observations and post-lesson interviews, and in Estonia also through an online feedback form. Thus, teachers and students, as experts from the field, together with researchers who presented at project seminars and were consulted as needed for further input, also contributed to the project, making it more reliable both scientifically and pedagogically.

Development in Gustavianum

The team at Gustavianum added many items to the chest to illustrate aspects of everyday life in the 17th century. The chest includes a plate, a spoon and spice bags linked to a discussion task about what people ate, what foods are consumed today and what pupils think will be eaten in the future. The spice bags could be touched and smelled, so pupils could guess their contents.

A replica of a student's coat allows pupils to try it on and discuss in groups why clothes were made in a certain way in the past compared with how they are made today. The chest also contains historical games involving dice, cards and the game „Fox and Geese", each accompanied by instructions.

In addition, the chest includes two replica 17th-century maps. One shows all three modern countries involved in the project, with the first university cities – Uppsala, Dorpat (Tartu) and Turku – marked within what were then Sweden's borders. The other depicts Uppsala in the later part of the 17th century. Maps are a particularly engaging tools, allowing pupils to compare historical maps with modern ones familiar to them.

A quill similar to those used in the 17th century serves as inspiration for a task in which pupils write real letters on paper with ink to pupils in one of the other participating countries. This task required coordination not only among the teams in all three nations but also between English teachers in local schools. The same exercise was carried out in Estonia and Finland. In Sweden, the international project group visited a school that integrated the letter-writing activity into two English classes, where pupils read an example letter before composing their own using the same historical structure.

One task in the collection merits particular attention, as it produced unexpected and meaningful reactions from pupils, making it especially effective. This activity is based on the diaries of Johannes Julinus, a student who studied from 1659 to 1664, preserved in their original form at the University Library Carolina Rediviva in Uppsala. Johannes Julinus was born and raised in the Swedish town of Nyköping, but like his two older brothers, he moved to Uppsala, where he remained until he was transferred to the Turku Academy after becoming involved in an argument. His diaries, originally written in Latin, became accessible for educational use thanks to linguist Gunnar Tillander's Swedish translation and publication in 1968 under the title *Nyköpingsstudenten Johannes Julinus's Diaries and His Exploits in Uppsala, Turku and Strängnäs.* [24]

[24] Johannes Julinus and Gunnar Tilander, *Nyköpingsstudenten Johannes Julinus dagböcker 1659-64 och hans bedrifter i Uppsala, Åbo och Strängnäs* (Skara: Johansson, 1968).

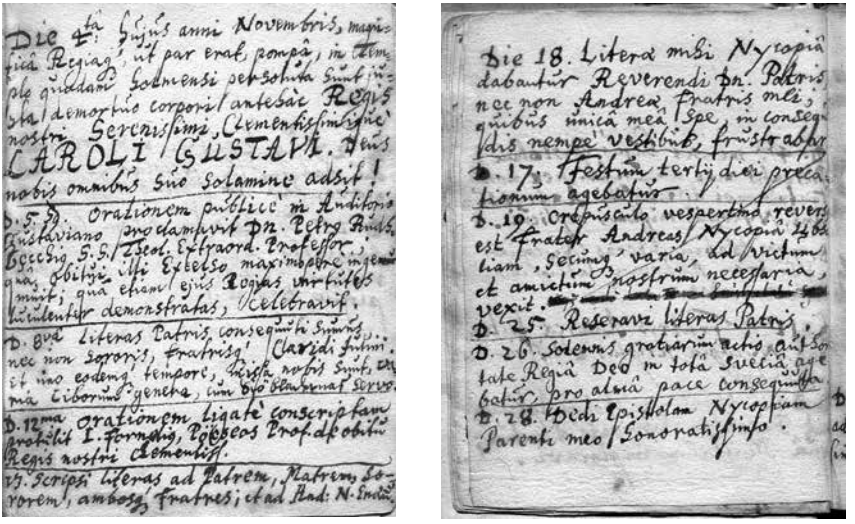

Figure 2. Pages from the diary of Johannes Julinus (manuscript department at Uppsala University Library Carolina Rediviva) from November 1660. The pages, together with the same texts in printed Latin and translations to Swedish, were used in the classroom. The text mentions the funeral of King Charles X Gustav, a public speech of Professor Petrus Rudbeckius and also personal details (letters from family members).

For the related task, five different pages from Johannes Julinus's original diaries (Figure 2) were copied and printed on paper. The class was divided into groups, each assigned a different page. The pupils' task was to extract as much information as possible from the difficult-to-read Latin handwriting, creating the feeling of interacting with a historical object through the OBL method. The task required close concentration, and most groups managed to recognise a few words. The teachers then reviewed each page with the groups, discussing their observations before distributing new copies of the exact same text in Latin printed in a clear digital font. This version allowed pupils to identify more letters and familiar words.

Finally, the pupils received a version of the same text with a Swedish translation. Each group presented what was written on their diary page and discussed what it revealed about the 17th century. Since each group worked with different pages containing varied information, they collaborated to piece together a fuller picture. This process led to live-

ly discussions about life in the past and present. The pupils already knew that much about Johannes Julinus's life differed from their own, but discovering that people in the 17th century wrestled with similar thoughts and problems proved to be an eye-opener for many.

The original purpose of the task was to help pupils work with authentic source material and understand what the diaries could reveal to modern readers about the period in which they were written. However, the pupils also developed an unexpected interest in language. They became especially engaged during the translation phase, recognising Latin words they already knew and gaining insight into how people wrote in Sweden centuries ago. A memorable moment occurred when a girl in the eighth grade, whose first language was Spanish, exclaimed across the classroom, „I didn't know I knew Latin!"

This focus on language also sparked the interest of the schools' language teachers. The activity proved particularly effective in engaging pupils who, according to their teachers, were usually less active in class. Several of these pupils, though not typically academically inclined, were able to contribute to solving the problems and took visible pride in their achievements.

Overall, the activities tested worked well, and both teachers and pupils expressed satisfaction with the results. The only issue identified concerned the spice bags: the cloth containers failed to preserve the scent of the spices, and over time each bag began to smell the same. This feedback was incorporated by all project teams to improve the design and ensure a better learning experience.

Development in the Helsinki University Museum Flame

The Finnish team explored the museum-in-a-box concept by benchmarking portable educational materials developed by the city museums of Helsinki and Vantaa. Both institutions have a Suitcase of Memories, which contains objects from past decades and is designed to engage both seniors and children. The items in these boxes and the accompanying activities – such as grinding coffee beans with a manual grinder, where the smell of the beans evokes strong emotions and memories in seniors while sparking fascination in children

– demonstrate the power of object-based learning (OBL). Museum professionals have confirmed that this form of OBL has a strong and lasting impact on participants.

The design process began with a clear vision of incorporating the history of science in some form or another. This led the Helsinki team to focus on the history of medicine, inspired by Elias Tillandz, the 17th-century professor of medicine and herbalist at the Turku Academy.[25]

The Helsinki chest was created primarily for sixth-grade pupils, as the 17th century is included in Finland's sixth-grade curriculum. While some history textbooks mention the educational reforms of Gustav II Adolf and the founding of the university in 1640, they provide little to no information about the development of science or everyday life during that period. The Student Chest was therefore designed to fill this gap in Finnish school curricula.

During the design process, the team reviewed the choices made by the other project partners and curated a similar selection of objects: a map, a compass, clothing items, a quill, writing paper and an *Album Amicorum*. The final version consisted of two antique-style suitcases – one larger case for clothing and one smaller for writing materials and other objects (Figure 3). This choice was made to ensure that the set remained lightweight and easy to transport, even by public transport, unlike a single large and heavy chest.

This version of the Student Chest was tested in three elementary schools in Helsinki. One challenge was that the Helsinki University Museum does not have a dedicated education team. To address this, the museum collaborated with teacher trainee students, who tested the chest in two schools as part of their science education course assignments, while the third test was conducted by the class teacher. In all cases, the chest was tested with sixth-grade pupils, its intended target group.

The first task involved letter writing, based on exercises developed by the Swedish team at Uppsala using the letters of Carl Gyldenstolpe.

[25] Elias Tillandz (or Elias Tillander) was the second professor of medicine at Turku Academy, known as the „Father of Botany" in Finland (see e.g. *National Biography of Finland*, https://kansallisbiografia.fi/english/person/2579).

Figure 3. The version of student chest(s) developed by Helsinki University Museum (Photo: Saara Seppälä, Helsinki University Museum Flame).

The next activity focused on medicinal herbs. Pupils were asked to smell four bottles containing essential oils – of rosemary, peppermint, sage and clove – and to guess what they were. The theoretical part of the task required pupils to search online for information about the health effects of these herbs. This activity was inspired by Elias Tillandz, who produced medicines from herbs cultivated in his garden and compiled an extensive catalogue of plants. The aim was to teach pupils about 17th-century medicine and the history of the university.

Students generally enjoyed this task, especially the sensory element of smelling and identifying the herbs. Some were easier to recognise than others, and in several groups the guessing activity led to lively discussion. However, the information search proved challenging for many pupils, so a helpful link to the project website was later added to make it easier for them to find relevant material.

Other tasks included dressing in period-style clothing for short roleplay activities (with items such as cloaks, shirts, berets, ruff collars, lace-trimmed detachable collars and pearls), working with a map to locate places and measure distances, and playing historical games with dice, cards and boards. The experiences gained from these activities were similar to those reported by the partner teams in other countries.

During the testing phase, the tasks were revised several times. It became clear that sixth graders needed considerable guidance and supervision. The initial activities were too open-ended and therefore required much additional explanation. Later, the instructions were made clearer and more direct. In one test, pupils expressed a wish for more background information. Although the project website contains detailed material on 17th-century life, teachers and pupils were unlikely to read it in full. Consequently, the final version of the Student Chest included concise descriptions of the relevant historical background. After these adjustments, a colourful leaflet was produced for both pupils and teachers, featuring vivid images and clear instructions for classroom use.

Development in the University of Tartu Museum

As in the Swedish version of the chest, the aim in Tartu was to compile a selection of items that would resemble the personal belongings of a travelling university student and use these objects as the basis for discussions and classroom activities.

The chest included copies of two historical maps: one showing Estonia and Livonia in the 17th century and another depicting the Swedish Realm. Pupils were first asked to locate specific cities and guess their modern names. They then discussed the differences between contemporary and historical maps and identified familiar places. The task also involved measuring travel time between cities and using a compass to determine the directions of various locations in relation to each other.

The clothing items and other props – including a cloak, plague mask, hats, collars, books, bottles and cutlery – were used in a roleplay exercise in which classes were divided into smaller groups. The

first step was to discuss what these items were, who used or wore them, and for what purpose. Each group was then assigned a category of people to represent through costume and viewpoint: philosophy students, theology students, law students, medical students, plague doctors, soldiers and citizens. Each group received a role card with basic information about the individuals, their daily lives, the challenges they faced and the ideas that influenced their thinking. The core of the task was a debate: each group was given a problem or question from a list and asked to develop arguments to present to the class.

A simpler version of this task, designed for younger pupils, involved creating a short play. Using the props and costumes from the chest, each group composed and performed a brief theatrical piece based on a set of written prompts.

Calligraphy paper, quills and ink were used to give pupils hands-on experience of writing as people did in the 17th century. The task began in the same way as in the Swedish version, using the historical letters of Carl Gyldenstolpe. An additional component required pupils to connect Latin and Estonian words to make the original letter easier to read and to introduce basic Latin vocabulary. They then wrote a reply to the letter using the same writing tools.

As another way to connect the classes, an *Album Amicorum* was added to the chest – a book containing the signatures of everyone who participated in the project, allowing pupils to leave their mark and establish a personal connection with the chest and its contents. The idea behind this signature book was that it resembled a 17th-century student's „friendship album", a popular custom of the time.

The chest also contained historical games, as well as medicinal herbs in bottles and bags, with tasks similar to those featured in the other teams' chests.

Once the task design was complete, teachers were invited to test the Student Chest in their classes. One such session took place at Tartu International School. The lesson lasted about one hour, with each task taking around fifteen minutes on average.

The map task was not particularly well received by pupils, except by those interested in geography or mathematics. It became apparent that these activities required more contextual information for both

pupils and teachers than initially expected. Additional explanations and instructions were therefore added to the Student Chest and the project website.

The writing task proved very successful, with many pupils noting that writing with ink was the highlight of the entire experience. Inferring the meanings of Latin words was easier for some pupils than for others, depending on their general knowledge of languages.

The improvised theatre exercise was generally the favourite activity among pupils, as it encouraged creativity and self-expression while providing entertainment for both participants and their classmates.

By contrast, pupils showed limited interest in playing historical games, often treating them as a break rather than an integral part of the programme. Nonetheless, presenting the physical objects remained an effective tool for fostering empathy through the OBL method.

In the disputation task, each group was assigned a central question to discuss, with 10–15 minutes for preparation. The groups then presented their characters' views on the issue. Typical topics included witch hunts or responsibility for the plagues. This activity usually generated enthusiastic participation.

Ultimately, no significant changes were made to the items used, but the insights gained from testing improved the understanding of how to present the tasks, leading to updates in the instructional materials.

Conclusion

By the end of the testing phase, the global pandemic had subsided, but the Student Chest continued to demonstrate strong potential as an educational tool. The initial objectives – bringing the museum experience to pupils, enriching classroom learning with objects that promote empathy, and aligning the content with school curricula – were largely achieved. All three project teams agreed that during development, the Student Chest and its associated tasks functioned effectively. The physical objects captured pupils' interest, and teachers found the project an enriching addition to their lessons.

Beyond its practical outcomes, the Student Chest project exemplified the principles of culturally responsive teaching by engaging pupils with historical narratives connected to their identities and cultural contexts. Through activities such as roleplay, letter writing and object-based inquiry, pupils were encouraged to reflect on diverse perspectives and develop historical empathy. This emotional and cognitive engagement helped learners humanise historical figures and events, fostering inclusivity and a deeper understanding of the past. The use of object-based learning is aligned with the contextual model of museum education, activating personal and sociocultural contexts even outside traditional museum settings. These theoretical foundations were evident not only in the project's design but also in its outcomes, as pupils showed increased motivation, empathy and critical thinking skills.

To date, hundreds of pupils aged between 12 and 18 have participated in one or more activities from the various versions of the Student Chest. The tasks were easily adapted to suit different ages and skill levels. The Swedish team also presented the chest at SciFest, one of Sweden's most prominent science festivals, while the Tartu team used it at numerous educational fairs, workshops and children's summer camps. Feedback collected after these activities confirmed that the project's methodological approach was effective: working with historical objects actively engaged pupils and helped them develop a deeper understanding of past events and processes within a historical context, as evidenced by the tasks that required analysis, critical thinking and creativity. The replicas of historical artefacts created the expected sense of curiosity and excitement among most pupils, prompting questions and encouraging discussion.

The teachers were satisfied with the general concept of the Student Chest, particularly its flexibility, which allowed them to choose among various tasks and adapt the proposed activities. One element that added particular value was the letter-writing task, in which pupils wrote to students in another country using a historical letter as inspiration. This idea was proposed during the project, inspired by pupils' enthusiasm when reading a student's letter from the past, which allowed them to write their own and discuss how communication functioned centuries ago compared with today. Although the

process was challenging – since the letters took time to arrive by post – the activity proved useful in the classroom and was appreciated by teachers, even if it did not lead to lasting pen-pal exchanges. Nevertheless, the idea of receiving a physical letter from abroad was exciting for pupils accustomed to the digital age.

After completing the design and testing of the chests and the accompanying website, the next step was to assess how the materials would be used in practice. The website was launched, and the Student Chest was promoted on the websites of all three participating. So far, the museums have not yet been able to promote the chests more actively, though there remains considerable potential for integrating these tools into classroom teaching. Several practical challenges persist, such as transportation logistics and teachers' preference for having museum curators lead the classroom sessions themselves, as this requires less preparation and is more convenient from the teachers' perspective. Even with the website's support, teachers still need to familiarise themselves with a substantial amount of information before conducting the activities independently. While the museums are eager to help find solutions to these practical challenges, limited resources make doing so difficult. In both Helsinki and Uppsala, the absence of dedicated educational staff and the cost of transportation are particular concerns. Consequently, wider use of the Student Chest will depend on future projects focused on promoting, marketing and implementing these educational materials.

That said, the activities themselves have proved engaging, informative and effective in fostering a positive attitude towards history – both in terms of developing general historical thinking skills, such as empathy and the ability to work with primary sources, and in relation to the specific period and the concepts required to understand it. The pupils who participated in testing the Student Chest had a positive experience with the tasks, especially those involving costumes and writing with ink. The activities enhanced their ability to work with sources such as letters and maps and helped cultivate empathy for people of the past, demonstrating how physical objects can shape one's understanding of historical periods.

Feedback from teachers indicates that the Student Chest has been a valuable tool for explaining distant and complex topics such as

religion and wars in the modern classroom. Several teachers also noted that, through active learning and hands-on activities, it becomes easier to engage a diverse range of pupils, including those with lower motivation or special educational needs.

Perhaps the most important lessons for pupils are not only about history but also about themselves. Reading, learning and discussing what real people once thought and how they lived provides perspective on pupils' own lives. Almost all tasks conclude with discussions that relate the past to the present and to pupils' personal experiences, making the lessons significantly more rewarding.

Finally, the museums involved in the project have strengthened their expertise and confidence in museum education and international collaboration. Learning through cross-border dialogue has broadened their understanding of the possibilities and challenges of museum education, while also revealing its limitations.

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Annex 1. Partners in the Student Chest project. Short overviews

Gustavianum is Uppsala University's oldest preserved building. Constructed in the 1620s, it originally housed lecture halls, libraries, student accommodation and student kitchens. In the later part of the 17th century, the building underwent a series of restorations, and under the leadership of Olof Rudbeck the Elder, an anatomical theatre was added between 1662 and 1663. Since 1997, Gustavianum has served as a public museum where the university's rich cultural heritage collections are displayed in permanent and temporary exhibitions.

Gustavianum, part of Uppsala University, manages the university's extensive collections of archaeological and historical objects, art, coins and scientific heritage. The museum building is an important venue for collaboration between the university and the local community. Its exhibitions and programmes are based on the museum's collections and on research conducted at Uppsala University.

The museum's collections are open for academic research and educational use. Gustavianum offers internship opportunities for Uppsala students, who work alongside curators in the museum stores. Students from a range of academic backgrounds are also employed in the museum.

Gustavianum's museum educators provide guided tours of all exhibitions for schools and preschools. The tours are tailored to the age and prior knowledge of each group.

The Helsinki University Museum Flame is a memory institution that preserves and presents the history and cultural heritage of the University of Helsinki, as well as the research and teaching carried out across its various disciplines. The museum operates three public venues: the exhibition centre in the university's Main Building, the Helsinki Observatory and the Art Room. It produces experiential exhibitions on science, research, art and the university's cultural heritage.

The museum's mission is to preserve and convey the history and cultural heritage of the University of Helsinki. It seeks to strengthen

public trust in research, promote scientific literacy and communicate the university's contribution to societal development. The museum supports equal learning, diverse education and broader public familiarity with the university and its work.

The museum offers guided tours, workshops and drawing courses. Both the exhibition centre and the Observatory provide public tours twice a month. Observatory tours are particularly popular among schoolchildren, one of the main target groups.

While the exhibition centre mainly targets adult audiences, it also seeks to reach younger learners. Programmes for schoolchildren have been developed, including a visit to the permanent exhibition, a guided walking tour of the university's Main Building and a task-based workshop within the temporary exhibition.

The Art Room's activities are aimed mainly at university students, though workshops and courses are occasionally offered to the general public.

All venues organise free-admission events as part of larger city-wide programmes and offer free entry to University of Helsinki students and staff.

The University of Tartu Museum comprises three locations: the History Museum main building, the Old Observatory and the Art Museum. These three sites are organised as a single entity, presenting the university's history and heritage to its students and other visitors. At the same time, the museum extends beyond the story of the university itself, addressing broader themes in the history of art and science. The museum's education department has developed an extensive range of educational programmes for schools. These programmes aim to inspire the next generation of university students in art and science, while also fostering positive associations between schoolchildren and the university.

The content of this educational work is diverse, but each programme must include some thematic link to the university and its academic legacy. For this reason, the Old Observatory offers seismology and earth science programmes in addition to its astronomy-related activities, as it was the first institution in Estonia to conduct seismological studies. The Art Museum's programmes are similarly

connected to its collection of plaster casts of ancient sculptures, lending themselves to lessons on Ancient Greece. Although the History Museum main building's most popular programmes focus on science, it also offers classes on the history of Tartu and its medieval cathedral, as well as on the history of the university in the context of local and European history.

17. sajandi tudengikirst – rahvusvaheline muuseumihariduse projekt

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Cecilia Ödman, Leif Hallsén, Uppsala Ülikooli muuseum,
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Artikkel annab ülevaate aastatel 2020–2023 Tartu Ülikooli muuseumi, Helsingi Ülikooli teadusmuuseumi Liekki (Leek) ja Uppsala Ülikooli muuseumi Gustavianumi koostööprojektist. Projekti keskmes oli kohvermuuseumi loomine ning selle tulemusena valmis igal ülikoolimuuseumil oma „17. sajandi tudengikirst".

Artikli ja projekti teoreetiline raamistik tugineb kontekstuaalse õppimise mudelile, kultuuritundlikule õpetamisele (CRT) ja ajaloolise empaatia arendamisele. CRT põhimõtted võimaldasid arvestada õpilaste kultuuritaustaga, luua tähenduslikke seoseid ning kaasata mitmekesiseid vaatenurki. Ajalooline empaatia aitas õpilastel mõista mineviku inimeste motiive ja tundeid ning luua seoseid tänapäevaga ning naaberriikide ajalooga.

Projekti praktiliseks väljundiks on „tudengi reisikirstud" – kohvermuuseumid, mis sisaldavad näiteks kirjutusvahendeid, rõivaid, maakaarte, mänge ja ravimtaimi, et näitlikustada 17. sajandiga seotud teemasid. Lisaks esemetele on kirstudes ka ülesannete juhised; pikemad kirjeldused (ja videod teemade ülevaadetega) on väljas projekti veebilehel studentchest.eu. Projekti raames läbiviidud katsetuste käigus osalesid õpilased rollimängudes, analüüsisid maakaarte ja ajaloolisi kirju, kirjutasid ise sule ja tindiga ning viisid läbi debatte ja rollimänge. Suulises tagasisides leidsid õpetajad ja õpilased, et käsitletav periood muutus neile huvitavamaks ja elulähedasemaks. Samuti näitasid kohvrite katsetused, et neid saab edukalt kasutada mitte ainult ajaloo, vaid ka näiteks inglise keele tunnis. Ainete lõimimise võimalusi on veelgi.

Kokkuvõttes näitas projekt, et muuseumiharidus saab edukalt toimida ka väljaspool muuseumi, toetades ajaloo õpetamist, arendades kriitilist mõtlemist ja pakkudes tähenduslikke õppimiskogemusi. Projekt tugevdas ka muuseumide koostööd ja tõi esile vajaduse

jätkusuutlike hariduslahenduste järele, mis aitavad kaasa formaalhariduse eesmärkide täitmisele ning aitavad väärtustada meie ühist pärandit ja toetada õpilaste kriitilise mõtlemise ja empaatia arengut.