





Initial findings

October 2019





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Digital heritage in education

From videos of the liberation in Arnhem in 1945 in a history lesson to Lorentz's X-ray – the first in the world – in a biology lesson. The use of heritage in education is important: it gives students an image of the past and contributes to cultural awareness and reflection of the present. Furthermore, a lot of heritage material can liven and enrich classes. And in their classes, teachers can more easily use heritage in digital form. How available and usable is digital heritage for education? This publication covers the initial findings of the 'Unlocking digital heritage for education' programme.

Museums, archives and other heritage institutes provide digital heritage and use it to develop various course materials for education. Unfortunately, these materials are not always easy to find and often, it does not sufficiently align with the course programme.

As a result, schools make little use of the materials and they do not yet constitute a structural component of the course programme.

The 'Unlocking digital heritage for education' programme takes stock of how retrievable and usable digital heritage is and how it can be meaningfully used in education. Kennisnet and the Dutch Digital Heritage Network are joining forces to structurally incorporate heritage in classes in primary and secondary education through the use of ICT.







Inventory approach



For the 'Unlocking digital heritage for education' programme, first we took inventory of how heritage institutes currently make their materials available and how schools use those materials. Furthermore, we researched schools' wishes to use digital heritage and heritage course materials. We have shared the results of this general inventory in this publication.

The results came from a literature review and (in-depth) interviews with experts and experience experts. This inventory provides those interested and involved with a general idea of the status of digital heritage in education.

For this research, we spoke with:

- Heritage institutes (such as museums, archives and online heritage platforms)
- Education institutes (such as schools, school boards and cooperatives)
- Connectors (such as heritage centres and art institutes that are in charge of coordinating supply and demand in a region or province's cultural education)
- ► Knowledge centres, networks and branch organisations in the line of heritage and education
- ▶ Education publishers and developers of educational products
- Funds focused on heritage and cultural education
- ► Educational products (such as tools or initiatives surrounding digital heritage)

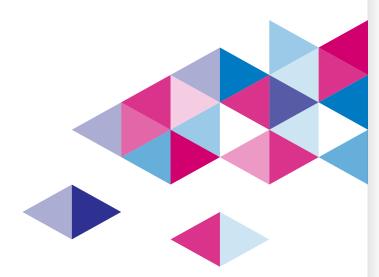
A complete overview of the organisations we spoke with is provided in *Appendix 1*.

The interviews were supplemented with desk research. A complete overview of sources used for that research is provided in *Appendix 2*.

The main findings from the interviews and desk research are covered in this publication. Based on those findings, we identify a set of opportunities for the successful application of digital heritage in education and structure the programme with more direction.







What are heritage, digital heritage and heritage course materials?

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In schools and within the heritage sector, different terms are used to talk about digital heritage in education. Therefore, we will further explain the terms 'heritage', 'digital heritage' and 'heritage course materials'.

Language, art, traditions, monuments – heritage is a broad concept. Heritage is the collective name for traces of the past which we believe are worth maintaining for the present.

Heritage can be digitised. For example, by scanning a medieval book, photographing a monumental mill or making the story of a textile factory worker available online. Heritage can also be 'born' digitally. An example is *The Digital City* website, the Netherlands' first online community, which is now heritage. All these digital images, texts, audio and documents are called digital heritage.

Lessons or forms of work that incorporate heritage are called heritage course materials. Of course, these lessons can be digital or non-digital. This programme focuses exclusively on digital heritage course materials. These terms are widely used in the programme:

- ► Heritage: cultural heritage in all forms.
- ► Digital heritage: heritage collections that have been digitised or which were born digital.
- ► Heritage course materials: Heritage that has been incorporated in (digital) course materials for education.

Digital heritage's road to the classroom

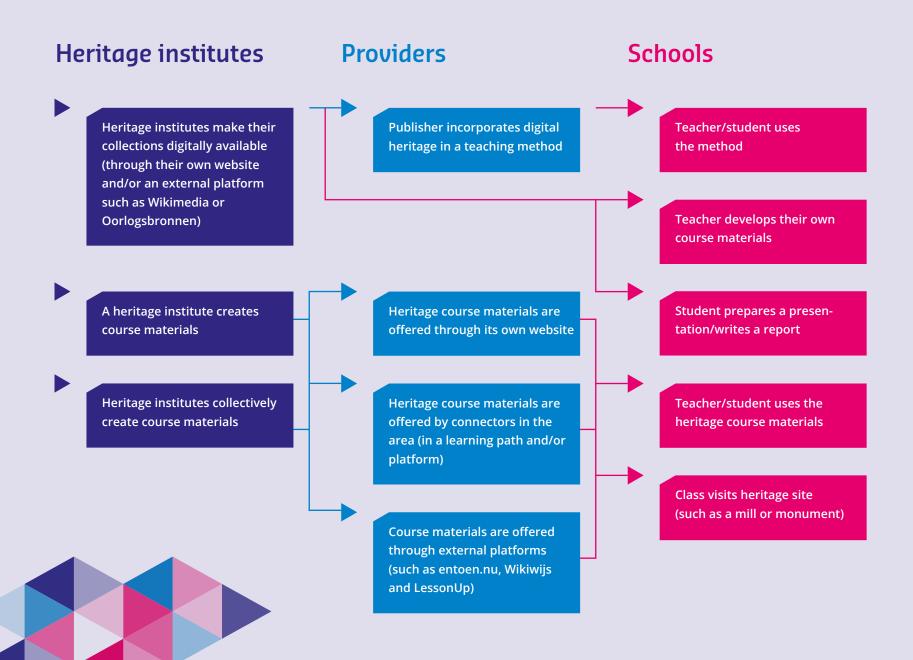
The inventory formed a picture of the journey that heritage makes from a heritage institute to digital heritage in the classroom. And the parties involved in that process. That is depicted in the figure below.















Findings



This chapter covers the main findings from the inventory stage of the experiences and challenges in the development and use of digital heritage in education. The findings are divided in general findings and findings that specifically apply to one of the concerned target groups.

General findings

Confusion over definitions

The first finding is that there is a lot of confusion about the terms 'heritage', 'digital heritage' and 'heritage course materials'. Not everyone knows what these terms mean. The term 'digital heritage' is often interpreted too narrowly. Involved parties tend to think of the image of a painting, or a picture of a mill for an art of history lesson. But the archived website of a city in Limburg, of the dialect of a town in Overijssel, are also forms of heritage.

The position of heritage in the education curriculum

Heritage has much broader uses than just for history class or art and culture education. Nature heritage, for example, is relevant to the subject of biology, and a video about the Wall Street Crash of 1929 is of interest to the subject of economics. We expect that there is relevant heritage available for all subjects.

The 'why' question also plays a role in the use of heritage in education. For example: why are certain things kept and not others? What value do they contribute to today's society? And who determines that? The skills you need to answer these questions, have the conversation about them and also understand the positions of others are called 'heritage wisdom'.

Rights to digital heritage

The rights involved in digital heritage are not always clear to users in education. Therefore, it is sometimes difficult to gauge whether discovered heritage materials may actually be used. Sometimes, no rights are listed or users do not know how to interpret rights notices. For example when using open licences, such as the Creative Commons licence: 'Attribution-NonCommercial'. To some, that may sound like use of that work is not permitted, but it is permitted for projects without a commercial purpose.

Furthermore, a lot of heritage from the 20th and 21st century still has copyright, which means that it cannot be used without certain conditions. There are educational exceptions for use within the physical or digital walls of the school, but those do not apply to all target groups and types of use. As a result, recent heritage materials are not as easily available. For more information on that, see the Kennisnet publication 'Auteursrecht en internet: Wat mogen scholen wel en niet' (Copyright and the Internet: What schools are allowed and not allowed to do').









Smaller range in secondary education

The most important educational range offered by heritage institutes consists of field trip lessons. These are when schools visit a heritage institute such as a museum or a mill. These visits boost visitor numbers and income for heritage institutes.

Heritage institutes often develop heritage course materials for a visit and possibly also for preparation for the visit or discussion afterwards.

There is a particularly wide range available in primary education, both in the form of field trip lessons and heritage course materials. That is partly due to heritage institutes having a preference for primary school students. To them, they are quieter and easier to supervise than secondary school students.

Moreover, group teachers in primary education are freer to plan their class schedules. Secondary school schedules are often set with fixed class times, which means a field trip requires consultation between teachers, and is not as easy to plan.

In some cases, there are cultural education schemes, such as 'Quality cultural education', with more available resources for primary education than for secondary education.

Digital course materials require maintenance

Digital course materials age quickly. They age in terms of content, but also due to rapid digital development. That can include plug-ins required for viewing the materials, for example, which the manufacturers no longer provide updates. Digital course materials require maintenance, e.g. so that links to online materials keep working. Videos may also no longer work as a result of technical changes – for example, when the server a video is stored on is moved.

One of the causes of poor maintenance is a lack of funds. That particularly applies to heritage course materials that are developed with temporary subsidies. After the temporary subsidy, there are no more funds available for maintaining the course materials, and they age and become outdated. Often, the costs of maintenance after a temporary subside are not taken into account.

In this programme, we researched a better way for heritage institutes to consider maintenance when creating course materials.

This makes the course materials more sustainable.









Specific findings

In addition to general findings, there are also findings (mainly obstacles) that apply to a certain target group. These can be categorised as: heritage institutes, connectors and teachers.

Heritage institutes

Heritage institutes develop heritage course materials with the goal of knowledge sharing. There is a lot of interesting information available that they want to share. They also see it as an opportunity to put the heritage institute on the map. We have found that the course materials developed by the heritage institutes themselves:

- vary widely per institute in terms of quality.
- often do not have a (solid) link with learning objectives. The heritage course materials often take up a large part of a class, or even multiple classes, without replacing (parts of) the teaching method. In that case, it is added on top of the existing course programme, making it difficult for teachers to know how it will fit into their curriculum. As a result, the materials often do not sufficiently align with the class in practice.
- are often only distributed through the institute's own website. With that, the educational range is fragmented and divided over countless individual heritage institute websites and not easy for teachers to find.
- often do not contain the search terms that teachers use and are difficult to find through the search engines or platforms that teachers use.

Teachers

Teachers see that digital heritage and heritage course materials can enrich their course programme and make it personal for their students. Regionally bound heritage in particular can play a big role in this. However, many teachers lack the time to work with heritage course materials. That is because:

- they do not have a sufficient view of how heritage materials fit into the course programme.
- ▶ they see working with digital heritage as an additional burden.
- ▶ they cannot easily find their way in the big, varied and fragmented range of materials. As a result, preparing quality lessons involving heritage takes a lot of time.
- they need specific expertise to effectively use heritage and heritage course materials. Such as: knowledge of the curriculum, skills for incorporating a variety of course materials and the option to deviate from the standard programme.
- ready-made heritage course materials do not sufficiently align with the set material and learning objectives.



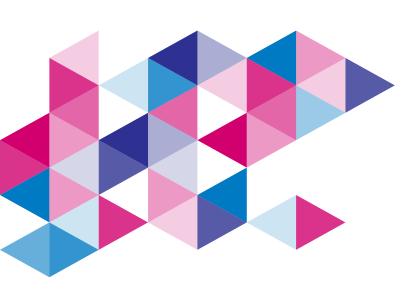






HERMAN TIBOSCH (HEAD OF EDUCATION AT KRÖLLER-MÜLLER MUSEUM):

"For teachers, it is better for the heritage to not feel like an extra class, with big objectives and a long manual, but like a logical, useful and fun addition to the existing course programme."



Connectors

Connectors see it as a great obstacle that schools do not always have a clear idea of their own wishes for using heritage in the classroom (the educational demand). The range of materials offered by heritage institutes also often focuses on information that they want to share (the content), but not on the materials that the teachers cover. The connecting parties in a province, region or municipality play an important role in coordinating supply and demand:

- ➤ The connector employs a permanent contact to coordinate supply and demand with heritage institutes per school. Ideally, there is a platform through which the connector can provide insight into what a school has done and can be done in the area of culture and heritage education. An example is the *Leiden Culture Education Group's* MijnSchool page. On that page, schools can see what they are doing and have done in the area of culture education.
- ➤ The connector works with schools to develop an overarching course programme or learning path that aligns with the learning objectives and topics that teachers incorporate.
- ➤ The connecting parties work to increase the expertise of the educators at heritage institutes and internal culture coordinators at school.





Opportunities



Based on these findings, we have identified the following opportunities to sustainably increase the use of digital heritage.

Knowledge sharing

There is a strong need for knowledge sharing and practical experiences among organisations that use or successfully make digital heritage available in education. This knowledge can be accessed through connectors, who already have links with both education institutes and heritage institutes. In addition to practical experiences, there is also a need for knowledge about matters including:

- making heritage course materials smart, sustainable and easy to find:
- using public ICT services (like Wikiwijs, Edurep and Entree);
- **copyright.**

Connection with the course programme and the students

Heritage can be an integral and sustainable part of the course programme, provided schools do not see it as separate material and extra work on top of the existing programme. This requires good connections between the heritage, the learning objectives and topics used in the course programme. Regional heritage materials in particular provide opportunities for this, as they align with the students' experience and provide recognition.

For example, a geography teaching method about how the polder landscape came to be will be relatable to students in the Groene Hart, but less so to students in Maastricht.

It is useful to look into what is needed to make these connections successful, both technically and content-wise, and to help organisations achieve that.

In primary education, the field trips offer good connections with heritage, but definitely also the additional lessons that are often structured with a central theme. In secondary education, digital heritage offers opportunities, as there is relatively less time, funds and flexibility available in the schedules for field trips to heritage institutes.

Digital links and applying filters

The range of digital heritage and heritage course materials is wide and fragmented. That makes it difficult for schools to find materials that fit the curriculum.







ARJA VAN VELDHUIZEN (CULTURAL EDUCATION SPECIALIST AT LKCA):

"Heritage institutes' manner of digitising and describing collections primarily serves the goals of those organisations themselves. It does not directly align with how education works. You have to invest in the translation process."

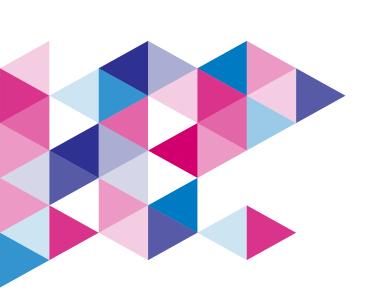
Often, the amount of heritage materials that teachers find during their search is overwhelming. For example, when a teacher going through an online database looking for an interesting Roman coin and finding thousands of coins, widely varying in image quality.

Making this process easier for all groups within education – like teachers, students, but also publishers – requires a proper structure to the information, with effective filters. That keeps the range manageable. Successful platforms on which heritage materials are offered have things like an effective search function and align with the themes that are relevant to education.

And to improve the ability to find heritage materials, it is important to better and more sustainably link relevant themes (technically and in terms content) to the terms used by heritage institutes.







How to proceed?

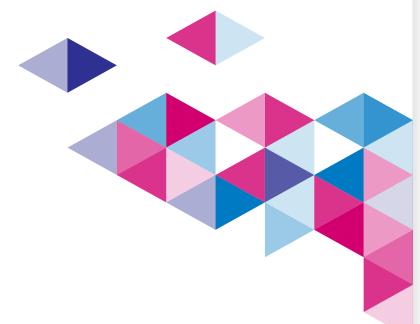
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This report contains the results from the inventory stage of the 'Unlocking digital heritage for education' programme. In the upcoming period, we will work together with the initiators of four projects who are currently developing or using digital heritage and heritage course materials in education. The lessons we learned during the initial inventory will be applied in these projects.

We will actively contribute to the four initiatives in the form of project support, technical expertise and advice on content. Additionally, we will follow and support right initiatives on a less regular basis.

We will also improve the national infrastructure of heritage and education, making heritage course materials easier to find and use. We will also apply knowledge and experience that we gain in the supported initiatives.

Finally, throughout the entire programme, we will share the know-ledge we have gained through practical tools, publications and meetings on the *Kennisnet website* and *Dutch Digital Heritage*Network website. You can also stay up to date via the 'Digital Heritage for Education' LinkedIn group.







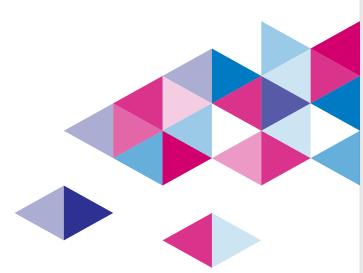
More information

More information on the programme is provided at *Kennisnet.nl* and *Netwerkdigitaalerfgoed.nl*. If you wish to receive this information in the form of a presentation, send an e-mail to *support@kennisnet.nl* and mention 'Unlocking digital heritage' in the subject.

Questions about this publication and the Kennisnet and Dutch Digital Heritage Network programme can be asked by sending an e-mail to *support@kennisnet.nl*, and mention *'Unlocking digital heritage'* in the subject.







Appendix 1 – Interviewed organisations



For the inventory, we spoke with:

- ► Heritage institutes (such as museums, archives and online heritage platforms):
 - Kröller-Müller Museum
 - Modemuze
 - Netherlands Institute for Sound and Vision
 - Netwerk Oorlogsbronnen (War Sources Network)
 - Nederlands Open Air Museum / entoen.nu
- ► Education institutes (such as schools, school boards and cooperatives):
 - ▶ De Rietschoof Public Primary School
 - SSPOH (Foundation for Suitable Primary Education Haaglanden)
- ➤ Connectors (such as heritage centres and art institutes that are in charge of coordinating supply and demand in a region or province's cultural education):
 - Zaltbommel Municipality Culture Coach
 - Leiden Culture Education Group
 - Freelance Heritage Coach & Culture Adviser
 - Plein C
 - Brabant Heritage
 - Gelderland Heritage
 - South Holland Cultural Heritage House
 - ► Landscape Heritage Utrecht
 - Fryslân Museum Federation

- ► Knowledge centres, networks and branch organisations in the line of heritage and education:
 - Dutch National Digital Heritage
 - Museum association
 - ► LKCA
 - Reinwardt Academie
- ▶ Education publishers and developers of educational products:
 - Noordhoff
 - ► ThiemeMeulenhoff
- ▶ Funds focused on heritage and cultural education:
 - ► Fund for Cultural Participation
 - Creative Industries Fund
- Educational products (such as tools or initiatives surrounding digital heritage):
 - National Committee for 4 and 5 May Education department
 - Digital Block Calendar
 - Heritage tools
 - Spacetime Layers





Appendix 2 – Sources used



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Colofon

How available and usable is digital heritage for education?

Initial findings

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About Kennisnet

A good education lays the foundation for living, learning and working, and challenges students to bring out the best in themselves. This requires an education that responds to social, economic and technological developments. Kennisnet supports management boards in primary education, secondary education and vocational education in professionally implementing ICT and is the guide and builder of ICT foundations for schools.

Kennisnet is financed by the Dutch Ministry of Education, Culture and Science.

About the Dutch Digital Heritage Network

The Dutch Digital Heritage Network was set up with the mission to develop – with all of the heritage institutions in the Netherlands – a system of facilities and services for improving the visibility, usability and sustainability of digital heritage. The Dutch Digital Heritage Network collective carries out the National Digital Heritage Strategy: from usable and sustainably accessibly digital collections and the technical infrastructure to online services for education and other target groups.

This is a publication within the 'Unlocking digital heritage for education' programme.

The programme is carried out by Kennisnet and the Dutch Digital Heritage Network, who work together in this process to improve the unlocking of digital cultural heritage for education.



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