Ancient Cities: Teaching and Learning in the Digital Age

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Abstract

In this paper we present an overview of the *Ancient Cities* project's outcomes and experiences with producing and testing digital educational material in the field of archaeology. In the first part, the Massive Open Online Course (MOOC) *Discovering Greek & Roman Cities* is introduced with respect to its target audiences and learning objectives, the ways in which it was disseminated to the target audiences, and how its structure and learning material were developed. Based on several questionnaires answered by the participants and user data from the MOOC platform itself, we were able to collect comprehensive information on the demography of the participants, their expectations, and their experiences. These data allow us to draw conclusions about the opportunities and difficulties of open education in the historical humanities. In the second part, we show how the course's materials were successfully implemented in academic teaching at the Panthéon-Sorbonne University, the University of Paris-Saclay (UVSQ)*,* and the University of Pennsylvania. These examples highlight how smaller academic fields in the humanities can design and enhance their respective teaching environments in the digital age.

Introduction

The strategic partnership *Ancient Cities: Creating a Digital Learning Environment on Cultural Heritage* has been established to produce and offer open, high-level educational material. It was funded by the ERASMUS+ program from 2017 to 2020 and brought together experts in ancient civilizations and e-learning practices. Led by the Kiel University, the partnership associated the following universities: Aarhus University (Denmark), National and Kapodistrian University of Athens (Greece, since 2018), University of Bergen (Norway), University of Birmingham (U.K., 2017–2018), Panthéon-Sorbonne University (France), and the Open University (Netherlands).

The common goals were to develop an innovative, pan-European digital learning module on ancient cities for use at higher education institutions and to create the freely available Massive Open Online Course (MOOC) *Discovering Greek & Roman Cities* for a broad audience. The project's aims were to stimulate, produce, and test innovative learning models; to enhance the quality of students' knowledge and skills (language skills, media literacy, critical thinking, didactic skills); to promote internationalization in teaching at higher education institutions; and to bring high-quality educational material to adult learners and schoolteachers. Leading scholars from the field of urban archaeology and ancient history worked closely together with specialists in digital

learning, always under the guiding question: How can digital teaching be implemented in the historical humanities and how can digitalization appeal to different target groups?

The project focused on the ancient city, as this topic is a central subject in the education of students of Greek and Roman archaeology, history, and art history. Since the publication of N.D. Fustel de Coulanges' book *La Cité Antique* (1864), classical antiquity has been approached through the perspective of the city. The city was the fundamental political and social entity for organizing life in antiquity. For more than 150 years, it has been the subject of ongoing scholarly debates and discussions that have been considerably enriched thanks to archaeological discoveries. At the same time, the ancient city is important for broad sections of the population, as many European cities have their roots in antiquity, which can still be seen today on the city map, or in the ruins of temples, theaters, and thermal baths. What city are we dealing with? Whether called *polis* in Greek or *civitas* in Latin, the Greek and Roman cities were multifaceted entities. They can be considered as states, populations, citizen groups, or religious communities, or can be approached materially as towns through the concept of urbanization. All these aspects were discussed in the project.

In this paper we provide an overview of the project's outcomes and experiences with producing and testing digital educational material in the field of archaeology. In the first part, we address our MOOC *Discovering Greek & Roman Cities*, its target audiences and learning objectives, and its structure and learning materials. We also present the ways in which we have promoted the MOOC to target audiences. Based on several questionnaires completed by the participants and user data from the MOOC platform, we were able to gather comprehensive information about the demographics of the participants, their expectations, and their experiences. These data allow us to draw conclusions about the opportunities and difficulties of open education in the historical humanities. In the second part, we demonstrate how we incorporated the learning material produced for the MOOC in our teaching at the university level.

The MOOC *Discovering Greek & Roman Cities*

MOOCs are a relatively new development in digitally enhanced teaching: they allow a very large number of learners (from 1,000 to more than 100,000 people) to access knowledge and information freely online.[1] The courses have specific learning objectives that learners can achieve through activities (videos, readings, tests, assignments) within a given time. The first MOOC was launched in 2008 at the University of Manitoba in Canada.[2] Then, in the fall of 2011, MOOCs were set up at Stanford University in computer science, reaching several tens of thousands of participants. Their creators founded the Coursera and Udacity platforms shortly thereafter. Initially, MOOCs were received with great enthusiasm, with the hope of opening up education and knowledge to more recipients and making them accessible worldwide without barriers. After a

short time, this initial excitement was followed by disillusionment, as the number of people who actually completed a MOOC after enrolling was very low, while the time and financial effort required to produce each one is very high. In the meantime, MOOCs have established themselves as a form of digital education worldwide; there are probably at least 12,000 courses with over 100 million registered users offered by 900 universities.[3]

Target Audiences, Learning Objectives, and Multilingualism

For our project, we chose the MOOC format to reach a larger group of people outside of academia and to test this form of teaching as an element of lifelong learning. Thus, the MOOC *Discovering Greek & Roman Cities* was aimed at (1) teachers at secondary schools and adult education; (2) students and colleagues of the fields of architecture, (ancient) history, Greek, art history, and Latin; (3) stakeholders from tourism, art, architecture, and cultural management; and (4) people with a general interest in archaeology, art and cultural history, architecture, and history.

Through such a MOOC, the exciting and topical contents of the ancient world can be communicated to larger groups of people. This is one of the main potentialities of MOOC platforms; they make it possible for several hundred people from different cultural backgrounds with varying educational backgrounds to take part in courses—a number and diversity that cannot be achieved through offering lectures or seminars at universities.

Well beyond the objective of communicating knowledge about the layout and function or the historical development of ancient cities, the aim of the course was to promote interest in and discussion of the (ancient) cultural heritage in Europe and, more specifically, in everyone's own city.

Participation did not require prerequisites, such as possession of a qualification or a level of performance in earlier studies. The course was accessible for free online after registration on the Open edX® MOOC platform that the Open University of the Netherlands acquired from a provider (Figure 1). The course was made available twice: from September to November 2019, and from April to June 2020 (during the first peak of the Corona pandemic in Europe) with 2,349 and 2,414 participants, respectively.

Over a period of eight weeks, experts from five different European countries imparted basic knowledge about ancient cities and methods of urban archaeology in English, French, and German (Figure 2). In this way, participants learned about the complexity of ancient cultural heritage. Through the collaboration of experts from different countries, each bringing his or her own research focus, as well as multiple course languages, we sought to break national perspectives and bring together an international group of learners. Of course, many institutes of classics or classical archaeology throughout Europe are offering online digital learning material, most often
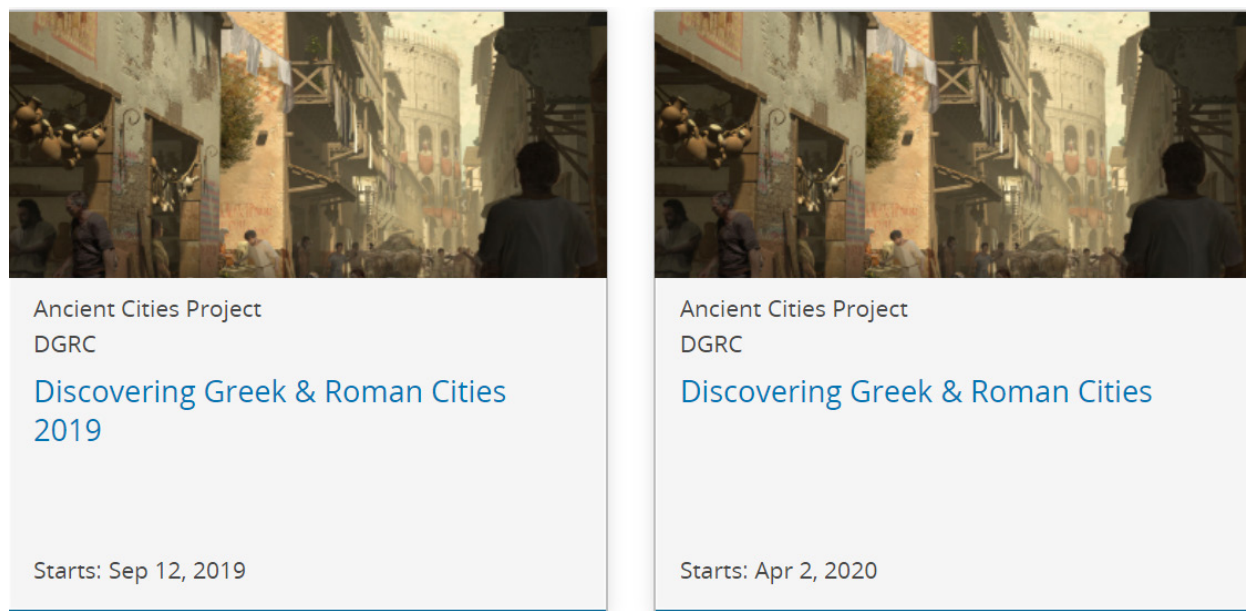
Figure 1. Registration page for the two runs of the MOOC.

targeting their own students. Due to their monolingual composition, however, they are restricted to language boundaries or promote English as a global teaching language. Hence, they do not embrace a pan-European perspective, as the topic of antiquity itself should allow or deserve. As an innovation, our strategic partnership committed itself to multilingualism and to the European ideal. So, the course has been made available in English, French, and German (Figure 3), reflecting the diversity of the partners; video contents were produced in one of these languages, with subtitles made available for
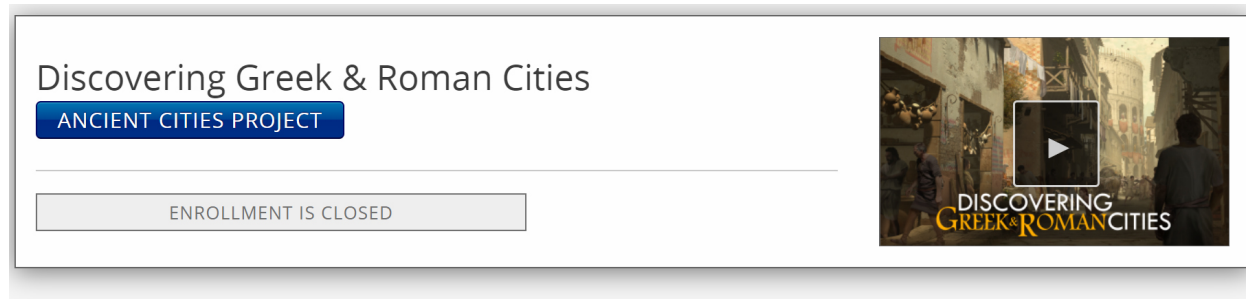
Enrolment has been closed now for new registrations. If you have already enrolled in the course, you can continue to access the content, do the assignments and quizzes and take part in the discussion.

In this trilingual MOOC (English, French, German), an international team of experts from six different universities will explore the many facets of Greek and Roman cities. They will discuss mega cities like Rome, centres of international commerce like the Greek city of Delos and Palmyra in the Syrian Desert, regional centres of production like Pompeii, and frontier towns like Dura Europos on the Euphrates.

The world of ancient Greece and Rome was a world of cities. City-states dominated Greece in the first millennium BCE, and in the Roman Empire, urban societies thrived from Britain and Spain in the West to Syria and Jordan in the East. Most of the major developments in the political, social, intellectual, and religious history of this period started in cities. Accordingly, cities are the ideal point of departure for the study of life in antiquity.

Course Number	DGRC
Classes Start	Apr 2, 2020
Classes End	Jun 11, 2020
Estimated Effort	2:30

Figure 2. "About" page of the MOOC.

all videos in all three languages. At a later stage, subtitles in two additional languages, Greek and Turkish, were made available on request by participants and teachers from partner institutions.[4] Additional materials (such as quizzes and readings) were also produced in the three languages of the project. To our knowledge, *Discovering Greek & Roman Cities* is the first multilingual MOOC dedicated to archaeology or classics.[5]

Figure 3. Multilingualism: course material in English, German, and French as presented in Module 1.

Structure, Content, and Assignments

The course began with an introductory section to familiarize the learners with the content and the platform so that they could make better use of this—for some of them still unfamiliar—form of online learning. First, there was a brief introduction to the content of the course in the form of learning objectives, maps, and timelines; the necessary prerequisites; and an introduction to the teachers (Figure 4). This was followed by an explanation of the technical aspects of the course, including use of the forum and a focus on the course's multilingualism, notably through the possibility of showing subtitles and transcripts of the videos in various languages.

The course itself was divided into eight modules, each focusing on a key aspect of ancient urbanism. The modules were released consecutively each week on a

Thursday. We chose to open the content consecutively to ensure as much consistency in the pace of learning as possible. Opening all modules immediately at the beginning of the MOOC would have made it both difficult for students to share what they were working on and for instructors to provide feedback on these assignments. We decided to open the modules toward the end of the work week because we assumed that most learners would work on the course content in their free time—presumably in the evenings or on the weekend. We found opening the modules at the beginning of the work week to be demotivating. In addition, we were concerned that our weekly email would be lost in a multitude of messages at the beginning of the week.

Figure 4. Outline of the "Welcome" section and Module 1.

An important preparatory issue had been to select the most relevant topics to discuss in *Discovering Greek & Roman Cities*. Not all topics could be covered, and every selected topic could itself be discussed through a variety of examples and case studies. As already mentioned, the notion of *city* covers many different subjects, most of which we wanted to address. To this point, the selection of topics and examples reflects the main fields of expertise of the scholars involved in the project. After our introductory session, themes of life, religion, politics, death, infrastructure, and the economy of

ancient cities were discussed. The last module focused on the legacy of ancient cities and the role of ancient heritage in our cities today.

To be more precise, the following module subjects were discussed:

Module 1	Why does it matter? / Pourquoi est-ce important? / Warum ist es wichtig?
Module 2	Daily life in the city / Vivre en ville dans l'Antiquité / Leben in der Stadt
Module 3	Religion and the city / La religion dans les cités antiques / Religion und die Stadt
Module 4	Politics and the city / La politique dans les cités antiques / Politik und die Stadt
Module 5	Death and the city / Mourir dans les villes de l'Antiquité / Tod und die Stadt
Module 6	Infrastructure and the city / Infrastructures urbaines / Infrastruktur und die Stadt
Module 7	Economy and the city / La vie économique dans les villes de l'Antiquité / Wirtschaft und die Stadt
Module 8	Legacy of the Ancient City / L'héritage des villes antiques / Das Erbe der antiken Stadt

Each of the modules had the same structure:

1. Introduction with a brief narrative, learning objectives, important key terms, maps, and images of archaeological sites, as well as quotes from ancient sources
2. Three to six videos of up to 10 minutes length
3. Assignments
4. Quiz
5. Reading Lists

Each of the eight modules began with an introduction consisting of a brief narrative, assigned learning objectives, explanation of key terms, and photographs of archaeological sites, maps, and quotes from ancient written sources (Figure 5).[6] The brief narratives were written by project member Christina Videbech. They were deliberately kept light in tone using techniques from fiction to captivate the students and to portray the "feeling" of the ancient city (Figure 6). Each written text was based on the key terms of the individual modules, using similar words as in the video lectures to ensure the continuity of each module. The narrative incorporated the different locations and themes addressed by each module.

Module 1: Why does it matter

Introduction

Video lecture: 1.1 Why do ancient cities matter today?

Video lecture: 1.2 What is a city?

Video lecture: 1.3 What did an ancient city look like?

Video lecture: 1.4 Chronology and geography of the ancient world

Video lecture: 1.5 How do you know it?

Bonus video: 1.6 Rome: A Centre for the Study of Ancient Cities

Apply your knowledge
Quiz ✎

Reading

Figure 5. Structure of Module 1 as displayed on the MOOC platform.

Figure 6. Brief narrative in the introduction to Module 1 as displayed on the MOOC platform.

Although the introductions were fictional, they were firmly based on archaeological research. To ensure that the information lived up to scholarly standards, all project members read through and commented on them based on their area of expertise.

Studies have demonstrated the importance of making the learning process and teaching goals visible to the students so they can track their ongoing learning process and visualize the relevance of their work (Hass and Osborn 2007; Miller 2007; MIT Online Writing and Communication Center 1999). It was therefore a clear goal to make such tracking as easy as possible. This was achieved by openly incorporating learning goals related to each module. We aimed at making the link between text and video material, assignments, and learning goals as clear as possible, which was further underscored for the participants during their assignment work. Moreover, we related the learning goals to real life situations as much as possible, illustrating skills that archaeologists use in their daily work.

Keywords, maps (Figure 7), and quotes were incorporated into each module and specifically related to the subject matter to give the learners easy access to background knowledge for the module and a spatial understanding of the sites mentioned. The

Figure 7. Map with places mentioned in Module 1 as displayed on the MOOC platform.

Figure 8. Example of keywords in Module 1 included in the glossary.

keywords (Figure 8) were extracted from videos and assignments to explain new concepts or words, but also to help the participants easily navigate through the different modules and quickly learn what was important.

The quotes were taken from ancient sources to underline the topic of each module (Figure 9). Furthermore, their purpose was to make the theme come alive and be more personal to the participants by *listening* to the eyewitnesses of ancient times. Research on learning shows that this kind of personalized history works very well in

Voices from the past

We often do not have many sources to the lives of the not so wealthy people in a city. However, we do have one very effective source: The quotes below are graffiti found in Pompeii and Herculaneum, giving a glimpse of the life of the 99%. The last two quotes by Seneca and Cicero represent the 1%. Take a look at what ordinary people and the most wealthy thought about living in a city.

> *"Apollinaris, the doctor of the emperor Titus, shat well here"*
> (Herculaneum, on the exterior wall of a house)

> *"Would that you pay for all your tricks, innkeeper. You sell us water and keep the good wine for yourself"*
> (Pompeii, Wood-working Shop of Potitus, next to a bar)
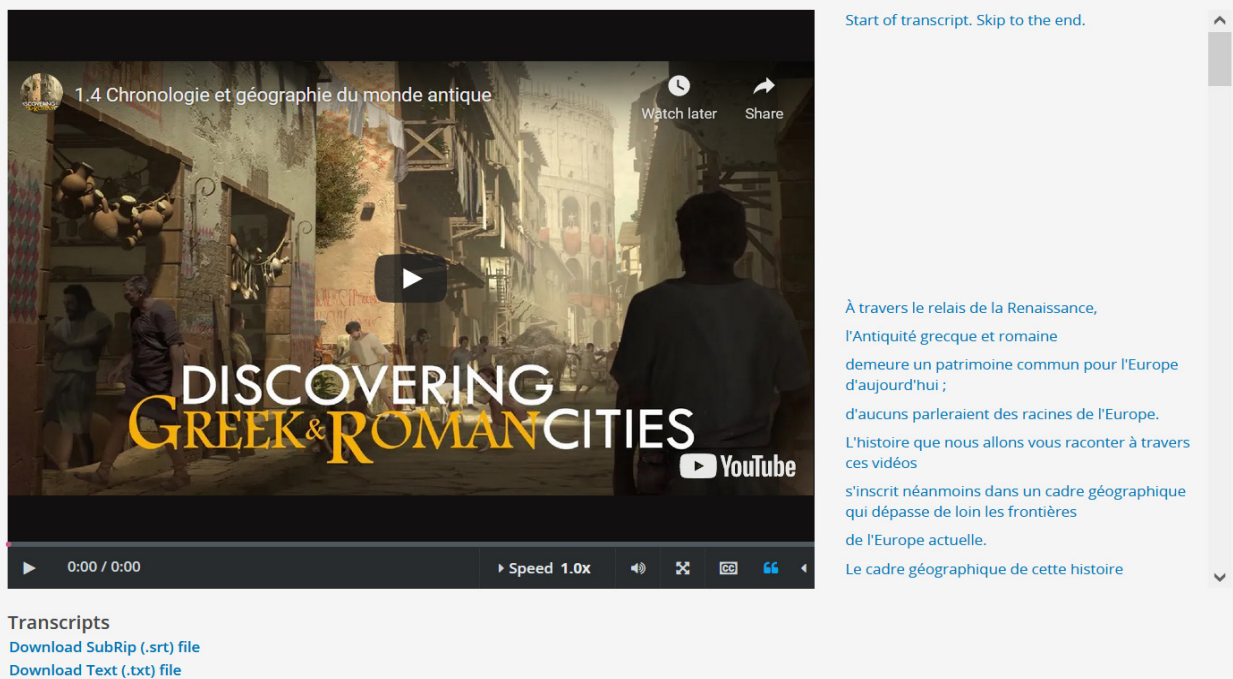
> *"Floronius, privileged soldier of the 7th legion, was here. The women did not know of his presence. Only six women came to know, too few for such a stallion."*
> (Pompeii, Gladiator barracks)

Figure 9. Section "Voices from the past" in Module 2: translation of graffiti found in Pompeii and Herculaneum.

learning situations. Finally, several of the quotes were used in assignments to foster the development of a source-critical approach in the students.

The introductory section was followed by three to six videos of up to 10 minutes each, produced by experts from five different countries. The videos addressed a variety of subjects related to the main topic of the module, with special attention given to bringing different viewpoints and perspectives, including a diversity in language for each module. Although videos were hosted on YouTube, the videos were also embedded

Video lecture: Chronology and geography of the ancient world

Start of transcript. Skip to the end.

1.4 Chronologie et géographie du monde antique

Watch later   Share

DISCOVERING GREEK & ROMAN CITIES

0:00 / 0:00   ▸ Speed 1.0x

À travers le relais de la Renaissance,
l'Antiquité grecque et romaine
demeure un patrimoine commun pour l'Europe d'aujourd'hui ;
d'aucuns parleraient des racines de l'Europe.
L'histoire que nous allons vous raconter à travers ces vidéos
s'inscrit néanmoins dans un cadre géographique qui dépasse de loin les frontières
de l'Europe actuelle.
Le cadre géographique de cette histoire

Transcripts
Download SubRip (.srt) file
Download Text (.txt) file

Figure 10. An example from Module 1 of the integration of the videos on the MOOC platform.

into the MOOC platform and shown aligned with a transcript plus embedded subtitles (Figure 10). Transcripts and subtitles could be downloaded. The videos were filmed either on location at archaeological sites or in modern cities (Figure 11), depending on the topic of the video, the learning objectives, and the general financial and administrative possibilities and constraints. The former was selected when we wanted to give viewers firsthand information about archaeological sites and incorporate interviews with relevant specialists, while we chose the latter when we wanted to link ancient and modern cities by recording the videos in a contemporary setting.

To test, apply, and expand the knowledge acquired in the introductions and videos, the participants could choose one of three assignments to complete, answer quiz questions, and delve deeper into the topic using selected literature recommendations. The assignments were color-coded into three levels of difficulty to make it easier

Figure 11. Filming in Cologne in front of the entrance to the Praetorium for the video *Antike in der modernen Stadt*, produced by Stefan Feuser in cooperation with eLK.Medien, the central e-learning service of Kiel University (photograph by Anna Lena Möller).

for learners to choose (Figure 12). An important factor in the development of the assignments was the promotion of active learning and critical thinking, inspired by, among others, the scholarship of John Bean (1996:149–161) on this subject. His research has demonstrated how open-ended questions encourage student reflection and discussion, which were two of the aims of the MOOC. This approach was therefore useful to encourage the MOOC participants in challenging their own worldview by putting themselves in the shoes of a person living in an ancient city (Bean 1996:156).

Studies have shown that such learning environments allow the students to thrive best if learners are presented assignments that conceptualize something they can relate to (Bean 1996:151; Hass and Osborn 2007:4, 10–11; Miller 2007). To ensure this personal interest was reflected in the MOOC, during a winter school in Paris early in 2018 (see below), university students of the participating institutions were asked to come up with ideas for an online course and what assignments they would like. While all of the ideas were carefully considered, some proved to be impossible to implement in this course. However, others served as good starting points for inspiration, such as

The assignments are not mandatory, but we suggest that you dedicate some further time to complete at least one of the assignments, to become more acquainted with Greek and Roman cities. Don't hesitate to post your assignments on your favourite social network and share the link with the community in our forum. We invite you to actively respond, evaluate and provide feedback to other participants' assignments. The forum will be moderated.

Assignment: Create your own Greek or Roman city

This assignment is of **average difficulty** and should not take more than 2 hours.

A city has been defined as "an inhabited place of greater size, population, or importance than a town or village" or "an area in which a large number of people live fairly close together", but cities are much more than that.

Read the information on the websites indicated below about how to build a city and what is needed in a modern city and compare it to what you know of the ancient city.

Now draw a city map of an ideal Greek or Roman city.

Consider the following questions in formulating your response and give reasons for your choices.

Upload your thoughts as a description or image (photo, drawing) in the forum of DGRC (at the bottom of this page). Furthermore, it is encouraged to use modern apps such as snapchat or the like.

Questions to consider

- Where would you place the agora/the forum?
- Where are the sanctuaries and temples located, where are the living quarters?

Figure 12. Assignment "Create your own Greek or Roman city" in Module 1.

the suggestions to include teasers for each week, develop quizzes, and facilitate clear learning goals and interactive work between students.

It was very important that the assignments reflected archaeological reality and method. Practical assignments where a set of data or archaeological material had to be analyzed was therefore highly prioritized. This is an approach that favors and encourages critical thinking and requires the use of the different available sources, both literary and material (Bean 1996:154; Miller 2007). Attention was paid to include as many different types of assignments as possible. For example, learners were asked to classify archaeological objects, lay out their own Greek and Roman city (see Figure 12), create their own dedications to an ancient deity, hold a Roman dinner event, or locate and present about historical sites in their own neighborhood. Furthermore, a strong link with the aforementioned learning goals made the purpose of each assignment clear to the student. Each module also had a multiple-choice quiz (Figure 13) with the explicit goal of helping the student visualize what they had learned throughout the module. So, more than being a way of calculating the skill of a student, the quizzes were designed as a further learning tool, often adding new knowledge to that already acquired, or encouraging the student to go further. To reflect the difficulty of the individual questions, they were also color-coded into our three difficulty levels. The main objective for the reading lists was to provide the necessary background knowledge that—along with the video lectures—enabled the participants to do assignments (Figure 14). However, some texts were also listed here for those who wanted to read further. For clarity, the lists were divided into basic reading, advanced reading, and links to websites. The links functioned as opportunities for the students to learn about life in the ancient city

(average, mittlere Schwierigkeit, moyen)
[EN] Question 7. What can ancient coins tell us about ancient religious life?
[DE] Frage 7. Was verraten uns antike Münzen über das religiöse Leben in der Antike?
[FR] Question 7. Que peuvent nous apprendre les monnaies antiques sur la vie religieuse ?

☐ [EN] The number of coins found in a sanctuary indicates how important the worshipped deity was.
[DE] Die Anzahl der Münzen, die man in einem Heiligtum findet, gibt Aufschluss über die Bedeutung der verehrten Gottheit.
[FR] Le nombre de pièces trouvées dans un sanctuaire indique l'importance de la divinité vénérée.

☐ [EN] In the Roman period, the cities of the Eastern Empire minted their own bronze coins for local circulation. Many of these coins depict local deities or local myths.

[DE] In der Römerzeit prägten die Städte im Osten des Reichs ihre eigenen Bronzemünzen für den lokalen Umlauf. Auf vielen dieser Münzen sind lokale Gottheiten oder Mythen dargestellt.

[FR] À l'époque romaine, les cités orientales de l'Empire frappaient leurs propres pièces de bronze pour la circulation locale. Beaucoup de ces pièces représentent des divinités locales ou des mythes locaux.

☐ [EN] Coins were a propaganda tool and the first mass medium of the world. They were used, for example, to advertise the construction of new temples commissioned by a city or by the emperor.

[DE] Münzen waren ein Propaganda-Instrument und das erste Massenmedium der Welt. Sie dienten beispielsweise der Bekanntmachung neuer Tempelbauten, die von der Stadt oder dem Kaiser in Auftrag gegeben wurden.

[FR] Les pièces de monnaie étaient un outil de propagande et le premier média de masse du monde. Elles étaient utilisées, par exemple, pour annoncer la construction de nouveaux temples commandés par une cité ou par l'empereur.

Figure 13. Example of the quizzes: question 7 of the quiz in Module 3.

Basic reading

- Article in the Ancient History Encyclopedia about "The Ancient City"
- Article discussing the role of geology in the success of Rome and Naples
- A blog on "critical classical reception studies"
- Khan Academy: About digging Roman cities
- Khan Academy: Visualizing Imperial Rome

Advanced reading

- Camp, J. M., The Archaeology of Athens, 2001 (a good introduction to the city of Athens)
- Claridge, A., Rome: An Oxford Archaeological Guide, 2010 (a good introduction to the city of Rome, also a useful glossary)
- Kolb, F., Die Stadt im Altertum im Altertum, 1984 (a comprehensive presentation of the history of cities in Mesopotamia and in the Greek and Roman Mediterranean).
- Laurence, R. et al., The City in the Roman West c. 250 BC-c. AD 250, 2011 (a good introduction to Roman cities in western Europe)
- Nicholas, D., The Growth of the Medieval City: From Late Antiquity to the Early Fourteenth Century, 1995 (presents the development from ancient to medieval cities)
- Wallace-Hadrill, A., Herculaneum: Past and Future, 2011, pp. 65-87 (a chapter on restoring and reconstructing the ancient city of Pompeii)
- Zuiderhoek, A., The Ancient City, 2017 (up-to-date introduction to the evolution, layout and society of Greek and Roman Cities)

Websites

The websites below give an impression of ancient cities and the buildings in them.

- Scene from Life of Brian – What did the Romans ever do for us?
- Pliny the Elder on the marvels of ancient Rome
- 3D reconstruction of Athens
- 3D reconstruction of Pompeii
- 3D reconstructions of different buildings/sites in Rome

Figure 14. An example of basic, advanced, and website reading lists taken from Module 1.

from other sources such as videos, reconstructions, and popular culture. They were chosen based on easy accessibility and comprehension, while always ensuring that the research behind it was sound, or selected because the link was used to encourage a discussion. As a commitment to multilingualism, particular attention was paid to adapting the basic readings and website links to distinct linguistic audiences, providing references and additional contents in languages other than English. This was not always easy nor even possible since—given the regional specificity of some content and, commonly, for much web-based content—there is a marked predominance of English-language sources. Anyway, we often chose to offer slightly different contents, depending on the language, rather than to adopt a monolingual approach.

The format of an online course with participants from different countries and time zones did place some limitations with respect to dialogue. One instrument to facilitate exchange and dialogue among the learners and between teachers and learners was the online forum designed to be integrated into the course (Figure 15). Learners were encouraged to post their results on the assignments in the forum, and to comment on the results of other learners, in a dialogue between both learners and teachers. Furthermore, teachers and specially appointed student assistants monitored the online forum, where they commented on assignments, answered questions, and participated in discussions. In the first run of the MOOC in fall 2019, the forum was used by the learners very cautiously and almost only for posting results. To encourage learners to actively use the forum in the second run, particularly successful students from the first run were enlisted as moderators of the forum. All these actions had the purpose of giving the students a feeling of a community across the world, encouraging the engagement of the students. This is a key component in successful learning, especially when online.

Figure 15. An example of the discussion in the forum on the assignment "Creating a votive offering" in Module 3.

As another tool for dialogue, we sent out an enthusiastic weekly email and held a virtual office hour, where students could interact with the teachers. The weekly email introduced the topic of each module through questions and learning objectives (Figure 16). From the access rates to the MOOC platform and videos, we could observe that sending these messages motivated the participants to continue working on the course or to resume their engagement in the course. The virtual office hour was held weekly, with at least one of the instructors available to answer questions about the MOOC and lead discussions on the topic of the weekly module. While this opportunity was taken up by an average of only 10 people during the first run in fall 2019, the number of participants was significantly higher, averaging 30, during the second run in spring 2020, possibly reflecting the need for social engagement (and the individual's availability) during the COVID-19 pandemic closures.

Figure 16. An example of the weekly message sent out to the participants of the MOOC as displayed on the platform: message at the end of the MOOC.

Overall, we assumed a time commitment of two and a half hours per week. We received feedback from the participants that this was too low, and that the effort was actually three to four hours. Upon completion of the course, participants who watched all

videos and answered 80% of the quiz questions correctly received an official certificate confirming their successful participation in the course.

As noted previously, the course materials and the forum were multilingual and available in English, French, and German. For the videos, we later added additional subtitles in Greek and Turkish to make the videos accessible to as many people as possible. Since the platform we used (Open edX®, Ginkgo release) did not support multilingual content, we chose to list the content in three languages on each page, rather than offering three separate courses in English, German, and French, which would have been contrary to the objective of multilingualism. Similarly, since the group of instructors who supervised each of the two runs was multilingual, we encouraged learners to post messages in the MOOC forum in English, French, and German.

Dissemination

In addition to the creation of the MOOC *Discovering Greek & Roman Cities*, its dissemination was an important task of the project to make as many people as possible from the intended target groups aware of the course. Our MOOC was not published on one of the major platforms such as Coursera, edX, or FutureLearn, each of which has several million users enrolled,[7] but on an Open edX® MOOC platform that the Open University of the Netherlands acquired from a provider. This was mainly due to the fact that we were obliged to work in open access as part of the ERASMUS+ grant program of the European Union. Furthermore, the usage of commercial MOOC providers would have meant paying large fees to create and deliver the MOOC. Participants still would have been able to register for free, but only with limited features. As we did not publish our MOOC on one of the major platforms, we could not rely on the database of an existing community to promote the MOOC but had to develop our own strategies to reach our target groups.

A mix of analog and digital dissemination channels was chosen, and we benefited from the international scope of the project. The distribution to universities was carried out via email lists by the partners of the project combined with the request to publicly display flyers and posters about the MOOC or to make them known otherwise. Teachers at secondary schools were contacted via the mailing lists and websites of professional associations for classical philology and history. Articles about the project and the MOOC *Discovering Greek & Roman Cities* were published in the magazines *Antike Welt* (Germany), *Archéologia* (France), and *Sfinx* (Denmark).

For dissemination in the virtual world, we first promoted the MOOC on the project webpage. We created a trilingual homepage and also set up project pages on Twitter and Facebook, while English-, German-, and French-language teasers were produced, uploaded to YouTube, and promoted through the project's own channels.[8] Since the dispersion of the project pages in social media was relatively low, the members of the

consortium directly approached popular online projects and blogs such as *archaeologie-online*,[9] *Actualités des études anciennes*,[10] *Ancient History Encyclopedia*,[11] *Forskning. no,*[12] and *Themata Archaiologias*[13] with the request to announce the start of the MOOC via their digital channels. In addition, Facebook posts for both the first and second runs were commercially promoted for the start of the course.

Participants in both runs indicated different ways in which they learned about the MOOC. Analog and digital dissemination channels were roughly balanced. This shows that the strategy of disseminating the course internationally through different measures and channels was successful. Slightly less than half stated that they had learned about the MOOC from professors, fellow students, friends, flyers and posters on display, or by reading an article. Slightly more than half had learned about it through digital dissemination channels such as social media, websites, newsletters, or online essays. The importance of Facebook as a medium—through which just under a quarter of all learners became aware of our course—is worth highlighting.

Copyright Issues

Most of the MOOC contents such as the video lectures, introductory texts, assignments, quizzes, glossary, and reading lists have been designed and developed specifically for the MOOC by the members of the project as open educational resources. In addition, relevant maps and images were added to illustrate important concepts. We preferred to use maps and images that were available under a Creative Commons license or were in the public domain. For some, we had to obtain permission to use the map or image. The primary aim was to bring high-quality educational material to adult learners and to make it available free of charge, in different languages, and without any prior knowledge or degree requirement.

The MOOC content, with the exception of copyrighted material, is provided under a Creative Commons license to allow anybody who is interested in the material to reuse it (under the conditions of the Creative Commons license Attribution-NonCommercial-NoDerivatives 4.0 CC BY-NC-ND). To widely disseminate the video contents and learning material, including beyond the registered participants of the MOOC, all 34 videos have been made available on a YouTube channel since the beginning of April 2020. To date, the videos have been viewed more than 71,000 times, with a total viewing time of over 4,700 hours. The learning material is available via open access from the ERASMUS+ Project Results Platform.[14]

As our strategic partnership was also directed towards increasing and improving high-level learning opportunities in adult and school education, we sincerely welcome colleagues from other higher education institutions and teachers from schools or adult education centers to use and adopt it according to their own needs.

Demographics and Evaluation Results

Demographic data have been taken from the profiles participants created when enrolling in the MOOC. The profiles contained fields for age, gender, educational level, and country. Fields were optional and several participants chose not to provide this information.
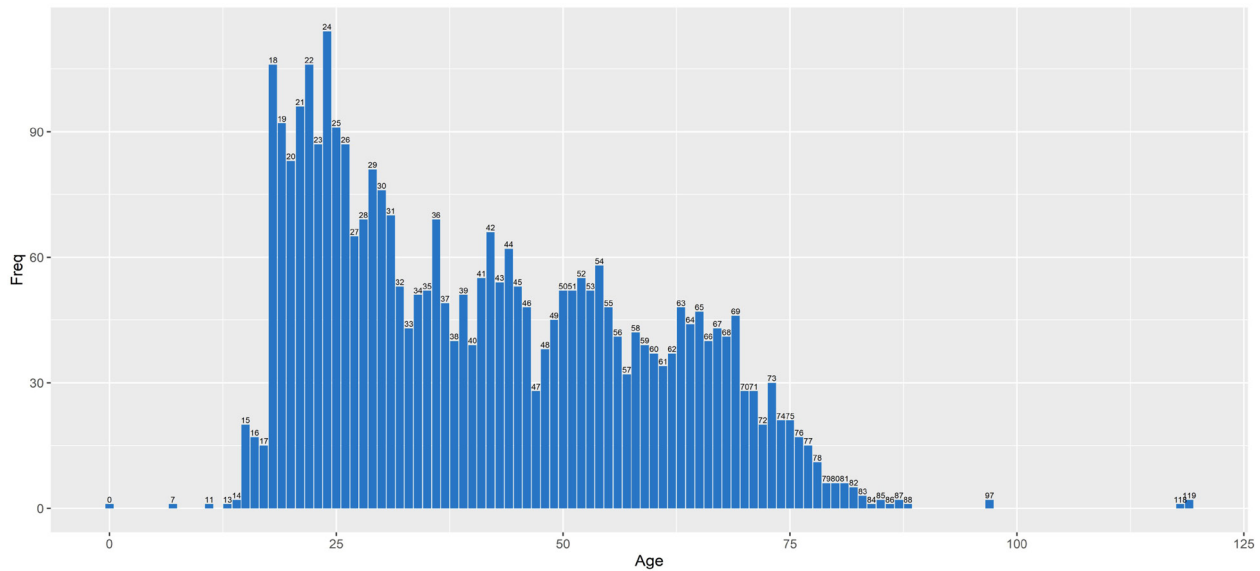
Figure 17. Age distribution of participants for both runs. The outliers on the age scale were included in this graph but were not considered in the calculation of the participants' average age. (M. Austenfeld, Kiel University)
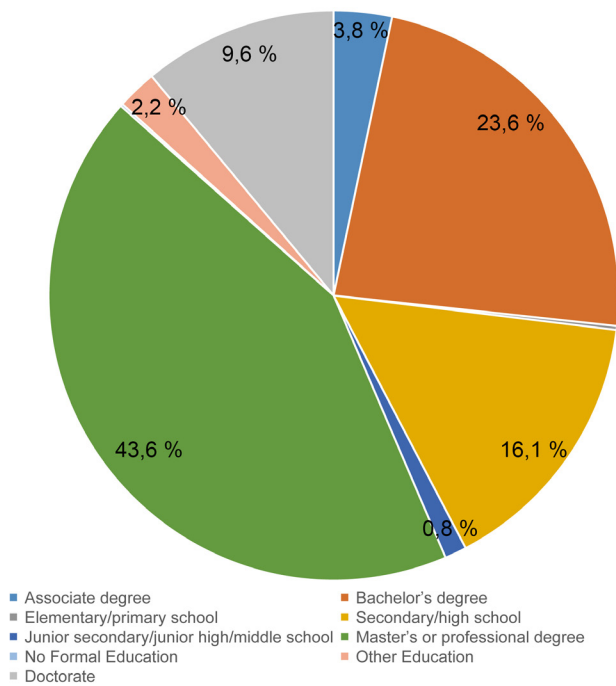
Figure 18. Highest level of education obtained by participants for both runs (M. Austenfeld, Kiel University).

For the first run, demographic data of 2,349 participants were available. The average age was 40 (Figure 17), almost 60% of the participants were female, 67% held a bachelor's or master's degree, and 16% had finished secondary or high school (Figure 18). Participants indicated one of 63 different countries from all (inhabited) continents, with the majority coming from the countries of Germany, Greece, Norway, United States, United Kingdom, Netherlands, and Turkey (Figure 19).
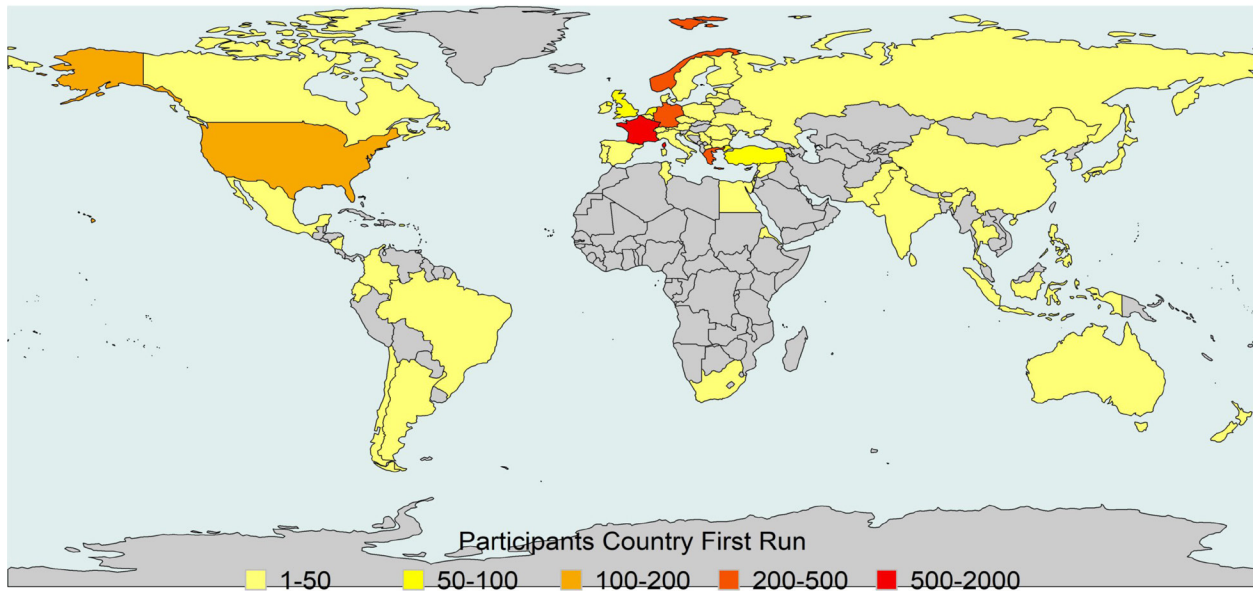
Figure 19. Participant countries: first run of the MOOC (M. Austenfeld, Kiel University).
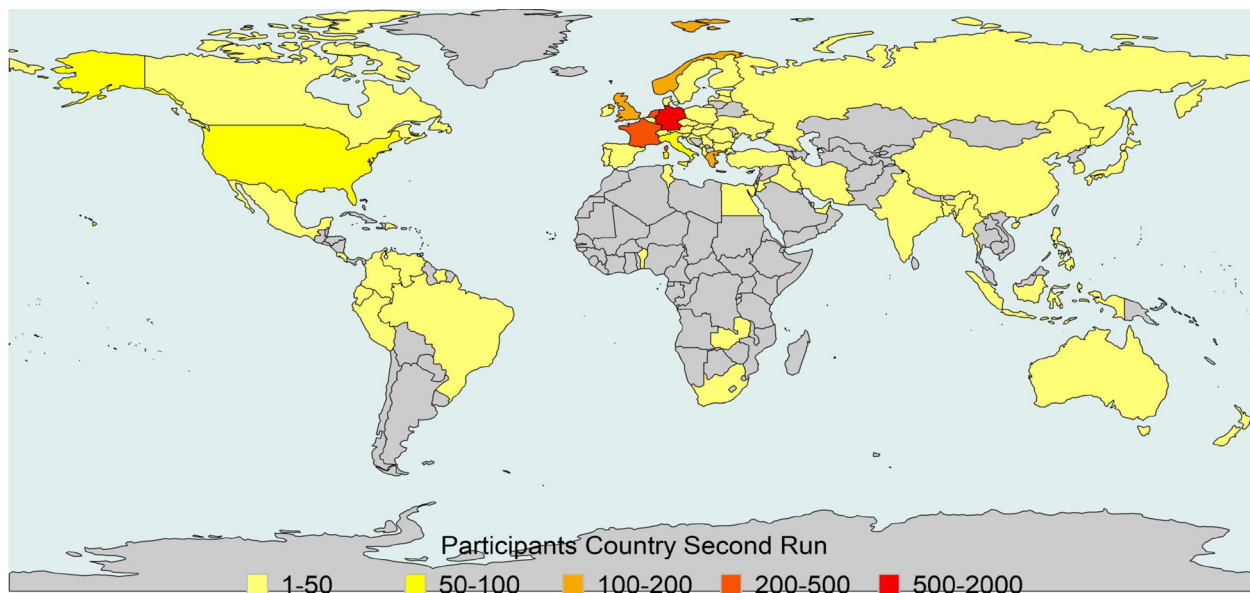
Figure 20. Participant countries: second run of the MOOC (M. Austenfeld, Kiel University).

For the second run, demographic data of 2,387 participants were available. Participants were on average 42 years old (see Figure 17), with the youngest being 13 and the eldest 97; 45% were female, 29% male (the remainder did not indicate gender); 31% held a master's degree, however 27% did not specify their level of education (see Figure 18). Participants indicated one of 74 countries, with the majority coming from Germany, France, and the Netherlands (Figure 20).

To learn more about the learners' expectations and experiences in the two rounds of the MOOC, participants were invited to answer two questionnaires: one at the start of the course regarding their expectations and one at the end regarding their experiences.

There was a fair response rate (386 and 472 respondents per session, respectively) to the questionnaire at the start of the MOOC asking about expectations for enrolling in the MOOC. No marked differences existed between the first or second course sections in the expectations of the participants. The main reason to enroll was to gain knowledge about the topic, though some enrolled out of curiosity. While in the first course run only 6% indicated that their enrollment was motivated by a desire to obtain a certificate, in the second run 17% declared an interest in certification. In general, respondents did not have experience with e-learning or MOOCs and preferred the more traditional modes of learning by doing assignments and quizzes, watching videos, reading text, and interacting with the teacher, but less so reading comments by or discussing with other learners. Although the whole MOOC structure was multilingual, English seemed to be the preferred language, even if there was no outspoken preference for language of content, video, or user interface.

The response rate to the questionnaire at the end of the MOOC, inquiring about experiences, was slightly lower (267 and 359 respondents, respectively). Although the rating of the experiences tended to be on the positive side, there were also negative ratings. Respondents varied about "being challenged," "being engaged," and the multilingual character of the content. The quantity of content and the assessment of the videos seemed to be fine. In both runs, the respondents' ratings on assignments and quizzes varied. In general, they indicated that the number of assignments was high and time consuming. Although very few participants actually submitted quizzes, some respondents would have liked more quizzes. Respondents would have preferred more feedback on assignments and quizzes.

Overall, learners were very positive about the MOOC. However, the MOOC might not cater sufficiently to learners who have no experience with e-learning. Most learners expected that they could only study new content at the time we sent the weekly message and did not understand that they could study whenever and wherever they wanted. Because of this lack of e-learning experience, learners had issues navigating the platform. The platform does not support multilingual content, and our choice of presenting all languages on a single page was perhaps suboptimal.

Another issue we encountered is that the MOOC platform does not support uploading assignment products. Therefore we had to ask learners to upload to social media instead and discuss their assignments in the discussion forum. Many learners did not feel comfortable having to use social media and would have preferred everything to be handled within the platform. As it was reported, assignments and quizzes could have been better aligned with the content of the MOOC and suited to the variety of academic levels and age categories of the learners. It also appeared that learners would have preferred feedback from teachers, not just from other learners or even teaching assistants, indicating that peer assessment is not yet a well-accepted process in education. Other forms of (automated) feedback should also perhaps be explored. Overall, a multilingual MOOC remains a challenge, not just because the content has to be provided in multiple languages, but also because communication with the learners has to be in multiple languages too. In particular, French learners had difficulty with English as a means of communication. Various respondents would have liked videos spoken in all languages instead of combining the spoken language with subtitles in different languages. This, however, would have missed our main objective of running a single, multilingual, international MOOC, and not several, monolingual, parallel, national courses. Here too, Europe is still a community in the making.

On a quantitative level, we are satisfied with the number of approximately 2,400 enrolled learners per run, especially since the course did not run on any of the major platforms such as Coursera, edX, or FutureLearn with their dissemination capabilities and huge numbers of registered users. For the first run, the total number of 307 certificates issued means that at least 13% of the enrolled participants watched all videos and submitted all eight quizzes with a score of at least 80%. For the second run, 500 certificates were issued (21% of enrolled participants). This ratio is certainly at the upper end of the completion rate of other MOOCs.[15] However, it is important to remember that learners also acquire knowledge and initiate their own learning activities without formally completing a MOOC.[16]

Incorporating the MOOC into University Teaching

The second main objective of the strategic partnership was to produce a pan-European, multilingual learning module on ancient cities and to implement it into the curricula of the partner universities. This learning module was meant to enhance the students' knowledge on the subject and methodology of ancient cities on a pan-European level, and to enhance the students' language skills, their media literacy, and their critical thinking. Of course, direct, personal contact between teachers and learners will never be substituted by digital methods. The personal contact and the discussion and weighing of opinions in university courses are central elements of teaching in the humanities. The *Ancient Cities* project, therefore, did not aim to replace classroom

teaching at universities with internet-based courses. The goal was rather to beneficially supplement in-person courses with the technical advantages of digital methods and to deepen specific knowledge.

A first step was the organization of a winter school, which was held in Paris in February to March of 2018.[17] Five bachelor's students from each participating university convened during one week of intensive lessons and cultural visits. Lectures by teachers involved in the production of the MOOC were given in English, and students were asked to work on group assignments. Groups were linguistically mixed, including one student from each participating institution. We asked them to think about the different concepts of citizenship and how they were defined and practiced in their country of origin. The aim was to make them aware of the diversity of current applications throughout the European Union, which helped them to conceive the "otherness" of ancient Greek and Roman citizenships and to recognize their temporal distance but also the strong legacy of classical antiquity.

The following year, during a spring school organized in Aarhus, participating students at (mostly) the master's degree level were lectured on the introduction of new(er) teaching methodologies, such as web-based approaches, distance learning, collaborative work, peer evaluation, and inverted classrooms.[18] This was a unique opportunity for teachers as well to compare national approaches and integrate new aspects of teaching in their own practice. At this point, as group activity, students were asked to plan a teaching module on ancient cities and to propose possible scenarios for learning activities. This produced a wonderful brainstorming experience, with many good ideas ready to be developed and applied to the implementation of our MOOC into the pedagogical experience of our universities. Through this experience, both students and teachers realized the time-consuming aspect of designing a course, but they also fostered their didactic skills and their knowledge of project management.

The project initially planned to create an international internet-based seminar led by a tutor issued from the strategic partnership. After a phase of self-learning, during which the students would acquire knowledge about the history and archaeology of ancient cities based on teaching videos and introductory texts, both individually and independent of location, the informational content would then be deepened by an international internet-based seminar, with additional teaching material brought into the course by each of the project members. During the seminar, the students would work on specific projects in small groups under the guidance of the tutor and would eventually present their results online to the audience of the seminar and discuss it with their peers. In this way, students would have joined and collaborated in an international environment without having to travel.

However, due to the incompatibility of university calendars across Europe and after considering the diversity of the curricula and levels in which each of the partners

were teaching, it proved impossible to find a common time slot, or a common course unit shared by all universities, even within the existing European Credit Transfer and Accumulation System (ECTS).[19] In the near future, with the creation of truly European universities, students should be able to benefit from a broader diversity of perspectives across the European Union and develop multiculturalism, which should become a key aspect of the future European higher education system.[20] Beyond the physical mobility historically linked to the 35-year-old European student exchange program ERASMUS, these new, currently developing networks of universities, as promoted by the new ERASMUS+ program, will probably transform higher education in Europe by implementing new, supranational curricula, enabling students to engage in virtual and physical mobility, and allowing them to collect credits across the network through classes taught in various languages. In this way, they will not only acquire archaeological expertise but also develop intercultural skills, expanding their language proficiency and broadening their professional horizons. In our case, students from Kiel, for example, could have taken part remotely in an archaeological course at the Panthéon-Sorbonne University for one semester and in another course at Aarhus University the following semester. This was not yet possible, however, at the time of our project. In the near future the new digital possibilities—many of them developed during the pandemic—will certainly contribute to making archaeology and classics, as well as other fields of higher education, more international without having to travel. For now, however, the first European universities have only engaged in the initial steps towards this new goal. As it was conceived, the *Ancient Cities* project was a forerunner to this new trend but probably came too early to be fully implemented across our universities.

With universities converting to a majority of online teaching for several semesters, the COVID-19 crisis has demonstrated how such teaching experience is possible, although time-consuming for teachers and psychologically difficult for students (Chan et al. 2022). Of course, these were rare extreme conditions—at least we hope—with all teaching being delivered online and social interactions (even beyond campuses) strictly reduced in the real world. Implementing a few online units within local or newly created European curricula, while keeping what makes universities places of social engagement, nevertheless seems a reasonable path and is probably the future of European and global higher education training.

Anyway, even before the pandemic, considering the discrepancies between our national curricula, we decided to implement our collectively produced material at our individual institutions in different ways, according to local requirements and constraints.

Panthéon-Sorbonne University

At the Panthéon-Sorbonne University, the MOOC was implemented in the 2019 fall semester of dual bachelor's programs in Art History and Archaeology with, respectively, Law and History, two very selective programs with a total of about 150 students,

whereas approximately 500 students are enrolled in the first year of the general bachelor's degree of Art History and Archaeology. The French pedagogy usually distinguishes between, on the one hand, the main lecture course (*cours magistral*), corresponding to a 2-hour lecture every week in an auditorium with optional attendance for the students and no interaction with the professor, and, on the other hand, the tutorials (*travaux dirigés*), corresponding to a 1.5-hour session per week in smaller groups of about 30 students with mandatory attendance. The 12-week main course (*Art et Archéologie de l'Antiquité grecque et romaine*) offers a chronological survey of Greek and Roman art history and archaeology, while the tutorials focus on technical aspects (pottery, statuary, metalworking, architecture, town planning). Due to social protests and a general strike in France that also affected universities during the 2019–2020 winter, only the Greek part of the course was delivered without any disturbances over six weeks.

In order to implement the learning material produced for the MOOC within this frame, the local representative of the *Ancient Cities* partnership turned to blended learning, which mixed face-to-face and online courses. Inverting the usual pedagogy applied in French universities, he opted for the principles of the flipped (or inverted) classroom, which combine phases of self-learning through video lectures with physical, in-person courses. With the flipped classroom, more theoretical learning takes place outside the classroom, allowing the teacher to go further in group sessions and students to assimilate the course content differently.

Since the pioneering experiences of the 1990s (Mazur 1997) and up to the most recent studies (Santos and Serpa 2020), inverted classrooms have proved to be an excellent method for active learning, encouraging not only the acquisition of knowledge, but also the development of other skills. The experiences of the last decade (Halili and Zainuddin 2015; Mok 2014; Ozdamli and Asiksoy 2016; Santos and Serpa 2020; Strayer 2012; Tucker 2012) have shown that, much more than the traditional learning process, flipped classrooms help students not only to focus attention for a longer time but also to develop and attain specific and transversal skills. Although in its guidelines for twenty-first century university teaching the French Ministry of Education encourages the development of approaches based on competencies, they have rarely been implemented up to now in the practices of most university professors (Paddeu and Veneau 2017).

In our experience, whereas the tutorials were not really impacted, even though material issued from the MOOC was also introduced in their content, the main lecture course was completely transformed. Before the start of the academic year, additional material was produced to provide students with a digital version of the usual content of the course, consisting of video lectures offering a chronological survey of Greek art history and archaeology from Geometric to Classical times. A series of ten video lectures was shot in French for a total of 6 hours of video and made available on the

course website (based on the Moodle platform). A full transcript of the lessons and slideshows with images of the relevant archaeological sites and works of art were also provided, as well as a short bibliography. Each week, students were asked to watch the videos (about one hour of video content per week) and/or read the related transcripts before attending the main lecture time. Online quizzes were provided to test their self-acquisition of the material. Students were also asked to contribute, through an online notepad, to a collective glossary compilation, aimed at generating self-acquisition of important concepts.

Instead of a one-way teaching experience, the main lecture course was devoted to various activities promoting discussion and an exchange of ideas with students:

1. a reply to all questions brought to the fore by students, both orally or through a live notepad, whether on the content of the online material or on (more or less) related topics, such as politics in ancient Greece; the role of women; the status of slaves, metics, and citizens; the notion of the artist; the agonistic mentality; and more.
2. a correction of the entries of the glossary compiled weekly.
3. quizzes including elements of gamification (high-score system) using the online platform Mentimeter.[21]
4. roleplaying activities on a voluntary basis, with or without preparation at home, such as replicating the pose of a statue (as an exercise to physically experiment the issue of balance and posing in Greek statuary) or simulating an assembly meeting to decide on the construction of a new temple for the city.
5. a selection of short videos produced for the MOOC, supplementing the weekly topics, or introducing new aspects, to engage the audience in a collective discussion about ancient Greek cities and their legacy.

The main goal of the course was to transform the traditional training in Greek art and archaeology into an inquiry on Greek society, by highlighting the importance of material culture in understanding the Greek civilization, particularly the history and archaeology of ancient cities and their reception as cultural heritage.

In the self-learning phase, the students were supposed to acquire knowledge individually and asynchronously at their own pace with the online video lectures and/or transcripts. In several respects, the digital learning modules were supposed to enhance the access, participation, and learning performance of the students. Online material was available independently of the student's location. Since the timing and rhythm of knowledge acquisition were both flexible, learners with full-time or part-time jobs during the day—a very typical situation in French universities—could appreciate the flexibility of the system, as could students with geographic obstacles, especially those with a time-consuming, long-distance daily commute from home to university (up to two hours each way for some).

The implementation of this pedagogical choice resulted in some interesting developments, which were assessed through an online (and anonymous) final survey submitted several weeks after the end of the lessons, with 82 students participating out of approximately 150 registered.

First, the rate of attendance in the weekly main lecture course quickly—and unexpectedly—dropped: from about 120 attendees at the first lesson, to 86 students the second week, falling to 51, and then to only 35 or so for each of the successive weeks. To be precise, attendance was explicitly said to be optional, and the course was—admittedly—in the unfavorable time slot of late afternoon (5–7 pm). According to the final survey, only 30% of the (responding) students attended the course every week and 40% of them attended several but not all lessons. For those who did not attend every week, the reasons given included that the online material was considered to be sufficient, they lacked of interest in the topic, they lacked time, they had a job, the course schedule was too late and they had a long commute between university and home, but they also indicated that a failure to prepare the week's course content prevented them from coming to the main lecture—an issue worth considering further (see below). Conversely, 93% of the students believed that the online material was well designed for the acquisition of the content of the course, with a majority considering the videos very helpful, although too long. Regarding the videos produced for the MOOC that were shot in English or German, 80% of the presumably French-speaking students watched all (15%) or some (65%) of them, with the majority considering the subtitles as a necessary incentive to watching. With regard to the MOOC itself, which was run simultaneously, half of the students declared that they followed it, although only partially, with a mere four of them engaging in the forum and three of them fully completing the MOOC. 40% of the (responding) students watched only a few videos or fulfilled some assignments, reportedly because of a general lack of time.

An important result of the survey is that only half the students had prepared the online content before the class, the rate dropping to one out of five when including the glossary compilation. As a result, those who had not prepared the course in advance reportedly felt it difficult to engage in quizzes, games, or group discussions during the lecture time, progressively giving up the weekly attendance as a consequence. Nearly half of the students stated that, considering this latter fact, the activities proposed during the main lecture were not sufficiently appealing to have them come back the next week. As a request for the next year, they insisted that the main lecture instructor dedicate time to the restating the main elements from the week's online course.

Responding students mostly criticized the time-consuming aspect of inverted classrooms. For those ready to get involved in such an experiment, preparing the content of the course usually took about one hour (59%) or up to two hours, even if 92% of them considered this as a time well spent and only 8% as a wasted time. But for those not willing or able to dedicate this time to the preparation of the course, the

weekly main lecture—transformed into a discussion session for previously acquired knowledge—was considered superfluous and unprofitable, if not discouraging.

Overall, half the students asserted that the main lecture time was not useful to the acquisition of course content or to the fulfillment of pedagogical objectives, while one of three students was eventually not satisfied or not satisfied at all with the experiment of the inverted classroom. As a teacher, one can certainly be satisfied by finding the glass half full, with half of the students considering the course to be profitable and two thirds of them being satisfied with the organization of the course and interested in such experiments. Yet, the implementation of the MOOC in regular teaching practices demonstrated the difficulty of engaging in an asynchronous and inverted form of teaching with French university students, especially when they are still (or already?) greatly conditioned to a standardized system, with the experiment considered a threat to the success of their education. One anonymous student even begged that this system would never be used again.

Unfortunately, the pedagogical results of the experiment could not be fully assessed. Due to the general strike in France during the months of December 2019 and January 2020 and the later lockdown due to the COVID-19 crisis, all resulting in chaos at the Panthéon-Sorbonne University, no final evaluation was conducted that year for this course. It would be impossible to align these comments with a formal evaluation of the students through an—admittedly—traditional, time-controlled exam. But perhaps this has also come to be old-fashioned.

For the two subsequent academic years (2020–2021 and 2021–2022), the course was again proposed using the same model, with in-class teaching normally delivered in September and October of each fall term (just before lockdowns or further restrictions due to new waves of COVID-19), but with one radical change: during the first class, the final exam question was deliberately provided to the attendees—a very unusual and challenging move for French students. The question, "How does material culture allow us to better understand Greek communities in their political, social, economic, cultural and other aspects?," was given with no recourse but to construct their own answer by using the material provided in the course. Precisely because the question is so generic and allows for a variety of answers, students were expected to explore the course content (videos, transcripts, reading list, and other resources) on their own and use the classroom interaction with the teacher as a means of constructing their response to the question. This small, initial change made a difference, as more students attended classes on a regular basis during the semester—although it must be acknowledged that after months of distance learning, the demand for in-class teaching was high. In any case, evaluation of the final paper demonstrated a new kind of student engagement with the course, with a variety of topics (some of which were not even covered by the course) being raised and discussed.

To return to results from the 2019 experiment, there were many positive comments received from the students, which included liking the existence of a teacher-certified content and its full availability right from the start of the course; the gaming aspect of classroom activities; the possibility of watching the lessons beforehand or playing them back several times; the stimulating effect of a discussion with the teacher; the accessibility of the teacher during the main lecture time; the fully autonomous learning process; and the possibility of organizing one's time according to personal schedules and constraints. Among the items that could be improved, students mentioned—sometimes with contradiction—the need for normal lectures covering the topics of the online material; the wish to supplement online material with additional content during the main lecture; the need to further develop interactions with the teacher during the main lecture time; the necessity to reduce the length of the videos; the desire to have more online quizzes for self-assessment; but mostly, as noted before, the need to explain the principal aspects of the online content during the lectures. These are certainly concerns worth taking into consideration.[22] Beyond the impersonal aspect of distance learning, which many students regret, they mainly complained about the time-consuming aspect of the preparation, particularly when it was added to the (optional) lecture time. While only few of them mentioned the eventual net gain of time such weekly assimilation and holistic understanding of the course content brought to preparing for a written final evaluation.

Certainly one of the most important lessons to take from this experiment is the need to explain in detail to the students the principles and requirements of the inverted classroom, its advantages and constraints, in order to allay disappointment and prevent misconceptions. There might have been, indeed, an initial misunderstanding of the pedagogical objectives by some students or, rather, a limited explanation by the teacher, whose aim was not primarily to teach them ancient art and archaeology per se, but—in line with the *Ancient Cities* project—to discuss ancient Greek civilization and its legacy through ancient art and archaeology. The lively classroom discussion was meant to show that material culture is a major source for writing about ancient history and for understanding ancient society, as well as providing a legacy from the past for a better understanding of the present. This goal was eventually achieved by providing the exact phrasing of the final exam paper, which helped students to understand the teacher's expectation. Explaining the aim of a course is perhaps the most challenging aspect of higher education. All of this, however, is not specific to blended learning. It is part of our duty, as pedagogues, to explain the principles and objectives of our courses, as well as the time required to fulfill all assignments and eventually achieve the expected goals (Chickering and Gamson 1989). And this will never be an easy task.

University of Paris-Saclay (UVSQ)

At the University of Paris-Saclay, the MOOC was implemented in the bachelor's program of the History Department in the 2019 fall semester, within the Roman History course. This course consisted of 2.5 hours per week, split between a main lecture (*cours magistral*) lasting one hour and a tutorial course (*travaux dirigés*) of one and a half hours. The tutorial session immediately followed the main lecture, with a short pause in between, and they were both delivered in the same classroom to the same group of students by the same professor. For the students, attendance for the tutorial sessions is optional, while attending the main lecture is mandatory. As the two parts of the course were contiguous, all the students were generally assiduous to both during the twelve weeks of the fall term. And, since the local academic year began earlier than that at the Panthéon-Sorbonne University, the twelve lessons could be taught completely, without being disturbed by the strikes that affected France in December 2019.

The teacher for the course was one of the authors of the MOOC. Her students consisted of a group of 30 students, just beginning the third year of their bachelor's degree (*Licence*). The same students had previously attended, during the fall term of their first year, an introduction to Roman history taught by another professor. The first-year course was dedicated to the period covering the transition from Republic to Empire, while the course for third-year students focused on the founding of Rome and its development until the second century BCE. The topic and the structure of the course had been defined before conceiving the idea of using the videos and the material of the MOOC. For this reason, it was not possible to design the main lecture as a blended learning course based on the MOOC, as this would have required a complete overhaul of its structure. The videos and resources of the MOOC, therefore, were introduced to supplement the tutorial sessions and give them a new rhythm. As the course was focused on Roman history, the sections of the MOOC related to Greek cities were set aside, so that only a selection of the videos and assignments was used. Students were nevertheless encouraged to engage with the MOOC on their own, but only two out of the thirty registered students completed the MOOC.

The main lecture was delivered as an oration, the content being delivered to the audience by the teacher without any interaction with the students. Conversely, during the tutorial session, every week the teacher posted a quiz of a dozen questions (on average) to the students through the Mentimeter platform. The first part of the quiz, given to the students at the beginning of the tutorial session, focused on the content that had just been delivered during the main lecture, allowing them to verify their general understanding and to point out the main topics on which they had to focus. The second part of the quiz, given to the students at the end of the tutorial session, targeted topics that had been collectively discussed in class, including content from the MOOC (videos, exercises, and other materials). A gamification aspect was introduced to stimulate the

students' attention. During the tutorial sessions, the students were divided into 6 groups of 5 persons each; the groups were named with letters of the alphabet. Each group had to answer the quiz collectively and to compete against the others. Every correct answer was worth one point, but the fastest answers obtained extra points. The gamification aspect and the students' anonymity—only the group letters were shown—encouraged participation, and the responsibility of an eventual mistake was shared among the members of the group.

Besides the quizzes on Mentimeter, the tutorial session was also used to work on the content of the videos of the MOOC. At the beginning, the videos were shown in full to the class, but this option was quickly abandoned for various reasons: (1) the audio device was not of very high quality and those sitting in the back rows could hardly hear anything; (2) the majority of the students did not have a sufficient proficiency in English or German to properly understand the content of the videos and, even though they were subtitled in French, when projected on the whiteboard the subtitles were too small to be read from the auditorium seats. For this reason, the videos were made available to the students prior to class on the Moodle platform for the course. The students were thus encouraged to watch the videos at home and to supplement the topic with readings (book chapters, online resources, and more). Although some of the videos concerned periods that were not included in the course, they offered interesting comparisons with the previous centuries considered in the lessons. Many of the additional resources provided by the MOOC (websites, videos, references, and such) were also profitably used by both the teacher and students. Each week, the students had to work on an assignment, including material or videos from the MOOC. However, the teacher decided not to use the prepared quizzes from the MOOC, and instead preferred to create new quizzes, more adapted to the content of the tutorials and the main lessons.

During tutorial sessions, the students also had to produce a commentary on a thematic selection of ancient texts and, according to the canonical rules of the French "dissertation," to present the structure for further analysis. All the groups worked on the same texts simultaneously; at the end of the session, the group work was compared and cross-examined by the groups. This aspect was meant to introduce the students to the difficult but rewarding task of peer review, instead of relying on the sole expertise (or authority) of the teacher.

The gamification principle introduced in the tutorials was extended to team challenges. For example, during a session on funerals in ancient Rome, the groups had to prepare the burial of an influential Roman of the third century BCE by choosing from a list of objects those items that would fit or be incongruous if they were to be put into the tomb.

Eventually, although these elements of gamification required extensive preparation by the teacher, the result was very rewarding, as the students enjoyed the

course and learned more quickly. The rivalry that arose between the groups was also an extraordinary mechanism to encourage the learning process, as it made the students more active. Incorporating the MOOC videos and material into the course allowed the teacher to develop its content but also to engage in new forms of teaching. At the end of the course, just two out of the 30 students failed to reach the minimum requirements, while all the others obtained very good results.

University of Pennsylvania

At the University of Pennsylvania, the MOOC was implemented in an online course entitled *Ancient Cities* (CLSC 250)[23] offered in the 2020 Spring 2 term (an 8-week accelerated term) for the Bachelor of Applied Arts and Sciences Degree of Penn's liberal arts and professional studies online program (Penn LPS Online).

Penn LPS Online provides a stepping stone for students to enhance their career through personal enrichment and professional scholarship. Penn LPS Online was developed with the goal of making a Penn School of Arts and Sciences education accessible to working adults. The Penn LPS Online Bachelor of Applied Arts and Sciences (BAAS) program provides a liberal arts education—built with career enhancement in mind. It is an accredited degree designed for working adults and other nontraditional students who want to pursue an online Ivy League education. In addition to the core methods and values of a liberal arts education, the online curriculum integrates professional or academic opportunities for students to apply the knowledge and skills they develop through their coursework. The BAAS program also features course blocks to help students fulfill the requirements for their degree concentration.

The CLSC 250 *Ancient Cities* course is offered in the Classics course block,[24] whose aim is the discovery of the classical world and the development of an understanding of ancient cultures through historical and contemporary lenses. In this context, the *Ancient Cities* course examines the architectural and urban developments of Greek and Roman cities together with central political institutions and religious and social practices that were associated with them. In studying a diversity of visual, material, and textual evidence—such as urban form, architectural and sculptural monuments, as well as literary sources and epigraphic evidence—the course addresses both the structure of the urban fabric and the sociopolitical situation of ancient Greek and Roman cities. The structure of the *Ancient Cities* course followed the MOOC structure (Modules 1–8) and a few additional videos were created to complement the existing video lectures: for example on the legacy of Macedonian cities in the Hellenistic and Roman periods. In addition, a weekly 1-hour synchronous lecture complemented and summarized the aim and scope of each module.

Students found that the course was well structured and appreciated the thematic interweaving of Greek and Roman cities. They also enjoyed the MOOC's weekly

assignments, which enabled them to engage with the material in a creative fashion. In addition to the weekly assignments, two written assignments were created—a 5-page double spaced paper in response to one of the readings and a 12-page double spaced research paper derived from a selection of topics, which were addressed in the weekly hour-long synchronous meetings.

Due to COVID-19 restrictions, teaching at Penn moved online in the second half of spring 2020 and a selection of MOOC videos and assignments were also used in a course on *Greek Architecture and Urbanism* (ARTH 228), offered in the Department of the History of Art. The creative and interactive nature of the MOOC assignments was really appreciated by the students of the course, who had been suddenly deprived of their physical presence in class.

Conclusion

A major challenge for MOOCs on archaeology, as a material and object-oriented discipline, is to transfer direct experiences of sites, materials, and objects to the internet. We sought to solve this by relating videos, assignments, and quizzes to specific site locations and artifacts, which we also encouraged students to experience directly if possible. Another aim was to raise the participants' awareness of the legacy of ancient cities, and to engage with that heritage on a global, national, and local level. This tied in with our goal of making students interact with that heritage in all its forms, especially in their own hometowns. The achievement of these aims was dependent upon active participation by the students. Therefore, we decided early on to adopt a dialogue-based teaching pedagogy in which assignments, the discussion forum, and live discussions during a weekly virtual office hour were used to encourage students to interact with the study materials and find their own answers.

We have learned a great deal about how to develop, produce, and run a MOOC (for many of us it was a novel experience), as well as about the rewards and pitfalls of online distance learning. The collaborative and interdisciplinary approach (archaeology/classics and didactics of distance learning) was particularly rewarding, as were the diverse international perspectives. In general, we consider MOOCs a good tool for public outreach and engagement with the broader public—even though the production of such resources is time-consuming and requires considerable resources.

Furthermore, especially during the COVID-19 crisis, university students have successfully participated in our MOOC. The learning material we created was and can still be utilized for blended learning scenarios at the university level. During the COVID-19 crisis, the learning material produced by the project members was made available through our YouTube channel to numerous higher-educational institutions and schools, which then incorporated the videos as part of the material provided to lockdown students.

Unfortunately, we are still far away from an integrated and homogenous pan-European system of higher education. Thus, the incompatibility of university calendars across Europe and the diversity of curricula and levels in which each of the partners were teaching made it impossible to create an international learning module beyond local and national curricula. We hope that this will be remedied in the near future, and we strongly encourage stakeholders to facilitate international teaching and learning opportunities.

The project has also demonstrated the need to devote staff time and economic resources to allow the development of both MOOCs and online/hybrid university courses. This entails a time-consuming and expensive development stage which is important for higher-educational institutions to acknowledge, but the potential long-term reward in attracting large, new groups of learners is truly impressive.

Despite these challenges, the project illustrates how smaller academic fields in the humanities can design and enhance their respective teaching environments in the digital age. This is a first step leading to the creation of pan-European universities and international curricula.

Acknowledgments

Notes

1   On the issue of what a MOOC is, see Bates 2019:215–217. While the first MOOCs were free, today platforms such as Coursera, edX, and FutureLearn charge for certificates or even entire courses.
2   On the development of MOOCs, see Bates (2019:213f) and Henderikx et al. (2017:353).
3   Bates 2019:214; Shah and Pickard 2019.
4   The translation into Greek was produced by the National and Kapodistrian University of Athens under supervision of Dimitris Plantzos. The translation into Turkish was produced in cooperation between the Istanbul Department of the

German Archaeological Institute, the Archaeological Department of Manisa Celal Bayar University (Turkey), and the Institute of Classical Studies of Kiel University, and coordinated by Felix Pirson, Güler Ates, and Stefan Feuser.

5   The first MOOC with an archaeological topic was *Archaeology's Dirty Little Secrets*, produced by Brown University and developed by archaeologist Susan Alcock. The course was offered in summer 2013 and spring 2014 through the Coursera platform. For the course concept, content, and more, see Alcock et al. 2016. For other courses with archaeological topics, see the brief overview in Rodríguez-Álvarez 2017.

6   The MOOC's textual material was based on the scholarship of dialogue-based learning, a theory with strong historical roots in scholarship on learning and dissemination (Dysthe 2013:52–77). Dialogue-based learning is increasingly being used in Scandinavian educational institutions, but also in museums of art and archaeology (Dysthe 2013). It is based on the theory that meaning and learning is developed through dialogue between both students and teachers (Dysthe 2013:45–46). Studies show that the heterogeneous backgrounds and inputs of the dialogue's participants contribute different viewpoints and thereby increase learning (Dysthe 2013:77; Dysthe et al. 2013:197–203). Even disagreement can be a strong tool for learning, if handled correctly. Furthermore, it has been argued that dialogue-based learning can contribute to the understanding of democratic citizenship (Dysthe et al. 2013:232–235).

7   According to their own data, Coursera currently has 82 million registered users (https://about.coursera.org/; last accessed January 27, 2022) and edX has over 35 million users (https://www.edx.org/about-us; last accessed January 27, 2022).

8   The teasers are available at https://youtu.be/bGgRPbCL31c (English), https://youtu.be/6NSHUUpCi9s (German), and https://youtu.be/UqtlaqURgT0 (French) (all last accessed January 27, 2022).

9   https://www.archaeologie-online.de/ (last accessed January 27, 2022).

10   https://reainfo.hypotheses.org/20900 (last accessed January 27, 2022).

11   https://www.ancient.eu/ (last accessed January 27, 2022).

12   https://forskning.no/ (last accessed January 27, 2022).

13   https://www.themata-archaiologias.gr/ (last accessed January 27, 2022).

14   The project's YouTube channel *Discovering Greek & Roman Cities* is available at https://www.youtube.com/channel/UCxLaX7Dae-9jLpWo1BZluMw (last accessed January 27, 2022). The learning material as well as the evaluation reports of the MOOC's two runs are available at https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2017-1-DE01-KA203-003537 (last accessed January 27, 2022).

15   In the MOOC *Archaeology's Dirty Little Secrets,* 16.5% (summer 2013) and 10.2% (spring 2014) of the active learners received a certificate of completion (Alcock et

16 al. 2016:19–20). For a general overview on completion rates of selected MOOCs, see Jordan 2014:147–150; Khalil and Ebner 2014; and Bates 2019:232–236.

16 An alternative typology to assess success and dropout in MOOCs is presented by Henderikx et al. 2017. A study on learning activities and outcomes of so-called invisible learners is presented by Dalsgaard and Gislev 2019.

17 The winter school was held in Paris from February 26 to March 2, 2018. For more on this event, see https://www.youtube.com/watch?v=lTrLE-P1o0A&t=56s (last accessed January 27, 2022).

18 The spring school was held in Aarhus from April 23 to April 26, 2019. For more on this event, see https://youtu.be/Q7Zkg2Ta6xw (last accessed January 27, 2022).

19 For information on the European Credit Transfer and Accumulation System (ECTS) established to make studies and courses more transparent, to help students move between countries, and to have their academic qualifications and study periods abroad recognized, see https://education.ec.europa.eu/levels/higher-education/inclusion-connectivity/european-credit-transfer-accumulation-system (last accessed January 27, 2022).

20 As defined by French president Emmanuel Macron's speech at the Sorbonne in September 2017 (https://www.elysee.fr/emmanuel-macron/2017/09/26/initiative-pour-l-europe-discours-d-emmanuel-macron-pour-une-europe-souveraine-unie-democratique; last accessed January 27, 2022) and by the European Universities Initiative created by the European Commission as part of the ERASMUS+ program 2021–2027 (https://education.ec.europa.eu/education-levels/higher-education/european-universities; last accessed January 27, 2022).

21 www.mentimeter.com (last accessed January 27, 2022).

22 In the autumn of 2020, as we enjoyed a temporary respite from the COVID-19 pandemic, with university teaching being delivered partly online and partly in person, the experiment was repeated with modifications. Firstly, more time was devoted to teaching the course content as an oration during the main lecture time. Secondly, the main objectives of the course, focusing on the social aspect of material culture, were explained more explicitly to the students at the outset, and the final exam question was given as an introduction to the course: "To what extent does material culture help us to know who the Greeks were?". Students were thus more ready to engage with the course as it provided the range of answers needed for the final exam. As assessed in January 2021, the results were very gratifying.

23 https://lpsonline.sas.upenn.edu/academics/courses/clsc-250-ancient-cities (last accessed January 27, 2022).

24 https://lpsonline.sas.upenn.edu/academics/bachelors-degree/baas-course-blocks/classics (last accessed January 27, 2022).

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