

Ancient Cities: Teaching and Learning in the Digital Age^{*}

The humanities in general and classics and classical archaeology in particular need to test, promote, and implement high quality digital learning material appropriate for teaching at the university and school levels, and for reaching out to a broader audience. The strategic partnership *Ancient Cities. Creating a Digital Learning Environment on Cultural Heritage* has been established to produce and offer high level and open educational material. It was funded by the ERASMUS+ programme from 2017 to 2020, and brought together experts in ancient civilizations and e-learning practices. Led by the Kiel University, the project brought the following universities into partnership: Aarhus Universitet (Denmark), the National and Kapodistrian University of Athens (Greece, since 2018), Universitetet i Bergen (Norway), University of Birmingham (United Kingdom, 2017-2018), Université Paris 1 Panthéon-Sorbonne (France) and the Open Universiteit (Netherlands). This strategic partnership focused on the ancient city, as this is an important topic in the education of students in the fields of archaeology, history, and art history.

In our project we created the freely available Massive Open Online Course (MOOC) *Discovering Greek & Roman Cities* for a broad audience and developed learning material for a pan-European digital learning module on ancient cities for use at universities. The guiding question was: How can digital teaching be implemented in the historical humanities and how can digitization appeal to different target groups?

In this paper we provide an overview of the MOOC's structure and learning material, and of the participants' demographics and feedback. Following this, we demonstrate how we implemented the learning material in our teaching at university level.

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The MOOC *Discovering Greek & Roman Cities*

The MOOC *Discovering Greek & Roman Cities* was aimed at a broad audience: essentially anyone interested in archaeology, art and cultural history, architecture, and history. Participation did not require any previous knowledge, and the course was accessible online free of charge after a registration on the *Open edX* MOOC platform of the Open Universiteit. The course ran twice: in autumn 2019 and in spring 2020 during the first Covid-19 lockdown. Course materials were multilingual and available in German, English and French. We recently added Greek and Turkish subtitles to all video content to provide accessibility to as many people as possible. As the platform used (*Open edX, Ginkgo release*) did not support multi-lingual content, we chose to provide multiple languages on a single page, rather than having separate pages in English, German and French. Since our group of teachers was multilingual, we encouraged learners to post in the MOOC forum in English, French and German.

The overall aims of *Discovering Greek & Roman Cities* were not only to communicate knowledge about the layout and function of ancient cities and their historical development, but also to spark interest in and to stimulate the discussion of the (ancient) cultural heritage in one's own city.¹ With experts from different backgrounds and the trilingual course we wanted to break up national perspectives and bring together an international group of learners. To the best of our knowledge, *Discovering Greek & Roman Cities* is the first multilingual MOOC devoted to archaeology.²

The course opened with a welcome section designed to familiarise learners with the platform, to ensure they could take full advantage of this form of online learning, even if they were not accustomed to it. The course consisted of eight modules, each of which centred on a key aspect of ancient urbanism. The modules became available consecutively every week. The introductory module was followed by modules on life, religion, politics, death, infrastructure, and the economy of ancient cities. The final module focused on the legacy of ancient cities and the role of ancient heritage in our cities today. The topics were chosen to provide an overview of the multivalent character of ancient Greek and Roman cities and the ways in which we study them today. As we wanted students to get exposure to first-hand knowledge of the subject matter, the expertise of the MOOC's partners was a defining factor in planning the modules. However, certain important topics – such as race, gender and the agency of subaltern communities – were

1 Students from the participating institutions were involved in the planning and development of the MOOC *Discovering Greek & Roman Cities* during a winter school in Paris (March 2018) and a spring school in Aarhus (April 2019). - We are very grateful to Susan Alcock, Sebastian Heath, and Peter Heslin for their advice, suggestions and criticism during the planning and creation of the MOOC *Discovering Greek & Roman Cities*. During our project meetings in Paris in March 2018, Susan Alcock gave important suggestions and insights for the early planning of the course. Sebastian Heath and Peter Heslin reviewed a first version of the course and helped us avoid errors, inaccuracies, and one-sided representations.

2 The first MOOC devoted to archaeology was *Archaeology's Dirty Little Secrets* produced by Brown University with Susan Alcock as lead instructor. The course was offered in Summer 2013 and Spring 2014. For the course design, content etc. see Alcock, Dufton, Durusu-Tanrıöver 2015. For further courses related to archaeological topics see the brief survey by Rodríguez-Álvarez 2017.

not addressed in-depth in the asynchronous videos of the online course. Such topics were tackled in synchronous meetings and online discussions, when the modules were implemented in university courses.

Each module consisted of three to six videos of up to 10 minutes in length that were produced by experts from five different countries. The videos were either shot on archaeological sites, or in modern urban settings: the setting was determined by the video's topic and learning goals, as well as general financial and administrative possibilities and restrictions. On the one hand, we wanted to give viewers access to first-hand information direct from archaeological sites, by interviewing specialists in the field. On the other hand, we also aimed to connect ancient and modern cities by recording some videos in a contemporary architectural environment.

These clips were accompanied by small narratives, which served to introduce the videos, as well as learning goals, and key images and maps. The introductory texts – written by project member Christina Videbech – were deliberately written using a light tone influenced by popular fictional writing in order to capture the student's imagination. Each text was written using the keywords from individual modules to ensure continuity within each module. Although these narratives were fictional, they were based in archaeological research. In terms of active learning, participants could choose between three assignments to work on, answer quiz questions to test their knowledge, and go deeper into the subject matter using the provided lists of selected literature and links. The multiple-choice quizzes could help the students internalise what they had learned throughout the module. However, rather than simply providing a means for students to assess and calculate their knowledge and skills, these quizzes were designed as a further learning tool, often adding new knowledge to that already acquired, and encouraging the student to think further. The two main objectives in selecting the reading lists were to provide necessary background knowledge for the students to work on assignments, and provide the opportunity to further explore a topic. The links functioned as opportunities to learn about life in the ancient city from other sources such as videos, reconstructions, and popular culture resources. They were chosen for accessibility and easy comprehension, but had to be based on sound research or otherwise encourage lively discussion.

In the MOOC, an online forum facilitated virtual discussions and exchange among the learners and with the teachers. The learners were encouraged to post their assignments to the forum and to comment on other learners' assignments. Teachers and specially appointed student assistants monitored the online forum, where they commented on assignments, answered questions, and participated in discussions. During the second run of the MOOC, especially successful students from the first run were selected to act as special participants in the forum. Once a week, we held an online 'Office Hour' where at least one of the teachers was available to ask questions regarding the

MOOC and to lead discussions. Eventually, the participants who had watched all the videos and correctly answered 80% of the quiz questions received an official certificate confirming their successful participation in the course.

The textual material produced for the MOOC was based on dialogue-based learning, an educational approach with strong historical roots in scholarship on learning and dissemination.³ Dialogue-based learning is increasingly being used in Scandinavian educational institutions, but also in museums of art and archaeology.⁴ It is based on the theory that meaning and learning are developed through dialogue between both students and teachers.⁵ Studies show that the heterogeneous backgrounds and inputs of a dialogue's participants contribute different viewpoints, and thereby increase learning.⁶

Who were the people taking our course? To provide us with information, participants were invited to answer a questionnaire regarding their expectations of the MOOC before starting the course and another one regarding their experiences at the end. More than half of the respondents did not have previous experience with e-learning or MOOCs, and preferred the more traditional modes of learning such as completing assignments and quizzes, watching videos, reading texts, and interacting with the teacher.

In terms of demographics, in the two runs we had a combined total of 4,800 enrolled learners and the 20 to 30 years age group was most strongly represented, probably mainly due to the fact that many students participated. Almost 60% of the participants were female. Around two-thirds of participants in the first run, and almost half the participants in the second run held a bachelor's or master's degree. Participants in the first run came from 63 countries across all continents, with the majority coming from France (24%), Germany (18%), Greece (10%), Norway (9%), the United States (7%), the United Kingdom, Netherlands, and Turkey (each 4%). Participants in the second run came from 74 countries, with the majority coming from Germany (34%), France (14%), and the Netherlands (13%).

What were the learners' expectations and experiences? For both runs, the main reasons given for enrolment were to expand or refresh existing knowledge on the topic, or to gain new knowledge on the topic; some participants enrolled out of curiosity. While 6% of respondents in the first run indicated that they enrolled to obtain a certificate, 16% of respondents from the second run expressed interest in earning a certificate. Generally, respondents did not have experience with e-learning or MOOCs and preferred the more traditional modes of learning, such as assignments and quizzes, watching videos, reading texts, and teacher-student interaction. They were less fond of reading comments or discussing issues with other learners. Although the whole MOOC structure

3 Dysthe 2013, 52–77.

4 Dysthe 2013, 45–80.

5 Dysthe 2013, 45–46.

6 Dysthe 2013, 77; Dysthe, Bernhardt, Esbjørn, 2013, 197–203.

was multilingual, English seemed to be the preferred language, even if there was no outspoken preference for language of content, video or user interface. Overall, learners' responses about their experiences in the MOOC were very positive. However, the MOOC might not cater sufficiently for learners who have no experience with e-learning. Most learners assumed they could only study new content from when 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 also had issues navigating the platform. The platform did not support multilingual content, and our choice of presenting all languages on a single page was suboptimal. Thus, a multilingual MOOC remains an issue; not just because content has to be provided in multiple languages, but also because communication with learners needs to occur in multiple languages.

Do we consider the MOOC as a success? It is difficult to measure this with regard to both qualitative and quantitative parameters, however overall we regard the MOOC as a success. In terms of qualitative assessment, the questionnaires we received provided very positive feedback on the course (even though there were also some negative ratings that need to be taken into account). Learners appreciated the multilingual character of the MOOC. Furthermore, during online Office Hours and in the MOOC's forum, learners gave very positive responses on the videos and the learning material. The intensified use of teaching assistants to monitor the discussion forum in the second run was also received positively, because participants were provided with more meaningful and extensive feedback on their assignments, and it stimulated participants to post and discuss in German or French instead of having to write in English.

On a quantitative level, we are satisfied with the number of approximately 2,400 enrolled learners per run, especially since the course was not hosted on any of the large platforms such as Coursera or FutureLearn with their possibilities for dissemination and a huge body of registered learners. For the first run the total number of 307 certificates issued shows that at least 13% of enrolled participants watched all the videos and submitted all eight quizzes with a score of at least 80%. For the second run 500 certificates were issued, indicating 21% of enrolled participants had achieved the same goals. This ratio is in the upper range for successful completion, compared to other MOOCs.⁷ However, one has to keep in mind that learners also acquire knowledge and initiate their own learning activities without formally finishing a MOOC.⁸

After the two rounds of the MOOC, we have made the teaching material produced – texts, maps, videos – freely available on the internet via Creative Commons (CC) license. All 34 videos of the MOOC have been available on YouTube since the beginning of

7 In the MOOC *Archaeology's Dirty Little Secrets* 16,5% (summer 2013) respectively 10,2% (spring 2014) of active students received completion certificates (Alcock, Dufton, Durusu-Tanrıöver 2015, 19–20). For a general overview of MOOC completion rate see Jordan 2014, 147–150, Khalil, Ebner 2014, and Bates 2019, 232–236.

8 For a study of learning activities and outcomes of so-called invisible learners see Dalsgaard, Gislev 2019.

April, 2020.⁹ To date, the videos have been viewed more than 60.000 times with a total viewing time of over 4.200 hours. We will also measure the success of the MOOC in the future use of the materials for teaching in universities, schools, and adult education.

Implementation of learning material

The production of high-quality learning material brings us to the project's second main objective: the implementation and usage of the material for pan-European and international multilingual teaching on university level. So far, the learning material developed for *Discovering Greek & Roman Cities* has been implemented at the Université Paris 1 Panthéon-Sorbonne, and at the University of Pennsylvania. In Paris, the MOOC was implemented in the 2019 autumn semester of two dual bachelor programs: the 'Bachelor of Art History and Archaeology with Law, and the 'Bachelor of Art History and Archaeology with History'. Based on blended learning, the course applied the educational approach of the 'flipped classroom', which combines phases of self-learning through video lectures with physical courses. A series of ten extra video lectures was shot in French to provide additional learning material. 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. Online quizzes were offered to allow students to test their comprehension of the material. Students were also asked to contribute, through an online collaborative text editor, and a collective glossary compilation aimed at a self-identification of important concepts. Instead of a one-way teaching experience, the main lecture course was devoted to various activities promoting discussion and exchange of ideas with students.

In the feedback phase, 93% of the students considered the online material fitting and well-designed for the successful acquisition of the course content. The majority considered the videos to be very profitable, although it was often commented that they were too long. 80% of the students watched all or some of the videos produced for the MOOC that were shot in English or German, with the majority considering the subtitles as a (necessary) incentive to watch them. Regarding the 'flipped classroom', student responses confirmed it was rewarding, but also time-consuming. A minority of students also strongly rejected this approach, having no previous experience of fully autonomous learning. In university education systems marked by Covid-19 and social distancing measures, this experiment has proven very relevant in terms of pedagogy during the 2020-2021 academic year, as it will probably be in a post-Covid world.

At the University of Pennsylvania the learning material was implemented in an online course entitled 'Ancient Cities' offered in the second half of the 2020 spring term

⁹ The project's YouTube channel *Discovering Greek & Roman Cities* is available at <https://www.youtube.com/channel/UCxLaX-7Dae-9jLpWo1BZluMw> (last accessed January 5, 2021).

for the Bachelor of Applied Arts and Sciences Degree of the university's liberal arts and professional studies online program. In contrast to Paris, these students were prepared to enrol in distance learning. The course was offered in the classics course block, which aims to introduce the classical world and develop an understanding of ancient cultures through historical and contemporary lenses. The structure followed the MOOC structure (Modules 1–8) and a few extra videos were created on additional topics to complement the existing video lectures. In addition, a weekly 1-hour synchronous lecture designed to complement and summarise the aim and scope of each module was provided. Students found the course well-structured and appreciated the thematic interweaving of topics referencing both 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) response to one of the readings, and a 12-page (double-spaced) research paper for which students could choose from a selection of topics addressed in the weekly synchronous meetings.

These examples demonstrate how the pan-European digital learning material created for *Discovering Greek & Roman Cities* has already been integrated into the curricula of various partner universities successfully. As the videos and learning material are released under the non-commercial Creative Commons license Attribution-NonCommercial-NoDerivatives 4.0 International (CC-BY-NC-ND 4.0), they may be used by university and secondary-school teachers, as well as in adult education, and can in every case be tailored to the needs of the teachers and learners involved. We highly encourage others to work with the open educational resources we have produced and to send us feedback on their experiences.

Conclusion

A major challenge for archaeology, as a material and object-oriented discipline, is to transfer direct experiences of sites, materials and objects to an internet based learning experience. We sought to solve this by relating videos, assignments, and quizzes to specific locations and artefacts, 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 manifestations, especially in their own hometowns. The achievement of these aims was dependent upon active participation from the students. This is why we decided early on to adapt a dialogue-based teaching pedagogy, where assignments, the discussion forum, and the live discussions during the 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 tools is time-consuming and requires considerable resources. Furthermore, especially during the Covid-19 crisis, university students have also successfully participated in our MOOC. The learning material we created can be utilised for blended learning scenarios at university level. Unfortunately, we are still far away from an integrated and homogenous pan-European higher education system. 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.

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