

---

## Internet Use for Archaeological Education



João Carlos Moreno de Sousa  
Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil

### Introduction

Although there is some variety between archaeologists' definitions of Archaeology, most of them agree it is a science that studies material vestiges and that it aims to understand the humanity (see ► [“Archaeology: Definition”](#)). However, archaeology is still completely unknown among a great part of general public. On the other side, some of the people who have ever heard about archeology at least once in their lives still relate it to dinosaurs or some fictional media that, even with no intention, distorts the public understanding related to real life archaeology. Journalistic media still confuses archaeology with paleontology and/or relate it to amateurs and sensationalistic studies of the past. Because of that, some archaeologists are always concerned about providing archaeological learning to the general public (see ► [“Public’ and Archaeology”](#)).

Actually, one of the scientific research goals is to transmit knowledge about produced data to other research studies and to the general public as well. Researchers all over the world diffuse this knowledge, most of the times, by scientific

publication as articles and books. Unfortunately, a big part of these publications are not presented to the general public in an accessible language, presenting terms and concepts that most of the public never heard about, or discussing subjects in a very specific context. These publications are difficult for the general public, and most of the times people may lose interest in reading them. Another factor interfering on public interest is the absence of open access to some of these publications, which are usually restricted to academics. It is notable how difficult it is to encourage the public to consume these materials; therefore, researchers are always discussing ways of doing public archaeology (see ► [“Cultural Heritage Outreach”](#)). The main question after all is about what is the best way of providing archaeological knowledge to the public in the modern world.

Researchers interested in providing scientific knowledge for the general public have followed two main guidelines: using simple language and providing free access to scientific publications. Researchers are increasing their understanding over the importance of providing scientific knowledge, since science is made, at least partially, because of (or as a response to) a nonacademic public interest, as well as to solve problems affecting all the society.

Internet is being used now as a powerful tool for a worldwide diffusion of this scientific knowledge, as well as providing access to scientific publications. In other words, Internet is now

being used for scientific education, and archaeology is part of it.

## Definition

With the increase of Internet use around the world, information gained a potential for transmission never seen before, breaking social, economics, and mostly geographic barriers. People are using Internet not just with computers, but also with mobile phones, tablets, televisions, and some other modern devices. Internet is turning into the major source of information for a lot of people around the world and, in this sense, it is easy to think about how big is the potential for scientific education and learning using online methods. Following this trend, archaeological education through the Internet is also a possible reality.

**Internet use for archaeological education, or online archaeological education,** is basically a way to provide archaeological knowledge through the Internet, reaching any kind of people, academics or not. In this sense, the Internet use for archaeological education may be understood as a type of public archaeology, or even collaborative archaeology (see ► [“Service Learning and Public Archaeology”](#) and ► [“Public Education and Archaeology: Disciplining Through Education”](#)). And because it uses digital methods online, it may even be understood as a kind of digital archaeology.

## Historical Background

We do not have to go so far in the past to build a historical background about the Internet use for archaeological education, since archaeology and Internet are connected since late 1990s. Some of the most known online archaeological education projects ever done are still being carried out and may be considered pioneers in the subject. It is a relatively recent phenomenon, which has been done by very few people around the world, making us to believe that the online archeology education history is still in its beginning.

Most of the collaborators making use of the Internet for archaeological education are online magazines or websites contributors with some experience in archaeology, or even scientific journalists specialized in archaeology, heritage, and history subjects. The most known examples of Internet use for archaeological education are online magazines. Some of the most popular websites around the world used by general public for archaeological learning are *Nature* (n.d.), *National Geographic* (1996), and *Heritage Daily* (2011), for example. They are not just very popular magazines around the world, but they also have open access to archaeology sections with lots of articles in their websites. As the articles are written by experts, they provide a trustful basic knowledge about the subjects, also referring to the original publications and researchers that the articles relate to.

Another example of online archaeological education website is *Thought.co* (2017). It has contributors from a large diversity of academic areas, including archaeology. The Archaeology section includes a great number of articles. The major difference of the online magazines from *Thought.co* is that the magazines mostly present archaeology news, interviews, and reports about the subject, while *Thought.co* also presents articles aiming to educate people from the basics, with information from a variety of categories. The website informs about research studies presented all over the world, while also including articles aiming to educate people about what is archaeology, what to consider before choosing a fieldschool, why to preserve heritage and even articles about archaeology law, methods and techniques, and a dictionary. Just like in the case of the online magazines, *Thought.co* articles are written by experts and always refer to original academic publications. Because of the website proposal of educating people, it has a potential of being a primary source of archaeological content to the general public, as well as to archaeology students, since their articles refer to academic publications, being occasionally used as a primary source.

Many of the archaeology research institutes around the world also present news and/or education sections in their websites, mostly providing

online education about the research studies carried out by themselves or even by other groups in their countries, sharing very important archaeology news. These institutional website articles are most of the times written by experts in archaeology, which includes archaeologists as well. The archaeology section of *Smithsonian Magazine* website (2005) is an example of that. The *Archaeology Magazine* (2008) website from the Archaeological Institute of America has an online version too, as well as a printed version, with original articles and brief reports about works published in other online magazines, including the links to the original academic articles. The site has a strategy of gathering in the same place articles published in different magazines, turning it into a tool that can be used as a primary source for archaeological content.

There are some websites carried out by experts and academics themselves, with no funding support and nonprofit objectives, aiming just to educate people about archaeological subject. These websites usually use free blogging server services to host their websites. In the last years, *The Archaeology News Network* (Georgopoulos 2010) is doing it, publishing and gathering articles from other international sources together in the same place. Following this path, we can also mention the Archaeological Legacy Institute that has a website entitled *The Archaeology Channel* (1999) aiming to nurture and bring widespread attention to the human cultural heritage.

Finally, we have the most largely known educational system applied online: The courses. A great number of institutions are providing online courses on a variety of archaeological subjects, directed both to academic students and to the general public. An example of a nonprofit course designed for general public is the Massive Open Online Courses (MOOCs), created in 2008. According to the *MOOC List* website (2016, February 29), there were 18 different archaeology MOOCs produced since 2014 to July 2018.

These are just some worldwide relevant examples of what has been done until the middle of 2010s. Internet has been largely used in the last

years as a tool for publishing and sharing scientific articles, books, and other types of research studies results. However, the Internet use for archeological education of the general public is not so largely used as seen for academic purposes. One of the reasons may be the fact that the Internet only started to be largely used by the general public in the last decades, mostly by younger people. On the other side, the older researchers who did not make use of the Internet for years or decades during academic life have few, or none, experience in the online methods and techniques. With the increase of the Internet use by archaeologists, and because Internet is popularly recognized as a powerful tool for disseminating information, it is expected that the online archaeological education projects will increase in number in a near future.

## Key Issues/Current Debates

There are two main key issues when talking about the Internet use for archaeological education: how to provide knowledge and which knowledge should be provided. But before discussing these issues, an important thing about online education must be clear: basic computer and digital knowledge and experience are necessary.

Some specific digital techniques are very complex, even for people who use Internet every time. It must be clear that the Internet use for education projects requires at least one person with enough technical knowledge and experience in digital materials production. Obviously, there is a variety of online approaches that can be applied using easy techniques.

Today, the most efficient way of providing online open access to scientific information is developing and managing Internet websites and/or digital software. Because they are less complex to manage and develop most of the times, websites are the most widely online tool used for archaeological education.

## How to Provide Online Archaeological Education

### Academic Archaeological Education

Online regular academic archaeological education became common in the last years. Online courses (a.k.a.: e-learning, cyber schools, distance learning) are examples of how one can undertake online academic education, a new method of learning that is benefiting students from all over the world (see ► [“Heritage and Higher Education”](#)). Considering that people can get more motivated studying in their native language, courses applied in different language versions could be an advantage (Barak et al. 2016). Besides that, the inclusion of students with any problems avoiding them to participate in regular classroom courses is another advantage, such as students from places with the absence, or poor quality, of local archaeology education (Kotoua et al. 2015), parents that still need to take care of their kids, or even students with autism disorder (Satterfield et al. 2015).

### Journalistic Media

One of the most efficient ways of reaching the general public is through journalistic media, since it is the main source for public information, having an abundant online content that includes archaeology news (see ► [“Media and Archaeology”](#)). Despite that, most of these media do not sufficiently inform about archaeological subjects from around the world. However, as was mentioned before, some of them have a journalistic team interested in scientific outreach, including professionals with experience in different science areas. These professionals, mostly the archaeology experts, are the best online diffusers of archaeological knowledge, since they have more experience collecting scientific data from publications, or even from the researchers themselves, delivering them to the public using a simple language without modifying the original information. Any researcher having the intent of diffusing their discoveries, ideas, or opinions to the public is able to contact these professionals (see ► [“Preserving Heritage: The Role of the Media”](#)).

Unfortunately, just a small number of the biggest and more famous journalistic media have a scientific outreach team. Researchers may still contact the smallest vehicles, like the local or regional ones, if they want to publish something, although it is not rare to see journalists contacting researchers in search of new material. Fearing the possibility of spreading mistaken information, some researchers may choose to publish their ideas in their own pages or institutional websites instead of contacting journalists with no experience in scientific outreach.

Archaeology Specialized Websites and Webpages Online archaeological education websites appeared in the last years, contributing with very good quality materials, even though most of them are made by people with no journalistic experience. The reason for that is the archaeological experience of the administrators and contributors, mostly composed by professional archaeologists, students, or other people directly related to archaeology.

One advantage of having archaeologists as administrators of specialized websites is to escape from the traditional journalistic ways of sharing information. Some media are known as being sensationalists, aiming not to educate people, but to reach more public attention and profit. In these cases, archaeology subject materials may be full of irrelevant or biased information. Managing their own websites, archaeologists are free to communicate directly to the public with none or very few mistakes. On the other hand, no experience in dealing with the general public, or even with digital systems, can become a problem in producing something interesting enough to the public. In that case, learning with other people working with online archaeology education is a good way to solve this issue and find the best forms of attracting people’s attention.

Another good thing of these websites is to allow the public to be in touch with the researchers through their email or comment sections, being able to ask questions or even sharing relevant ideas and knowledge.

The existence of some barriers as lack of funds or available time turns it difficult for some

researchers to work with online education. Since free online servers are available to develop a website, money is not the biggest problem. Researchers cannot stop their jobs for a nonprofit work, unless it is possible to get some funding or organize a volunteer team to manage and contribute with the website. In this case, everyone can collaborate without taking too much time from their main activities. A second option would be using the scientific outreach team or educative channel from their institution websites, where they can count with experts to make a high quality outreach, costing less time and energy.

### Online Social Networks

Academic social networks as Research Gate (2008) and Academia (2008) are used as a way of sharing academic publications and providing open access to previously published articles, which were available only in the traditional printed forms in libraries, institutional subscriptions, or reprint requests. Since these academic social networks do not reach the general public, it is necessary to adapt to the most popular social networks, sharing the information in ways these websites allow us to do.

Some worldwide popular social networks from early and mid-2010s are *Facebook*, *Twitter*, and *Instagram*, for example, where a variety of media can republish and advertise content through their social pages. As open access channels with a vast and global popularity, they are used as an important source of directed information. Social network pages directly related to the official archaeology websites may increase public interest, mostly because of the possibility to publish links of the original materials. It is also possible to produce original and exclusive materials in these social networks.

### Audiovisual Production

One of the biggest worldwide phenomena from the last years is the open access to audiovisual content production. As a result of that, some of these audiovisual producers, including some archaeologists, are using Internet to provide scientific content. Internet allows us to reproduce audiovisual content that have been broadcasted

by other media, since it follows the legal regulations for copyrights. Some contents were already produced to Internet as the primary reproducer as well.

The most famous kind of audiovisual production for scientific education is probably the documentary, since we see a variety of them on television for decades. Documentaries cannot only be produced for television transmission but for the Internet as well. In archaeology, audiovisual reports are also common, produced not just by journalistic media for the Internet but also by audiovisual production teams from research or funding institutions.

Another popular way of producing audiovisual material is through interviews with professionals of specific areas, being an excellent way of learning and also a trustful source for reference for everyone.

Within this decade, some untraditional methods of producing audiovisual materials appeared in the Internet. The vlogs, for example, are mostly independent productions where a person talks directly to the camera – the public – in a very informal and, sometimes, even humored manner. This kind of production is a good way of attracting the public, mostly young people, because it allows people to use a funny and irreverent way to reproduce information. Besides that, if the information is transmitted by professors, scientists, or experts, they are considered to be really trustful by the public.

Finally, one last kind of audiovisual production with increasing popularity is the online courses. Although they are not as interactive as the regular ones, it turned to be an excellent alternative for students who cannot attend the regular classes, helping to reach different people from all over the world. Obviously, online courses do not need to be restricted to audiovisual lessons and may also provide digital reading and other kinds of digital content as well.

The major advantage of online audiovisual productions, in comparison to other media, is that the public can access the content at any time and wherever they want. Independent or academic funded productions are mostly free to produce the materials in the way the producers think it is right,

not concerning about the length limits for the production or other traditional journalistic restrictions or editions, providing complete relevant information without having to cut scenes.

### **What Archaeological Knowledge May/Should Be Provided**

Here we present some examples of knowledge that may or should be provided by archaeologists, not just for other archaeologists and students, but for the general public as well.

#### Scientific Publications

It is not common for the general public to read scientific publications; however, they represent the entire academic work for students and researchers, being the main source of scientific knowledge. Besides their big importance for science, not everyone has open access to all of them. Because the open access issue is not solved yet, one of the things online archaeology education contributors may provide is a list of books, journals, and other scientific publications with open access. These lists could focus on regional or national publications, or on specific subjects, being used as a primary source for content.

#### Archaeological Research Studies Outreach

The research and its results outreach is, or should be, one of the biggest objectives of researchers, since they are not done for academic purposes only, but for the interest of the society as well. Because most of people are not able or interested in reading scientific publications, archaeologists should provide them in a different manner, using online open access means and simpler language. Illustrations, summary texts, maps, videos, and other things can all be used. The most important thing is always focusing on the importance of the research and results, as well as justifying the contributions of it to the world.

#### Basic Archaeology Knowledge Outreach

Providing information using a simple language is the best way to succeed in transmitting basic knowledge. Simple language can be used to produce articles aiming to educate people on the basic archaeological knowledge, like what archaeology

is, what are its disciplines, what is an archaeological site or vestige, how archaeologists excavate and analyze things, as well as any other information archaeologists may consider relevant.

#### Fiction, Pseudoarchaeology and Amateur Archaeology

It is not rare for people to confuse archaeology with paleontology, or also to be fascinated about archaeology while believing in fictional, fake, or even amateur information. Sometimes, providing the basic knowledge about archaeology may not be enough. Articles that make people aware of what scientifically trustful information is and what is right and wrong in fiction may change people's point of view in a good way (see ► [“Popular Culture and Archaeology”](#)).

#### Making Archaeologists-Public Contact

Internet can provide ways for archaeologists to talk directly to the public, and the public could also talk directly to archaeologists in the same way. With online contact, as through e-mails, comments sections on websites/pages, or even online chatting, people are able to learn more. The public would even be capable of helping contributors with future plans through comments, critics, and compliments.

A second advantage of the Internet is also the possibility of learning with the public about their regional or local archaeology knowledge. Sometimes people would love to share information about an archaeological site or artifact they found, but most of the times they do not know who they should talk to. Considering that in some cases archaeologists would be very interested in people's findings, the approximation between both would be a good approach.

Finally, helping people in a private way about their personal wishes of being a future archaeologist, advising about how to become an archaeologist in their countries, and also sharing some tips about universities or research subjects would encourage more people to enter in the field.

#### Archaeological Heritage, Ethics, and Law

The most important knowledge archaeologists should provide is about the importance of the



archaeological heritage for science and societies (see ► [“Heritage Values and Education”](#) and ► [“Heritage & Society”](#)). An educated people would probably have more respect with heritage, with the desire to preserve it too (see ► [“Cultural Heritage and the Public”](#)). However, people would like to learn about ethics and laws of their country or region concerning archaeological heritage. Therefore, archaeologists may provide the basic knowledge about national or regional laws (see ► [“Cultural Heritage Management: International Practice and Regional Applications”](#) and ► [“Legislation in Archaeology: Overview and Introduction”](#)), as well as advices of what people could do to help preserve the heritage or in case they find archaeological sites and artifacts. Online contributors could also share a compiled material including all the legal documents of their country and region concerning the archaeological heritage.

#### Archaeological Museums, Artifacts, and Sites

Museums and archaeological sites are the places where public is able to have a direct contact with archaeological vestiges, considered as the primary means for public archaeological education. Internet can be a great ally in sharing information about the research studies carried out by museums, about expositions, archaeological sites open for tourist visits, as well as museums and sites locations. Contributors could also provide lists of archaeological museums and sites.

Sometimes just indicating where these museums and sites are located may not be enough, considering that many people could not be able to travel and visit them. In this sense, an increasing recent approach are the virtual museums, with photo galleries, maps, 3d images, and other digital technologies, as virtual reality, with a big potential for archaeological-related information diffusion (see ► [“Cultural Heritage in the Digital Age”](#)).

The open access to virtual 3D reconstructions of sites and artifacts would probably increase the interest of people about archaeology.

#### Academic Archaeological Information

One of the most desired information by the public interested in archeology is related to the high

education and professionalization process. Even though some people do not know exactly what archaeology is, they still want to be archaeologists in the future or, if not, they just want to learn about the subject in universities courses.

A simple and effective way of helping people find archaeological higher education is providing online information about archaeology undergraduation and (post)graduation courses, like lists of courses in different countries. Also, it is important that archaeologists and online education contributors give support to everyone interested in becoming an archaeologist, mostly the ones showing a lot of interest, which may prove to be great archaeology colleagues. Giving information about open courses is very important as well, once they may encourage people to search for higher education courses.

#### Events

Not just open courses may encourage people, but some events as well, like congresses, symposiums, workshops, lectures, etc. Online information about these events is important too, and they may be provided as calendars. Online contributors may elaborate these calendars focusing on regional events, or also about thematic events (e.g., Calendar of zooarchaeology or lithics events). Most of the events have, now, official websites or webpages that may be linked within the calendar.

#### Fieldschools and Internships

Calendars are very useful for organizing travels, and it is also the case for events, fieldschools, and universities internships. This is a major interest of people engaged in archaeology and related sciences, once they are looking for more learning and practical experience opportunities. Fieldwork coordinators and other archaeologists are usually looking for people to help them in their projects as volunteers. Providing information about fieldschools and internships can contribute with archaeological education and to encourage new archaeologists.

## International Perspectives

With all that exposed, it is possible to notice that a great variety of information can be available in the Internet. We just mentioned some of the most common online sources of information about archaeology. Brazil is an example of country following these perspectives. Besides Brazilian people access international sources, they rather access their own sources, mostly because of the language. The most known sources we mentioned before are all in English and it gets difficult for non-English speakers to follow these sources. So it is interesting for archaeologists around the world to provide information in their native language as well. Thinking about that, Brazilian archaeologists started making use of Internet for archaeological education in a variety of ways during the middle 2010s.

For example, *Arqueologia e Pré-História* website (Moreno de Sousa 2013) aims to educate people by sharing articles about specific subjects and worldwide research studies in a simple language, as well as information about Brazilian museums, archaeological sites, events, open courses, higher education, heritage related law, fieldschools, etc. The website is having an increasing popularity (Fig. 1) through the help of the online social networks, sharing even more information with exclusive material. This popularity is resulting in a positive public return, with people providing information about archaeological findings and asking for advices about archaeological higher education. The website contributors are frequently being invited by schools and public agencies to provide lectures and courses for students and other local citizens.

The same is happening to *Arqueologia Egípcia* (Costa 2008), an Ancient Egypt specialized website that is becoming very popular in the country, not just by the administrator efforts, but also as a result of the popularity of the subject. Besides Egyptian archaeology, the website also provides a big variety of archaeological knowledge, making people learn even more than they would expect. As a result of the contributor efforts, with very positive return until now, the administrator also offers lectures and publishes

books. More recently, the author has also adopted the vlog type of scientific popularity (Costa 2013) and her videos reached more than 775,000 views until July 2018.

Another volunteer work in Brazilian online archaeological education is *Arqueologia em Ação* project (2013). The project aims to produce video interviews with archaeologists from everywhere in the world about their research studies or some specific archaeological subject they have experience in. The lack of funding and dependence on volunteers time results in a slow increase of the audiovisual material quality, although they have a very positive return from the public. School and university professors, for example, are using the project videos in their classes to teach about archaeology subjects. From May 2013 to Mid-2018, the videos reached more than 28,000 views.

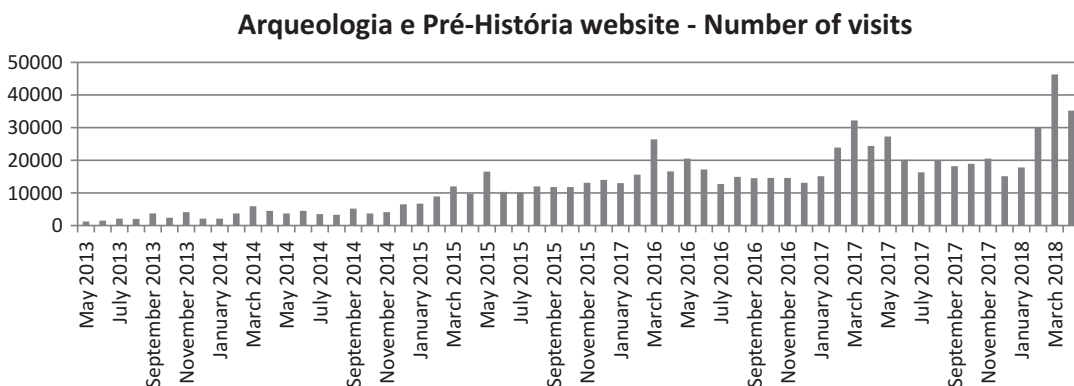
These kinds of nonprofit projects for online archaeological education are becoming very popular among Brazilian archaeology companies as well. The *Contexto's Live* project (2015–2016), for example, was part of a company's public archaeology program, and it has the intention of transmitting online live lectures to the general public, while providing posterior open access to them.

In Brazil, as well is in other countries, archaeology companies must, legally, provide public free education for the locals within the cities they are carrying out archaeological projects. However, Online Archaeological Education is a very efficient approach not just for locals but for everyone with Internet access in any part of the world, as *Contexto's Live* has proved. By this approach people are able not just to learn about archaeology, but about the companies' projects and results as well.

## Future Directions

It is important to notice that the higher is the volume and variety of online archaeological knowledge available to the public, the higher is the public interest in the subject. The more the public is getting interested, the more the public





**Internet Use for Archaeological Education, Fig. 1** Number of visits of *Arqueologia e Pré-História* website (Brazil). Statistics from May 2013 to April 2018

become aware of the cultural heritage importance and the more active is the public engagement. It is also important to notice that some people want to know about their local archaeological activities and learn about the importance of it for them. Once the public is aware of this, they tend to respect and collaborate with archaeologists.

That being said, it is not hard to assume how big and important can be the impact of Internet use for archaeological education on societies. So, for the near future, archaeologists should not just discuss how and what to provide as archaeological knowledge to the public, but also to ask why not to carry out online archaeology education projects? The digital world has arrived and archaeologists, besides looking at the past, must also look at their future directions on educating people. Archaeologists and online contributors must be aware that the modern technologies are making it able to innovate educational projects around the world. And soon new ways of online educating might appear and became popular as well.

## Cross-References

- ▶ [Archaeology: Definition](#)
- ▶ [Cultural Heritage and the Public](#)
- ▶ [Cultural Heritage in the Digital Age](#)
- ▶ [Cultural Heritage Management: International Practice and Regional Applications](#)
- ▶ [Cultural Heritage Outreach](#)

- ▶ [Heritage & Society](#)
- ▶ [Heritage and Higher Education](#)
- ▶ [Heritage Values and Education](#)
- ▶ [Legislation in Archaeology: Overview and Introduction](#)
- ▶ [Media and Archaeology](#)
- ▶ [Popular Culture and Archaeology](#)
- ▶ [Preserving Heritage: The Role of the Media](#)
- ▶ [“Public” and Archaeology](#)
- ▶ [Public Education and Archaeology: Disciplining Through Education](#)
- ▶ [Service Learning and Public Archaeology](#)

## References

- Academia.edu. 2008. Available at <https://www.academia.edu/>. Accessed 4 Aug 2018.
- Archaeology Magazine. 2008. Available at <http://www.archaeology.org/>. Accessed 4 Aug 2018.
- Arqueologia em Ação. 2013. Available at <https://www.youtube.com/arqueologiaemacao>. Accessed 4 Aug 2018.
- Barak, M., A. Watted, and H. Haick. 2016. Motivation to learn in massive open online courses: Examining aspects of language and social engagement. *Computers and Education* 94: 49–60. <https://doi.org/10.1016/j.compedu.2015.11.010>.
- Contexto's Live. 2015. Available at <https://www.youtube.com/contextosarqueologia>. Accessed 4 Aug 2018.
- Costa, M.J.N. 2008. *Arqueologia Egípcia (website)*. Available at <http://arqueologiaegipcia.com.br/>. Accessed 4 Aug 2018.
- Costa, M.J.N. 2013. *Arqueologia Egípcia (vlog)*. Available at <https://www.youtube.com/user/arqueologiaegipcia>. Accessed 4 Aug 2018.

- Georgopoulos, I. 2010. *The Archaeology News Network*. Available at <http://archaeologynewsnetwork.blogspot.com.br/>. Accessed 4 Aug 2018.
- Heritage Daily. 2011. *Archaeology*. Available at <https://www.heritagedaily.com/category/archaeology-news>. Accessed 4 Aug 2018.
- Kotoua, S., M. Ilkan, and H. Kilic. 2015. The growing of online education in Sub Saharan Africa: Case study Ghana. *Procedia-Social and Behavioral Sciences* 191: 2406–2411. <https://doi.org/10.1016/j.sbspro.2015.04.670>.
- MOOC List. 2016. Available at <https://www.mooc-list.com/tags/archaeology?static=true>. Accessed 4 Aug 2018.
- Moreno de Sousa, J.C. 2013. *Arqueologia e Pré-História*. Available at <http://arqueologiaeprehistoria.com/>. Accessed 4 Aug 2018.
- National Geographic. 1996. Available at <http://www.nationalgeographic.com/>. Accessed 4 Aug 2018.
- Nature. n.d. Available at [https://www.nature.com/subjects/archaeology?WT.ac=search\\_subjects\\_archaeology](https://www.nature.com/subjects/archaeology?WT.ac=search_subjects_archaeology). Accessed 4 Aug 2018.
- Research Gate. 2008. Available at <https://www.researchgate.net/>. Accessed 4 Aug 2018.
- Satterfield, D., C. Lepage, and N. Ladjahasan. 2015. Preferences for online course delivery methods in higher education for students with autism spectrum disorders. *Procedia Manufacturing* 3: 3651–3656. <https://doi.org/10.1016/j.promfg.2015.07.758>.
- Smithsonian Magazine. 2005. *Archaeology*. Available at <https://www.smithsonianmag.com/history/archaeology/>. Accessed 4 Aug 2018.
- The Archaeology Channel. 1999. Available at <http://archaeologychannel.org/>. Accessed 4 Aug 2018.
- Thought.co. 2017. *Archaeology*. Available at <https://www.thoughtco.com/archaeology-4133504>. Accessed 4 Aug 2018.
- Chowaniec, R. 2012. Archaeology on the Web. Educating children and youth through Internet portals. In *Archaeological heritage: Methods of education and popularization*, ed. R. Chowaniec and W. Więckowski, 37–41. Oxford: Archaeopress.
- Chowaniec, R. 2013. New technologies in the process of educating about the archaeological heritage. *EduAkcja. Magazyn edukacji elektronicznej* 1 (5): 32–42.
- Ciejka, K. 2012. Using social media and new technologies in the popularization and promotion of archaeology. In *Archaeological heritage: Methods of education and popularization*, ed. R. Chowaniec and W. Więckowski, 53–57. Oxford: Archaeopress.
- Davies, C., and R. Eynon. 2013. Studies of the Internet in learning and education: Broadening the disciplinary landscape of research. In *The Oxford handbook of Internet studies*, ed. H. Dutton. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199589074.013.0016>.
- Richardson, L.-J. 2014. Public archaeology in a digital age. PhD dissertation, University College London, London. 366 p.
- Schreg, R. 2013. Archaeology, the public, and social media. Some new insights from Germany. *Journal of Community Archaeology and Heritage Blog*. Available at <http://journalcah.blogspot.com/2013/07/archaeology-public-and-social-media.html>. Accessed 4 Aug 2018.
- Styliani, S., L. Fotis, K. Kostas, and P. Petros. 2009. Virtual museums, a survey and some issues for consideration. *Journal of Cultural Heritage* 10: 520–528. <https://doi.org/10.1016/j.culher.2009.03.003>.
- Terras, M. 2012. The impact of social media on the dissemination of research. Results of an experiment. *Journal of Digital Humanities* 1 (3): 30–38.
- Walker, D. 2014. Antisocial media in archaeology? *Archaeological Dialogues* 21: 217–325. <https://doi.org/10.1017/S1380203814000221>.

## Further Reading

- Bonacchi, Chiara, and G. Moshenska. 2015. Critical reflections on digital public archaeology. *Internet Archaeology* 40. <https://doi.org/10.11141/ia.40.7.1>.