Learning with Archaeogaming? A study based on student feedback

Sebastian Hageneuer 🔘 *based on peer reviews by Jeremiah McCall and 1 anonymous reviewer*

Cite this recommendation as:
Hageneuer, S. (2023) Learning with Archaeogaming? A study based on student feedback. *Peer Community in Archaeology*, 100391. 10.24072/pci.archaeo.100391

This paper (Stephan 2023) is about the use of video games as a pedagogical tool in class. Instead of taking the perspective of a lecturer, the author seeks the student's perspectives to evaluate the success of an interactive teaching method at the crossroads of history, archaeology, and classics. The paper starts with a literature review, that highlights the intensive use of video games among college students and high schoolers as well as the impact video games can have on learning about the past. The case study this paper is based on is made with the game Assassin's Creed: Odyssey, which is introduced in the next part of the paper as well as previous works on the same game. The author then explains his method, which entailed the tasks students had to complete for a class in classics. They could either choose to play a video game or more classically read some texts. After the tasks were done, students filled out a 14-question-survey to collect data about prior gaming experience, assignment enjoyment, and other questions specific to the assignments.

The results were based on only a fraction of the course participants (n=266) that completed the survey (n=26), which is a low number for doing statistical analysis. Besides some quantitative questions, students had also the possibility to freely give feedback on the assignments. Both survey types (quantitative answers and qualitative feedback) solely relied on the self-assessment of the students and one might wonder how representative a self-assessment is for evaluating learning outcomes. Both problems (size of the survey and actual achievements of learning outcomes) are getting discussed at the end of the paper, that rightly refers to its results as preliminary. I nevertheless think that this survey can help to better understand the role that video games can play in class. As the author rightly claims, this survey needs to be enhanced with a higher number of participants and a better way of determining the learning outcomes objectively. This paper can serve as a start into how we can determine the senseful use of video games in classrooms and what students think about doing so.

References:

Stephan, R. (2023). Student Feedback on Archaeogaming: Perspectives from a Classics Classroom, Zenodo, 8221286, ver. 6 peer-reviewed and recommended by Peer Community in Archaeology. https://doi.org/10.5281/zenodo.8221286

Reviews

Evaluation round #2

Reviewed by Jeremiah McCall, 06 November 2023

I am satisfied with the changes the author has made. To me, they seem to significantly improve the text and the author deserves to have their revised scholarship published. Congratulations!

Reviewed by anonymous reviewer 1, 19 October 2023

I am happy with the changes in the text and have no further comments on the article.

Evaluation round #1

DOI or URL of the preprint: https://doi.org/10.5281/zenodo.8221602
Version of the preprint: 1

Authors' reply, 11 October 2023

Reviewer 1 Comments

- Contextualization (remove the majors part, contextualize within video games and education)

    – I've removed the paragraph on the recent decline in History majors and contextualized the paper around research more closely related to the topic. I do think that mentioning the potential this has to increase enrollments and majors is an important thing to note in a time when large public universities are cutting humanities programs, but it is no longer the focus of the intro.

    – **New intro paragraph.** *In recent years, there has been an increase in the prevalence of research focused on the use of video games as a pedagogical tool for the instruction of history, archaeology, and classics (Brown 2008; Clark et a;. 2016; McCall 2013; Mitchell and Savill-Smith 2004; Squire and Jenkins 2011; Young et al. 2017). This trend reflects a growing recognition of the potential of video games to engage and educate students in a way that transcends traditional teaching methods by making students a more active part of the learning process (Squire et al. 2008). The intersection of history, archaeology, and classics in this context is particularly promising, as these disciplines provide a rich reservoir of content that can be effectively conveyed through interactive and immersive gaming experiences (McCall 2013, 2016, 2019; Mol et al., eds. 2017; Politopoulos et al. 2019b; Reinhard 2012). This burgeoning area of research not only underscores the evolving landscape of educational paradigms but also signifies a substantial shift in the way educators and institutions are adapting to the dynamic needs and preferences of modern learners.*

- Explain why student's did not have to do both assignment sequences

    – Paragraph in Methodology section revised and added.

- **New methodology paragraph.** *By running parallel assignment sequences within a single course, and by constructing similar assignment deliverables, the aim was to better isolate the impact of video games on student perceptions of the teaching and learning process. The secondary goal, however, was more pedagogically focused than research-based ; that is, I sought to provide students the opportunity with an educational experience tailored to their personal learning styles (Ambrose et al. 2010). Future studies may improve upon this by having all students complete both assignment sequences. However, because there was significant overlap in the topics that students were asked to investigate within each assignment sequence, and due to the time constraints of the course, students in this class only pursued one sequence or the other.*

- Check in-text citations and references

    - Fixed citations by removing comma between name and year.
    - Fixed bibliographic entries for Brown 2008 Mol et al. 2017; McCall 2013; McCall 2014

Reviewer 2 Comments

- Clarify what exactly is being measured (e.g., student perceptions of learning vs learning outcomes)

    - Topic sentence of paragraph 2 changed to removed focus on "learning outcomes." The claim in paragraph 3 that beter understanding student perspectives may lead to an improvement in achieving learning outcomes has become contextualized within educational research (see response to the next critique below).

    - **New topic sentence.** *This project seeks to better understand students' perspectives regarding the use of video games as a teaching tool in the classics classroom. In particular, it seeks to highlight the impact of video games on student satisfaction and on student perceptions of learning.*

- Cite the claim that appeal of learning mode increases effectiveness

    - Citations added to last paragraph of introduction within the discussion of why this type of study is important.

    - **New paragraph.** *While the impact of learning modality on effective learning has been debated (Aslaksen and Loras 2018), several studies suggest that tailoring teaching modalities to students' preferred modes of learning can have a substantial impact on the achievement of outcomes (Dekker et al. 2012) As a result, developing a better sense for the way in which students perceive the use of video games as a teaching tool, both its strengths and weaknesses, provides the potential to impact the achievement of learning outcomes in archaeology, history, and classics courses.*

- More details about specifics (was Discovery Tour used, which readings were used, how similar were the two assignment tracks)

    - **Discovery Tour Mode sentence Added.** *While it was not mandated that students in this study use the Discovery Tour mode or modules, they were made aware of the feature and its ability to open the complete map and remove the element of violence from the gaming experience.*

    - **Readings and Assignments.** While there wasn't room to cover each assignment for each sequence within the constraints of this article, I added a paragraph that discussed the difficulties in aligning the topic of each module's assignments across the two sequences. See bullet point below.

    - **New paragraph on assignment topics and readings.** *While the course was designed to produce identical deliverables (i.e., 300+ word written essays) for each assignment sequence, the topics of each module's written assignment often differed between the two sequences. This was, in large part, because the game did not have content adjacent to the topics that had been previously developed for the traditional assignment sequence. For example, in Module 2, the traditional assignment sequence that's been in use*

for the past several years has students read an excerpt from the Iliad and then reflect on what makes it "epic" in nature. This does not translate particularly well to the content within Assassin's Creed : Odyssey, which is focused on the Peloponnesian War rather than the Trojan War. Thus, the Module 2 topic within the video game sequence focused on religious practice at the site of Delphi with students reading excerpts from Pausanias' Description of Greece. Standardizing the content of these assignment sequences would be a productive goal for future studies since it could help reduce variance due to content topic and better isolate the impact of video games as a pedagogical tool for teaching archaeology.

- Reassess the claim of "significance" in line 211

  - **Term Replaced.** Statistical term "significance" removed, replaced with "substantial."

- I am unconvinced the findings show anything new or unexpected or even reinforcing. Video game playing students opted for a video game lesson and thought it more enjoyable is a big conclusion and that just does not seem enough to publish.

  - **Difference of opinion.** I can understand the reviewer's perspective here, but honestly, I just disagree. There are a plethora of reasons why people who enjoy video games might not like using them for assignments in a course: they lack the freedom of exploration normally present in the game, it's not about completing objectives, they have no experience with the specific game or don't like that sort of game, they find it confusing, etc. And there's no evidence that I could find that would suggest it's obvious that they would like that more than students who opt for another modality of learning (e.g., some people like reading, why wouldn't those scores be as high as the scores from the video game assignment sequence?). I'm not trying to claim that this is the last word on using video games as a teaching tool for archaeology, but there is some real data here that is useful to present, interpret, and publish.

Decision by Sebastian Hageneuer ⓘD, posted 17 September 2023, validated 18 September 2023

Please revise the article

Although the article heads in a good direction and is in itself an interesting study, some points the reviewers made have to be adressed. Both reviewers agree, that the study has some inconsistencies that need to be adressed or clarified. The reviews describe these inconsistencies in detail and I do not need to repeat them here. I would urge the author to take them as constructive as they are meant to refine the article into a newer version. The paper is an important contribution to the area of Archaeogaming and refining it can only make it better.

Reviewed by anonymous reviewer 1, 07 September 2023

Overall this is a good paper with important results that should be published. In the attached document I address some minor issues with comments, and some textual edits.

The main issue I currently see with the paper is the contextualization of the topic in the introduction. I believe that relating the study to declining student numbers in humanities (a definite problem world-wide) is not doing the argumentation any favor. It's a topic that is never returned to, and it is not really addressed with the survey. I think it would be best to contextualize the topic in it's own framework, i.e. video games and education (something that is done later).

Another point I want to address is that there should be a more explicit explanation as to why not all students had to do both assignments, so also be able to compare how students who don't play video games feel about it. In my experience this creates a rather different result in such studies, and I think it deserves a mention why the author chose not to do it.

Finally the text needs a bit of editing when it comes to in-text citations and its references.
Download the review

Reviewed by Jeremiah McCall, 01 September 2023

Though I think there may be room for the author's work and idea to develop into an article, I do not recommend this current article for publication.

The article tends to be pretty loose in expressing what exactly is being measured. Sometime it claims to assess whether video game lessons show an "increase in the achievement learning outcomes." In discussion, the author says "video games hold potential to increase student satisfaction and learning." But a student survey with the questions asked at most can only measure whether students feel they have learned not whether they have learned targeted learning goals– which is not the same thing. Elsewhere the author is clearer but still shifts back and forth on this. A clear discussion of what exactly can be determined and why from the surveys is missing and/or inconsistent.

If I am mistaken and the author can link the claim that the appeal of a learning mode increases effectiveness they should be citing it.

Other issues throughout leave the clarity of the instruction and its impact murky. Was Discovery Tour used? Which tours? What readings were used? Did the Discovery Tour tours used as homework topically match the readings assigned? These are all important questions that need answers for the article to provide insight. Not least of all, this is because the survey asked what the students learned and we don't know if they were studying even comparable topics (other than being in the ancient world). The lack o this information makes it less clear that the survey has objective usefulness.

Statistical reasoning is not my strong suit at all yet I am very aware that in line 211 the claim "the differences seem significant in scale" is not a statement of statistical significance and so not really a useful statistical claim.

Finally, I'm afraid that I am unconvinced the findings show anything new or unexpected or even reinforcing. Video game playing students opted for a video game lesson and thought it more enjoyable is a big conclusion and that just does not seem enough to publish.

One suggestion. Perhaps author can resurrect this research by making the case that positive attitude can effect learning or thinking one has learned is high correlated to having learned. As it is, though I regret to say it, I cannot recommend it for publication.