DE-POLARIZING BY COLORING, REASONING BY CURATING

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ABSTRACT

This short paper describes an early look at a project aimed at aiding students to understand various viewpoints through the advocacy of a museum visit. It aims to both improve historical reasoning and allow for more open-mindedness. This is done by combining a process of citizen curation with the use of de-polarization techniques.

KEYWORDS

Citizen Curation, Mobile learning, Active OPEN Minded Thinking

1. INTRODUCTION

Political and cultural polarization blights the public arenas in democratic societies posing ongoing threats to the social cohesion and the political process (McAvoy & Hess, 2013). Growing attention is focused on the role of social media and mobile assisted realms in promoting polarization. Algorithms driving social media and mobile information consumption increase individuals' exposure to information enhancing preconceived opinions (Lee, Choi, Kim, & Kim, 2014). This creates "echo chambers" in which self-confirming evidence is adopted uncritically while opposing views are rejected as "fake news" and adversaries are demonized (Gillani, Yuan, Saveski, Vosoughi, & Roy, 2018). History education and heritage sites have also become arenas of polarized politicized debates. Interpretations of the past which shed doubt on a nation's moral image or threaten to harm its esteem are deemed unpatriotic and ostracized while conservative and time accustomed historical symbols are criticized as colonialist and racist (Imperial War Museum, n.d.; T. Linenthal & Engelhardt, 1996).

However, heritage sites may also offer trajectories for dialogue and pluralistic engagement. Thus for example, Dutch museums dealing with controversial heritage such as slave trade or collaboration with Nazism created activities in which visiting students take up the roles of various historical agents, research their lives and engage with other (Savenije, van Boxtel, & Grever, 2014). Mobile learning in museums can also offer visitors the chance of an individualized active engagement with historical artefacts, making meaningful personalized structuring and interpretation of the exhibits according to their opinions (Tselios et al., 2009). Still, it is unclear whether encountering another person's opinion about the past or individualized interpretation of heritage facilitates depolarization (Bail et al., 2018). Debate with peers presenting opposing opinions may actually lead to entrenchment due to confirmation bias and face keeping (G. Lord, Ross, & R. Lepper, 1998). Similarly, tracing a personalized path and interpretation based on a mobile learning system may lead learners to establish their own polarizing echo chamber in the museum.

Our study explores the effects of a project which aims at promoting both engagement with diverse opinions and depolarization or open-mindedness, using the opportunities that mobile learning in museums could offer. We rely on Active Open-minded Thinking (AOT) theory both as a guideline and in tracing and assessing impact on student visitors (Baron, 2002; Stanovich & West, 1997). AOT centers on the ability to appraise evidence and claims regardless of prior opinion. It stresses both evidence based reasoning and considering the other's perspective. Evidence based reasoning should help learners to deliberate controversial issues in a rational manner, allowing them to form an informed independent opinion and to critically appraise opposing claims and their reliance on evidence. In a museum setting the evidence is drawn from the exhibits. In the process the learner-visitor selects, prioritizes, interprets and structures relationships between exhibits; a set of practices which aligns to some degree with a curator's role (Bruni et al 2020) (Mackay & Couldwell 2004). This gives a prominent space for proponents to present their views, acknowledges their voice and affirm self-worth in a way which facilitates acceptance of challenging information or views (Crocker, Niiya,

& Mischkowski, 2008). However, buttressing your own stance or interpretation with evidence may also enhance certainty and entrenchment, impeding open-minded deliberation. Another approach to overcome entrenchment and promote open-minded engagement with differing opinions, derived from Constructive Conflict theory, is taking a turn at defending the opponent's stance or part of it (Johnson & Johnson, 1988).

Following these theoretical approaches, we developed an interactive mobile supported museum learning activity. Mobile learning is first used to engage learners in using exhibits in historical reasoning doing virtual curation. Consequently, the system is used to promote AOT and avoid selective exposure to self-confirming information using recommendations that inverts the common polarizing effect of social media, engaging visitors with opinions opposite to their own, and helping them deconstruct the opposing argument into parts they can accept or reconsider.

2. SYSTEM DESCRIPTION

In this section, we describe two processes based on the theoretical background above: (A) curation through gathering evidence to support opinions and (B) exposure and analysis of others opinions. These processes take place in a three phase activity at different locations: (1) Pre-visit which occurs mainly in a computer classroom, (2) Within visit which consists of activities both in a museum and in a computer classroom; and (3) Post visit which occurs mainly in a computer classroom. We concentrate here on the activities that take place during the second phase, at the museum. The system is a web application so theoretically can take in different venues including mobile phones. The activity took place in the Hecht Museum in Haifa Israel.

2.1 Curation Through Gathering Evidence to Support Opinion

During this process, the users are reminded of their previous opinions (regarding the museum exhibition topic). The users are then requested to take 4 pictures in the museum on their phones with an app which supports their arguments. On each picture they are requested to place **tags** and write a short paragraph (or two) why they chose the particular object to support the argument (Figure 1). In the museum the students discuss the various artifacts (photos, justifications) which they capture in the museum grouped by whether they were for or against the Rebellion.

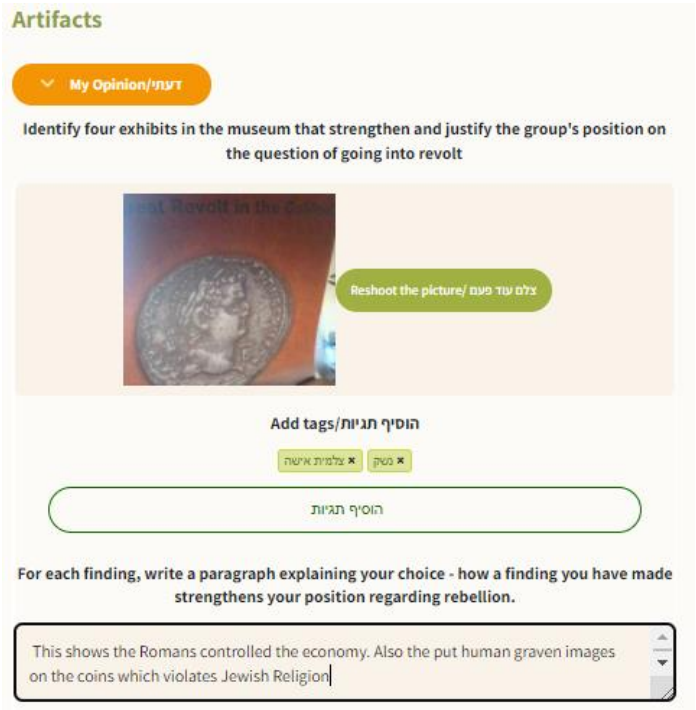

Figure 1. Choosing an artifact by Visitor Employed Photography

2.2 Exposure and Analysis of Other Opinions

In this process the users are first reminded of their own opinions (regarding the museum exhibition topic). They are then given two opinions in a serial order, depending on the experimental condition used. In particular, we examined two experimental conditions. In the first one, the visitors are given first one opinion which is similar to their opinion (based on own tagging of the own opinion[1]) and an opinion which is different from their opinion. The reasoning behind this experimental condition is that the first similar opinion opens the visitor up to future different opinions (inclusion then understanding). The second experimental condition is to expose the visitor to two differing opinions. The reasoning behind this experimental condition is that the more exposure to differing opinions the more likelihood of achieving understanding.

The process itself is supported by three screens. In the first one, the visitors are asked to color the text based on 4 levels of agreement: I agree with the item, I understand the item but disagree, the item caused me to rethink my views and I am still formulating my response, and I totally disagree with the item. The visitors then select what their relationship to the view presented is (see Figure 2;).

In the second screen (not shown in this paper), the visitors see what they colored in the categories of "understand but disagree" and "rethink". They are asked to give reasons for each of these two colorings. In the third and last screen (also not shown here), the visitors see their coloring again and are asked: a) what are the values embedded in the view presented? and b) independent of your individual opinion, what is your evaluation of the historical arguments used?

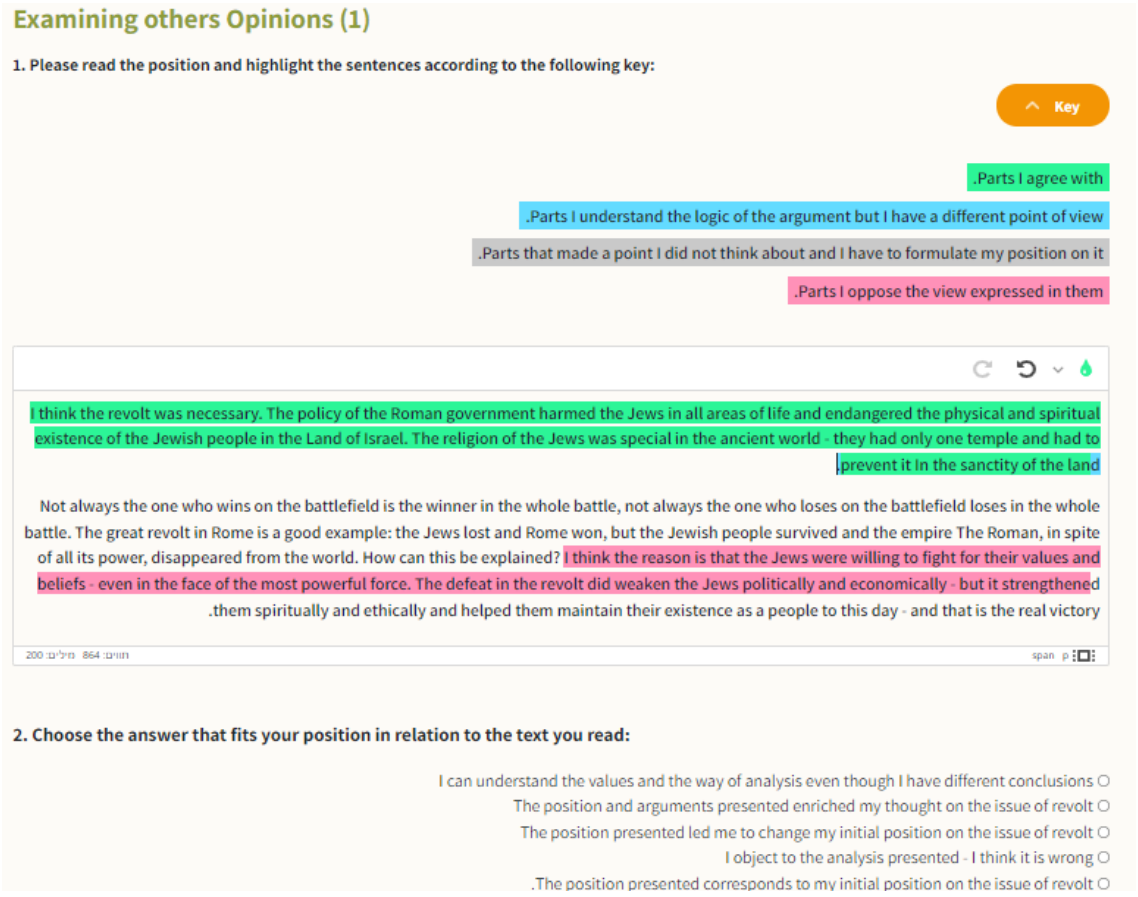

Figure 2. Analyzing others Opinions (first screen)

[1] In the future we intend to explore tagging through semantic analysis.

3. CONCLUSIONS

As we have suggested above, mobile learning in the museum could serve as a meeting point for learner-visitors through citizen curation and exhibit-based debate. We still need to explore whether this engagement would enhance self-confirmation bias and entrenchment or allow for active open-minded thinking, overcoming polarization and echo chambers. We believe mobile learning systems may help counter the tendency for polarization and atomization the mobile supported social media aroused. This paper showed the direction of novel technique aimed at enhancing inclusion and social cohesion by encouraging historical reasoning and open-mindedness. Hopefully the museum atmosphere combined with the techniques mentioned above will contribute to the above goals. We started exploring the use of the system with actual students, measuring the changes they undergo through questionnaires and repeating some of the activities at a later point in school.

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