

Studying users: How to assess the suitability and success of 3D technology in your museum



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“I feel in touch with the people...like, you can actually begin to imagine what their life was actually like.”

(Perry et al. 2017 ~ **15 participants**)

“...visitors highlight how the [3D technology] provided unknown information and encouraged them to look at objects longer, or in new and different ways.”

(Van Der Vaart and Damala, 2016 - **22 participants**)

“... interactivity is less appreciated than increased visual and audio fidelity, although several participants had trouble with the controls...and there was at least one instance of motion sickness caused by the movement on the screen.”

(Smith et al. 2018 - **25 participants**)

- Findings based on interviews/surveys in controlled trials (qualitative)
- Average study drawing its conclusions from less than 20 participants, and majority of test subjects are young, male, and university educated (Dey et al. 2018)
- Different cultural contexts
- Fallacy of designer as user
- Need for larger, robust studies of resources 'in the field' i.e. not in lab conditions, using participants that are representative of the target audience

Technology Readiness Index

“people's propensity to embrace and use new technologies for accomplishing goals in life and at work”

Optimism – a positive view of technology and a belief that it offers people increased control, flexibility, and efficiency in their lives.

“Products and services that use the newest technologies are much more convenient to use”

Innovativeness – a tendency to be a technology pioneer and thought leader.

“You can usually figure out new high-tech products and services without help from others”

Discomfort – a perceived lack of control over technology and a feeling of being overwhelmed by it.

“Sometimes, you think that technology systems are not designed for use by ordinary people”

Insecurity – distrust of technology, stemming from scepticism about its ability to work properly and concerns about its potential harmful consequences.

“Whenever something gets automated, you need to check carefully that the machine or computer is not making mistakes”

Positive scores in optimism and innovativeness:

- reflecting a participant's readiness to embrace technology
- *'motivators'*

Positive scores in discomfort and insecurity:

- reflect a lower readiness
- *'inhibitors'*

	Motivation	Inhibition	Group Characteristics
Sceptics	Low	Low	Need concrete reasons to adopt new technologies, tend to have a detached view of technology, with less extreme positive and negative beliefs
Explorers	High	Low	Interested in new technologies and needing minimal help to master them, tend to have a high degree of motivation and a low degree of inhibition
Avoiders	Moderate	High	Satisfied with basic functionality but need support and reassurance, tend to have a high degree of inhibition and low degree of motivation
Pioneers	High	High	Needing little convincing to adopt technology but require more support to be satisfied, tend to hold both strong positive and negative views about technology
Laggards	Low	High	Satisfied with basic functionality but need support and reassurance, they stand out due to their low degree of innovativeness

Did you have the chance to use the AR installation?

Do you think it enhanced your experience of the sculptures?

Did the AR experience contribute to any of the following?

- ☐ *I passed the time in an enjoyable way*
- ☐ *Spent quality time with friends/family*
- ☐ *It gave me/us something to talk about*
- ☐ *It inspired my own creativity/my children's creativity*
- ☐ *I improved my knowledge of the history of [Chontales and Juigalpa]*
- ☐ *My interest/my children's interest was encouraged*
- ☐ *I saw amazing/awe-inspiring things*
- ☐ *I felt a strong sense of personal/family/regional identity*

Would you be interested in using it/other museum technology again?

How would you change the AR experience if you could?

Smith et al. (2018): Visitor reactions to 3D models of Fishbourne Roman Palace in West Sussex, England

- Majority of visitors were either **Explorers (32%)** or **Avoiders (44%)**
- **Explorers** – mainly male, aged under 50yo, having a degree, and working in technology related employment
- **Avoiders** – mainly female, over 50yo, having a degree, not in technology related employment

Majority of visitors Fishbourne Roman Palace were aged over 50 (65%) and Female (60%)

Avoiders comprise the base audience – somewhat adverse to interactivity, requiring support and reassurance

School Groups

Explorer and Pioneer types – interested and motivated, requiring some assistance and training, likely to leave with strong impression of the technology



British Museum Virtual
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Thank you!

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