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Introduction

I am tasked with finding ways to improve the museum experience using AR this will meaning I will need to conduct field research to examine how museum user current use the museum and experience the exhibits. I visited two museums in order to conduct my field research the Horniman museum and the Royal Air Force museum. My primary preconception is museums are primarily for kids therefore, my improvements will be based on my observation of my kids' experience.

Field research

Horniman Museum

I found the Horniman had a more traditional approach to displaying there exhibits they had two guide tours per day other than that you were free to explore the museum on your own. They had several exhibits which had a small degree of movement in that the dinosaur was able to move its head or open its mouth. However, that was the extent of it for interactivity there was four or five small pits with bearded fossil which the kids could play at being archelologies and unearth the fossils. However, these where very busy and I found my kids had to wait for some time to get a chance to have a go. Each exhibit was accompanied with an information board telling the visitors about the individual exhibit. However, the words on these boards where at times long both my son who is eight and daughter who is twelve had a go at reading these information boards and both struggled, I myself struggle with some of the bigger words.



Royal Air Force museum

I found the Royal Air Force museum, had more interactive items making it more fun for the kids there was flight simulators, some air crafts you could actually going inside and VR simulation of the dam buster mission. I took my kids along with me as I wanted to get their views and overwhelmingly they enjoyed this museum more from there feedback it was because they could do a lot more that simple look at the exhibits they could actually interact. Allot of the exhibits still had the traditional information board attached to it with large amounts of text these exhibits my kids showed fare less interest in. however, although this museum cleared as made big efforts to make the experience more fun and interactive they still suffered the same issue of long waiting time to get to use the most popular exhibit the VR dam buster experience. When I arrived with my two little ones there was four people ahead of me bearing in mind it a ten-minute experience that was fourth minute wait something I would not have consider if it was not for my need to gather information on the experience from my kids.



Key issues I found with museums and AR solutions summary:

- Hard to read information signs, due to long complicated words. My son is eight and my daughter is 12 and they both struggled. AR can create an audio and visual information experience that is anchored to each exhibit. It would appear when the visitor points their device at the exhibit and talk about the exhibit.
- Lack of interactivity. AR can make the whole museum experience interactive bring exhibit to life. The exhibits can literature walk around the museum amongst the visitors. However, with current time restraints this will not be possible for prototype.
- Long ques for interactive items. With AR each visitor can have their own experience through there own device or with a rented device from the museum, therefore, no need for a cueing. This opens the possibility to recording their experience to take home with them.

Additional images for both visits can be found in appendix.

Design Concepts

- Use AR to turn pictures into AR windows giving information and animation to exhibits. The initial prototype did this using pop up video which talk about the exhibit, this can be seen in figures 1 and 1a.
- Use AR to give information on the various model in the exhibits. For example, I will use a 3d model of a T-rex to show how I will use AR by placing anchor point on the 3d model. This will allow the user to view the model in the exhibits through there device and by touching the screen get information via visuals a video and audio and written text. In this way the AR will solve the issue I found of kids struggling to read some of the more complex words and make the experience suitable for both visual impaired. This can be seen in figure 2 and 3.

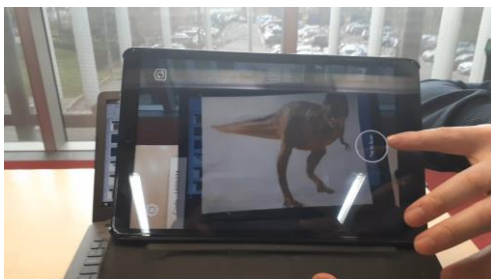


Figure 1 and 1a above, This was the initial design concept where AR is used to overlay information about exhibits by making a video popup. This idea was functional, however, feedback received was clear that this design did not make good utilisation of AR.



Figure 2 initial image



Figure 3

In the figure 2 and 3 above I used a 3d model of a T-rex to show how I will use AR to enhance the museum experience. The area the user can press are highlighted to show the user where to touch. The model of a 3d T-rex is used instead of the actual museum exhibit. What can be seen in the image is the view the user will have via device when looking at an exhibit by pressing on an area of interest information will be displayed with audio voice over option. Figure 2 shows information displayed, all the touch area which utilise AR will be displayed the same therefore, only one image of this is necessary. By touching the information box the user can get more detailed information.

Feedback

Discuss feedback from kids

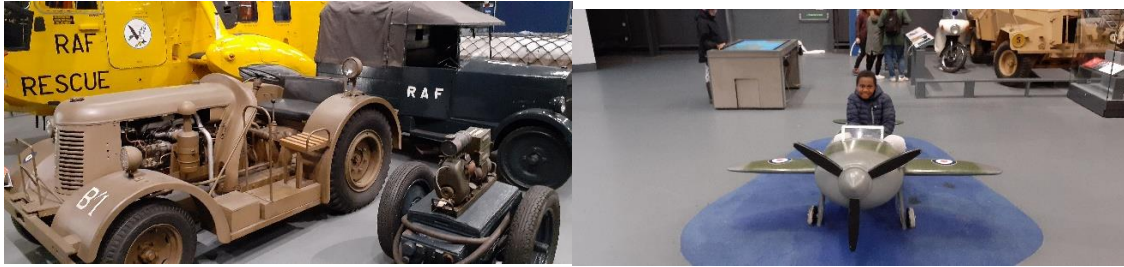
Evaluation

Discuss what worked what didn't and future improvements.

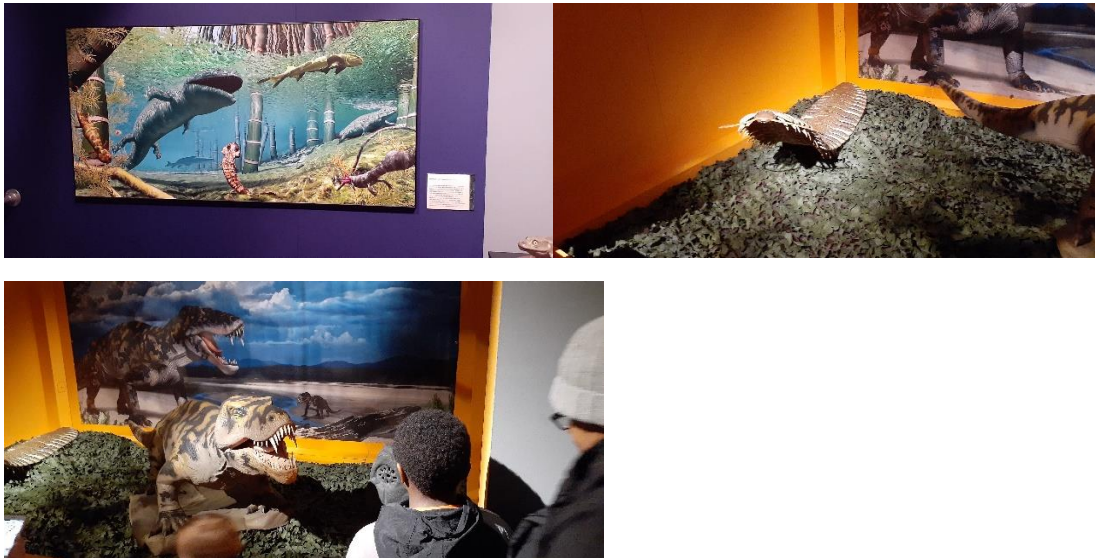
Learning outcome

Appendix

RAF museum



Horniman museum



Additional design images

References

There are no sources in the current document.