

Usability of
interactive digital
multimedia in the
GLAM sector

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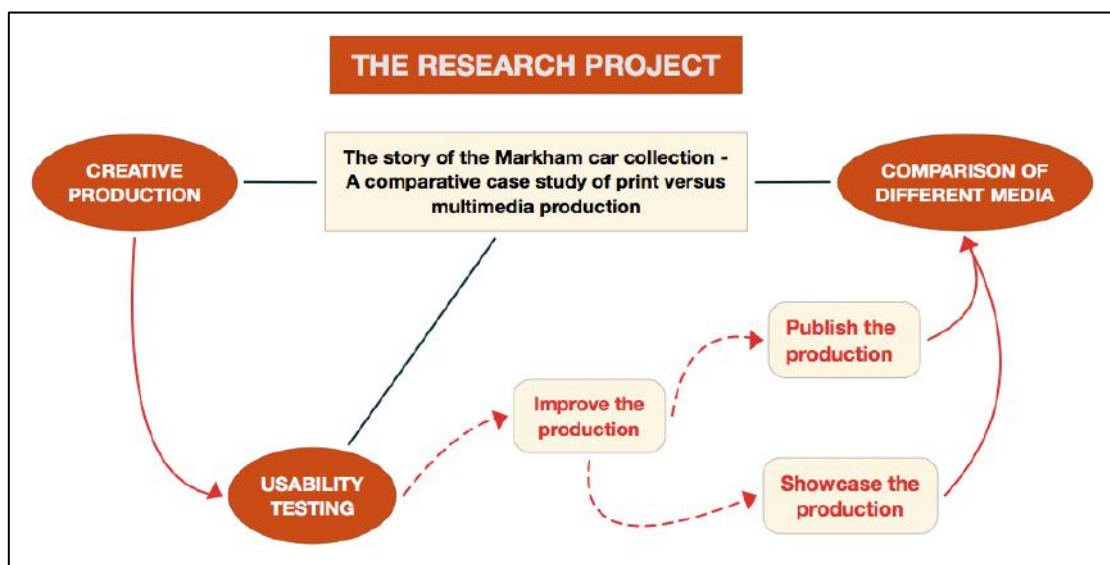
My **RESEARCH PROJECT** is: The story of the Markham car collection – A comparative study of print versus multimedia production.

The **PRIMARY QUESTION** of the research is:

**Are there preferences for
print versus visual media
to communicate information and tell
stories
about collections
in the GLAM sector?**

This research consists of three successive, interdependent stages: creative work (visualisation of an article), usability testing, and comparison of different media.

I have created an interactive digital multimedia production: The story of the Markham car collection. This production will be used as an instrument to find the answer to my primary research question regarding the preferences in the GLAM sector.



The challenge is, how to measure and how to evaluate this interactive digital multimedia product's usability. There are several approaches, applications, tools, and many models and theories to test usability and user experience. To test usability of multimedia in the museum sector combined evaluation methods are used. My production will be published online, on a website. The aim however, is not to test the website's usability, but rather to test the usability of the digital multimedia production (DMMP).

With **TESTING USABILITY** of my production, I would like to know, if the future users could easily navigate it, and do they receive well-structured and organised information. I also want to know, if the DMMP is aesthetically pleasing, and whether the users enjoy interacting with the production?

Could the future users easily navigate the production?

Do the users receive well-structured and organised information?

Is the digital multimedia production aesthetically pleasing?

Do the users enjoy interacting with the production?

From this I have established four questions, which are my research's **SECONDARY QUESTIONS**.

How easy is it for users to navigate the DMMP?

How user-friendly is the organisation, structure and presentation of the information in the DMMP?

Is the interface of the DMMP aesthetically pleasing?

What is the satisfaction level of the DMMP's users?

The **AIM OF USABILITY TEST** is, to seek advice on how the DMMP could be improved in terms of learnability, understand ability, attractiveness and satisfaction. These factors will be tested in my project.

Usability	Learnability	Informative feedback (Response to the actions)	
	Understand ability	Navigability	Find ability Recognition Information scent Attractiveness
		Information density (Display the information)	
	Attractiveness / Aesthetics	Font style uniformity Colour uniformity Consistency Overall visual layout	
	Satisfaction	Desirability of overall design (Emotional response to the design)	

27 of the 118 Microsoft **REACTION WORDS** will be used for testing.

<i>Attractive</i> <i>Clear</i> <i>Comprehensive</i> <i>Controllable</i> <i>Confident</i> <i>Consistent</i> <i>Creative</i> <i>Easy to use</i> <i>Effortless</i>	<i>Fast</i> <i>Friendly</i> <i>Fun</i> <i>High quality</i> <i>Impressive</i> <i>Interesting</i> <i>Manageable</i> <i>Meaningful</i> <i>Organized</i>	<i>Original</i> <i>Pleasant</i> <i>Professional</i> <i>Satisfying</i> <i>Simple</i> <i>Supporting</i> <i>Understandable</i> <i>Usable</i> <i>Useful</i>
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These words are the key terms in the statements in the questionnaire. Applying these MS reaction words, I have formulated **30 STATEMENTS**.

<p style="text-align: center;">LEARNABILITY</p> <ol style="list-style-type: none"> 1. I learned to use it <u>fast</u>. 2. I felt <u>confident</u> using it. 3. Learning to operate it is <u>manageable</u>. 4. The given instructions are <u>useful</u>. 5. The given instructions are <u>supporting</u>. 6. The navigation buttons can be found <u>fast</u>. 7. The navigation buttons responds <u>fast</u>. 8. The help menu is <u>useful</u>. 	<p style="text-align: center;">UNDERSTANDABILITY</p> <ol style="list-style-type: none"> 1. It was <u>simple</u> to use. 2. It was <u>easy to use</u>. 3. It is user <u>friendly</u>. 4. The organisation of information is <u>clear</u>. 5. It was <u>effortless</u> to find the multimedia elements. 6. The navigation buttons are <u>meaningful</u>. 7. The information (about the story) provided is <u>understandable</u>. 8. The entire production is well <u>organised</u>.
<p style="text-align: center;">AESTHETICS</p> <ol style="list-style-type: none"> 1. Reading characters on the screen is <u>pleasant</u>. 2. The characters are <u>consistent</u>. 3. The appearance of navigation buttons is <u>attractive</u>. 4. The colours are <u>pleasant</u>. 5. The media elements (e.g. pictures, sound) are <u>high quality</u>. 6. The overall design is <u>professional</u>. 7. The overall layout is <u>creative</u>. 	<p style="text-align: center;">SATISFACTION</p> <ol style="list-style-type: none"> 1. I am <u>satisfied</u> with the multimedia production. 2. It is <u>fun</u> to use it. 3. The navigation buttons are <u>controllable</u>. 4. The production is <u>impressive</u>. 5. The story is <u>interesting</u>. 6. The story is <u>comprehensive</u>. 7. The storytelling method is <u>original</u>.

In measuring and evaluating usability, Likert scales are very popular. For this study I have developed a 7-point Likert type questionnaire.

To test my production's usability, I would like to involve 5 to 7 experts, who are related to digital humanities, the GLAM sector and are experts in multimedia development and use.

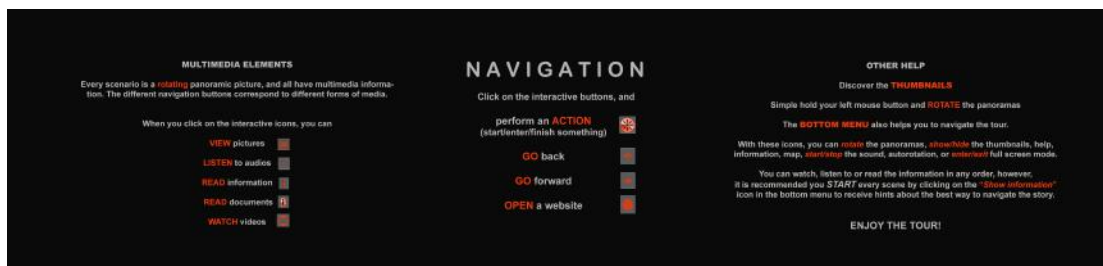
After analysing the experts' feedback, I will improve the DMMP, and as a result, hopefully achieve an effective, efficient, user-friendly immersive production, which will be published and showcased, presented, and used as a tool for the third stage of my research **COMPARISON OF DIFFERENT MEDIA** and to find the answer to my research question.

THE STORY OF THE MARKHAM CAR COLLECTION

THE INTERACTIVE DIGITAL MULTIMEDIA PRODUCTION

The key software to create the 'story' was the Kolor PanoTour software. The production consists of authentic spherical panoramic pictures (Whiteman Park, and the Motor Museum of WA), and partial spherical (180 degree) panoramas I have created and designed for the HIVE cylinder (5048x1200). Each scenario represents a key point of the story and built up as museum-like environment.

The starting panos include some introductions and instruction.



Then you can start and enjoy the tour. With the interactive navigation buttons you can perform actions (start, enter, finish something), go back and forth, or open a website.





Other interactive icons correspond to different forms of media. You can view pictures, listen to audio, read information, read documents and watch videos.

The imaginary museum rooms

The 'room' of the Star 1898 vis-à-vis (recurrent element of the story)



The 'room' of the Markham family



The 'room' of the Antique Auto Museum



The 'room' of the WA Museum (1967)



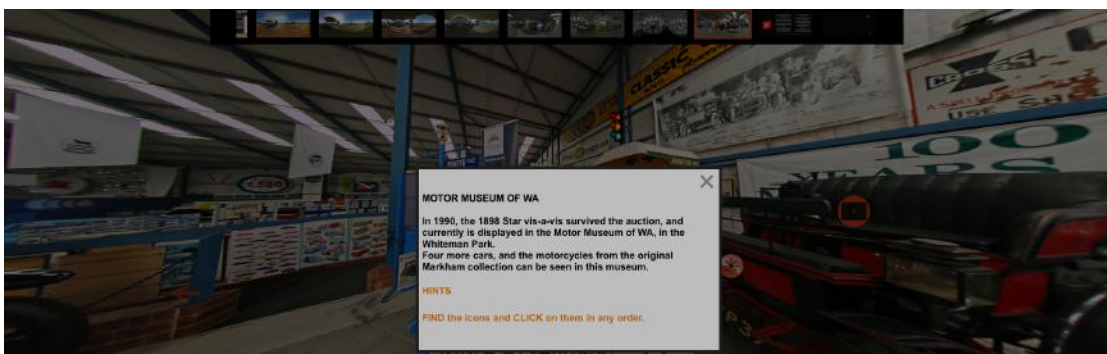
The 'room' of the WA Museum (198-89)



The 'room' of Christie's auction



After visiting these scenes, you can walk through the Whiteman Park, and enter the Motor Museum. (Here are some screenshots of a full panorama with the Star 1898 in the Motor Museum of WA)





Currently, the production is in the postproduction editing stage. All suggestions, recommendations are welcome.

If you have any question or if you would like to participate in the comparison study, please contact me.

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