EYETRACKING

INSIGHTS INTO VIEWING BEHAVIORS ON WEB DOCUMENTARIES: AN EYE-TRACKING STUDY

Table of contents

1.0 Introduction

For the Web Documentary course at Volda University College, we were able to use eye-tracking technology to learn about human behavior online. Eye tracking can be a valuable analysis tool to find out what people notice on a web documentary. The eye-tracking is used in a way that a camera records and tracks where a subject is looking. There are gaze points that follow the subject's reading behavior. Eye tracking can reveal how the eye moves during a process – it can either be a process where the subject reads something from a webpage or watches a film or just explores what's on the screen.

SOURCE: Neil Dawson

2.0 Method

We used eye tracking glasses and a computer that showed a web documentary that we wanted to test out. We used the one that is called "Explore Skaar". The reason why we chose that documentary is because we have an idea of using some of the same storytelling techniques – such as an interactive map and illustrations – for our own web documentary.

Our target group for the later project is people between the ages of 18 and 30. So we tested the eye tracking on three students within that age range. The students had not tried eye tracking before, and none of them had looked at the web documentary before.

The subjects were asked to meet in a room in the media building. The room was screened off, so it was hard for them to be distracted by people outside.

The participants got five minutes to look at the documentary. We used a think-aloud-protocol ass well as a retrospective interview at the end. So they could comment whatever they wanted during the five minutes. They could say whatever caught the eye, or what they liked and did not like during the time that was given. After the five minutes we asked them some questions, such as: What did you think of the production? Were there parts you wanted to see more of? What do you remember the most? We had a set of questions we wanted to ask based on how we want to design our own project in the future.

3.0 Main Findings

The research methods used highlighted several findings. Our most important findings can be summarized in three topics: navigation, interaction and presentation. In the below chapter, these categories will be expanded upon.

3.1 Usability

Through our subjects, it became clear that the navigation set up in the chosen web documentary wasn't clear to everyone. Both the first subject and the third subject struggled with finding a place to start and seemed to get a bit overwhelmed by the many options presented on the map.

Our second subject on the other hand, reported no navigational problems. He shared with us that he was diagnosed with ADHD, which could explain this difference. He also noted that the different ways of presenting information and interacting with it, made it easier for him to follow the story. As he has ADHD and dyslexia, he normally struggles following longer stories and reading big blocks of text, but here this was not the case.

3.2 Pedagogical functionalities

The content shown in the web documentary is all based on Skår, an old farm near Saebo, and the man who has lived there his whole life. Through different mediums, the creators let the reader 'wander' through the place and discover it. They use 360 cameras, photography, video, drone footage and illustrations to keep the attention of the viewer.

When asked which of these functions stood out the most to our subjects, all answered with the mediums that required the most interaction from the reader. Such as a 'call the ferry' option on the page, quiz questions on certain areas and the use of 360 footage to wander around the town.

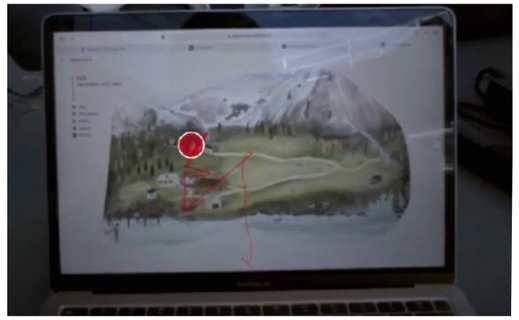
3.2 Visual attention

All three subjects seemed most drawn to human stories: whenever there was a person visible on a part of the page, their attention seemed to drift in that direction and they paid more attention to the information provided next to or told by that person.

Noteworthy is also that the two subjects who struggled the most with the navigation, subjects 1 and 3, were first drawn to the colorful, blinking dots put on the map. They only noticed there was a legend on the side of the map to help them navigate later on, after they'd already clicked through one or more parts of the web documentary.

4.0 SUBJECT 1: Pia

- Looks at buildings then text
- Looks around the map for a little while
- Reads "The Skieers" halfway through
- Reads "The Goat Farm" ca. halfway
- Looks around the entire map for about 5 seconds
- Goes back to start screen two times
- Asks "Is that the whole website?" after ca. 4 minutes
- Often reads the right side of presented text

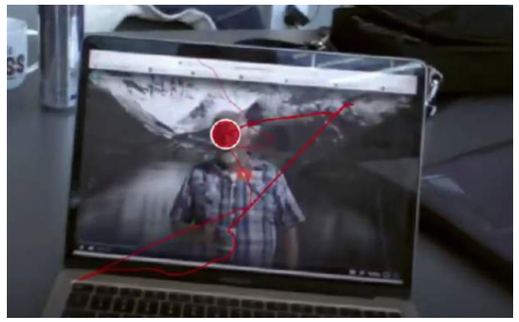


Pia looks a lot at the map

She also takes her time to read

5.0 SUBJECT 1: Martin

- Enthusiastic about video, chuckles at the man
- Dyslexic
- Loves the map, captures his “ADHD attention”
- “Ive always been the guy to read every plaque at museums”
- Explores the house in depth
- Reads first paragraph on “The Goat Farm” and “The Skiier”
- Quiz questions get his attention
- “Oh wow I can call somebody? What the heck?”

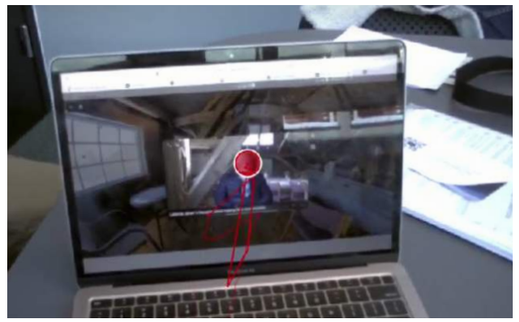


Martin saw the whole intro

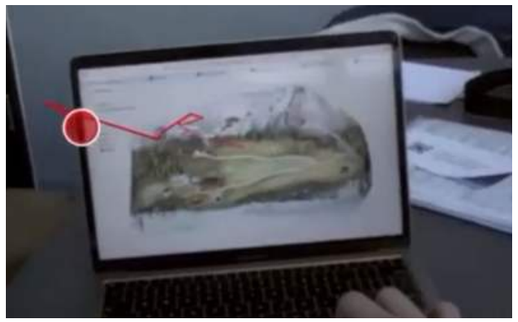
He was drawn to new features

6.0 SUBJECT 1: Leo

- Goes straight into the map from the start page.
- (Didn’t see the intro video)
- Reads “Avalanches” in depth.
- Skips bird song text.
- “Blinking dots” catches attention
- Likes the VR
- Likes jumping from place to place in VR
- Watches video thoroughly
- Asks if there is more map.
- Accidentally exits page for a second.
- Watches catering building video with attention, reads captions.



Voice and video held Leos attention



He was slightly confused at first

7.0 Suggested improvement

For the webdoc to be improved, adjustments need to be made to the narrative approach. A solely linear approach is not favorable, as the subjects were fond of the freedom of exploration. Yet, a suggested "route" would be most helpful, as well as fixed video points through the experience – including the intro.
This would ensure that there would be confusion and the viewer can navigate the webdoc at ease, without the anxiety of missing any elements.
Further, our subjects seemed to enjoy interactive features and video, and were more drawn to such features than text. Thus, such features should be widely featured, yet not to the point of being overused and surely not replacing text.

8.0 Conclusion

Through our research, we managed to not only acquire insight into the attention and focal patterns of our subjects – regarding the Skår web documentary – but also to get feedback that will aid us in our own work.
All subjects seemed to be most interested in interactive features of the webdoc – which included their own input or participation. Such features were the ferry, and the quiz, as well as the 3D camera which allowed for 360 navigations in certain areas, with the ability to jump to points.
Yet, the lack of a linear foundation in the progression of the web documentary was what caused the only problems our subjects had during the viewing. With freedom of choice – a non-linear map with points that are not connected in a chronological order of viewing – comes confusion and anxiety. A desire to not miss out on any text or other information caused our subjects to hastily search around the web page for anything missing. A more linear or guided approach – with the ability to jump at different points should one wish – would solve such issues and would allow the viewer to indulge in the experience with ease and without any fear of missing out.
On the same note, with subject 3 we realized that a more guided and less liberated approach would be necessary, as they failed to associate Skår with the rest of the webdoc by hastily skipping to the interactive map, rather than reading and watching the introduction where Skår speaks. Ironically, they were most attentive when Skår was acting as a guide and talking through video, rather than text.
Overall, a semi-linear approach with a plethora of interactive features would – theoretically – be most effective in keeping our subjects engaged and entertained, without overwhelming confusion or disorientation.
We not only came to these conclusions through a post-viewing discussion but also by encouraging our subjects to freely phrase their thoughts during the viewing of the web documentary and cross examining this information with the eye tracking report.

9.0 Group members


Marjo van Yperen


Åsna Kleiv


David Toman Søberg


Sophia Becker


Paul MacGillivray


HØGSKULEN
I VOLDA