

EYE-TRACKING ANALYSIS ON THE WEBSITE:

Tracking unconscious response to visual stimuli to create a sustainable website design

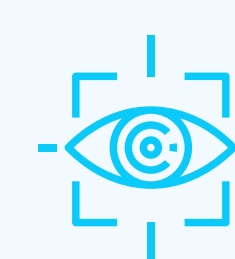
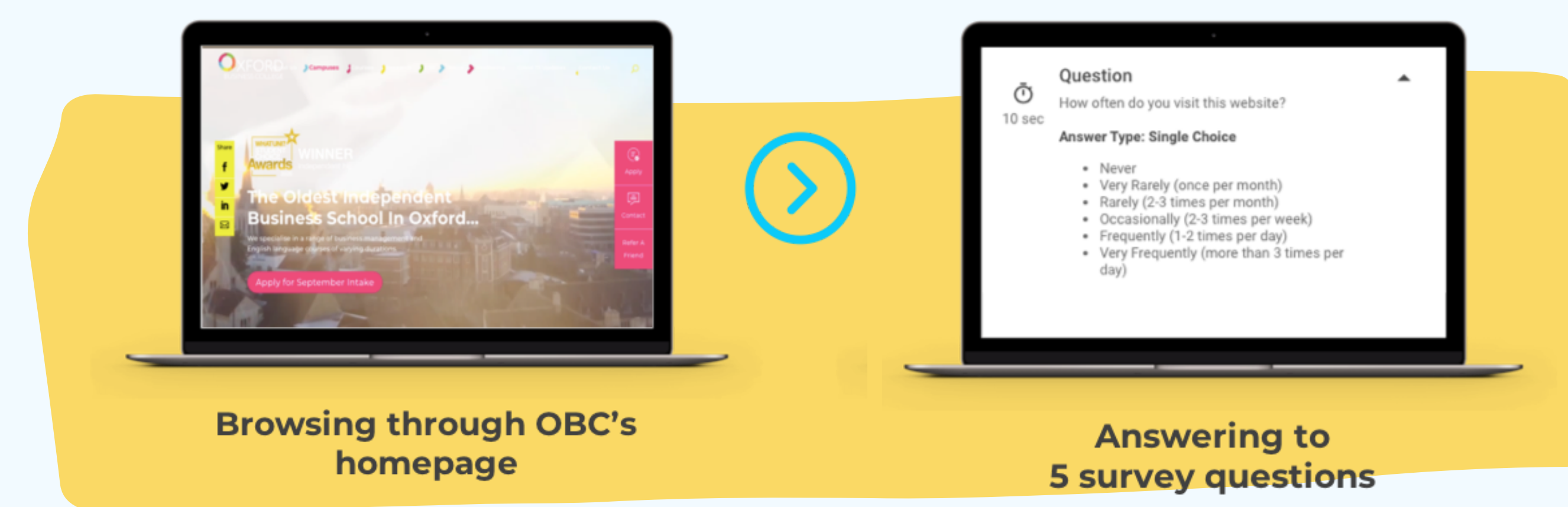
OBJECTIVE and METHODOLOGY

OBJECTIVES:

- To determine how much the content on the website is in accordance with the preferences of visitors
- To understand how can the website be improved based on the obtained neurometrics
- To get an insight into respondents' attentiveness levels leading to encoding and recall of information based on the webpage design

METHODS:

- Respondents received an 'html' link with the homepage of the Oxford Business College (OBC) website
- The task was to navigate through the homepage while the **eye-tracking** and **facial coding** was measured with the online platform for advanced quantitative research "Tobii Sticky"
- In the end, respondents answered a set of 5 questions which helped to gauge their user experience, learn about their expectations and reasons for visiting the website, and to test their attentiveness levels



Eye-tracking for attention distribution and the pattern of movement around the website



Emotion analysis for understanding how visual impact of website affects emotional responses



Survey questions to gauge respondents' website experience and test their attentiveness level

RESULTS



Figure 1. Areas of Interest (AOIs) used for extracting the eye-tracking metrics.

Figure 2. Heat map showing general distribution of gaze points.

- The heat map reveals that the top of the homepage is a point of attraction for respondents.
- Gaze points were concentrated from left to center, meaning that most of the information presented on the right is not seen.
 - AOI 1 and AOI 2 have the longest dwell time and shortest time to first fixation: *attract the visual attention the most*
- The seen order indicates that respondents first notice the information placed in the middle of their screen and in their eye level.
- Relatively higher intensities of negative emotions were observed during the OBC's homepage browsing.

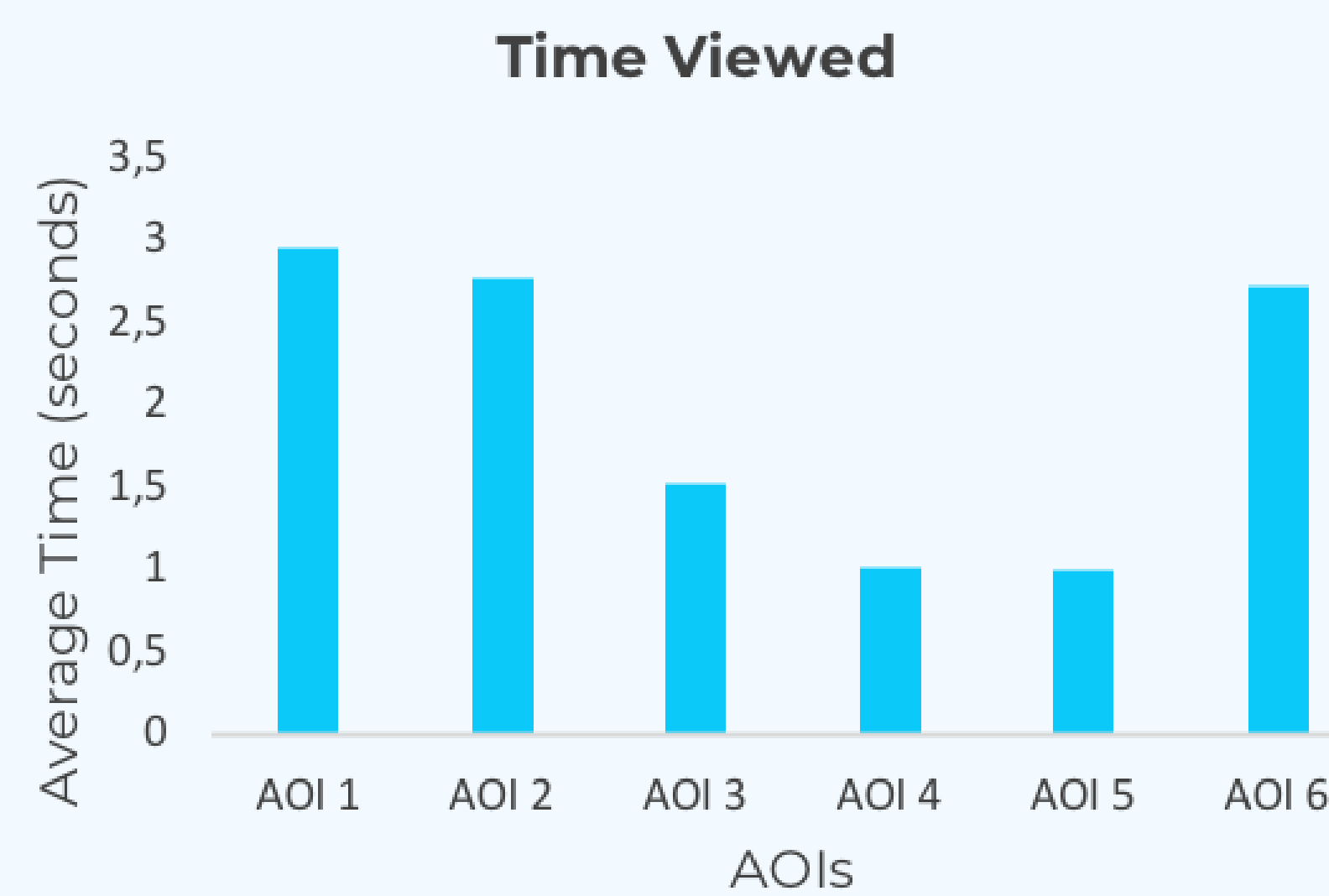


Figure 3. Average time spent looking at the AOI.

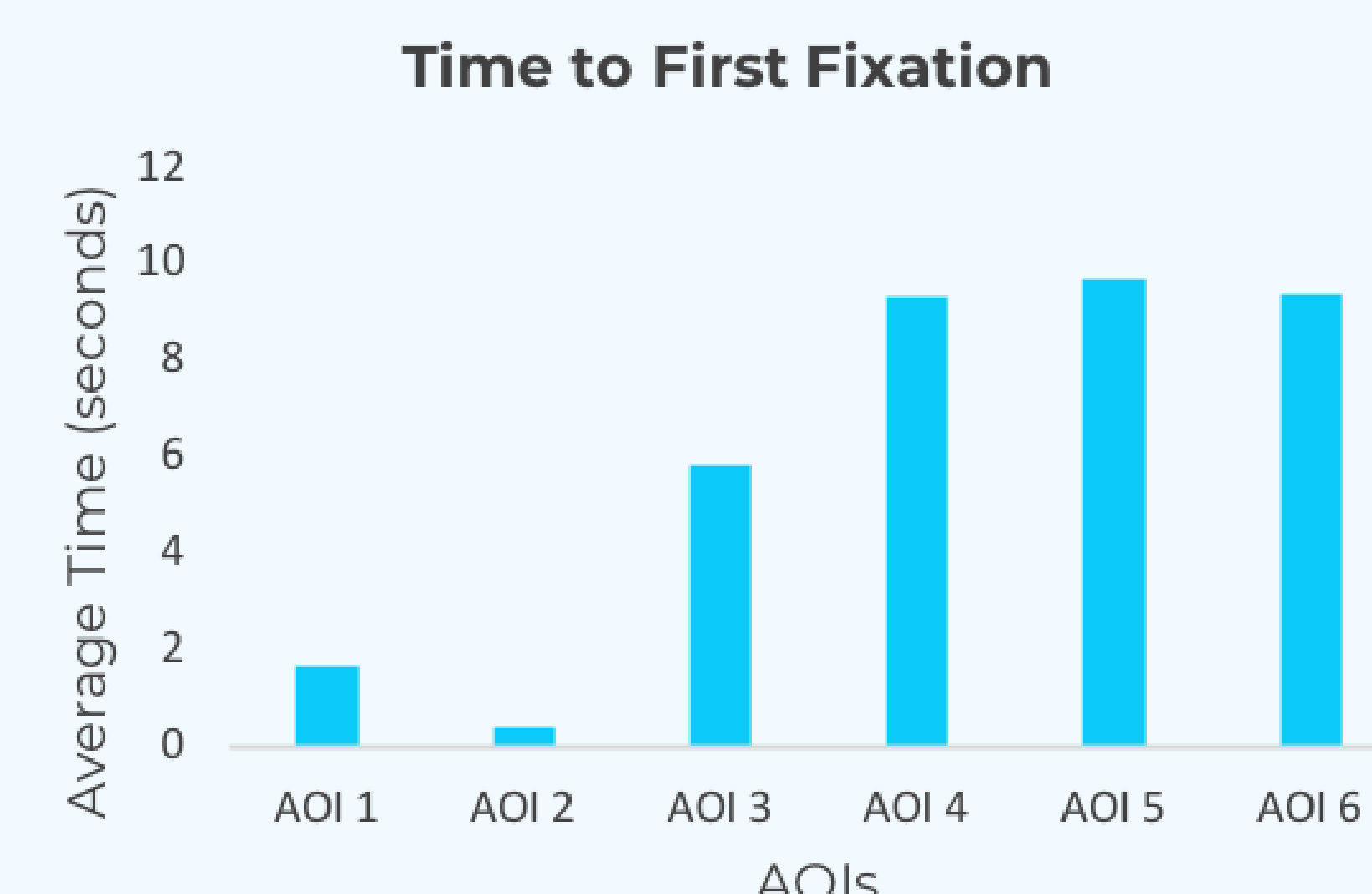


Figure 4. Average time to first fixation per AOI.

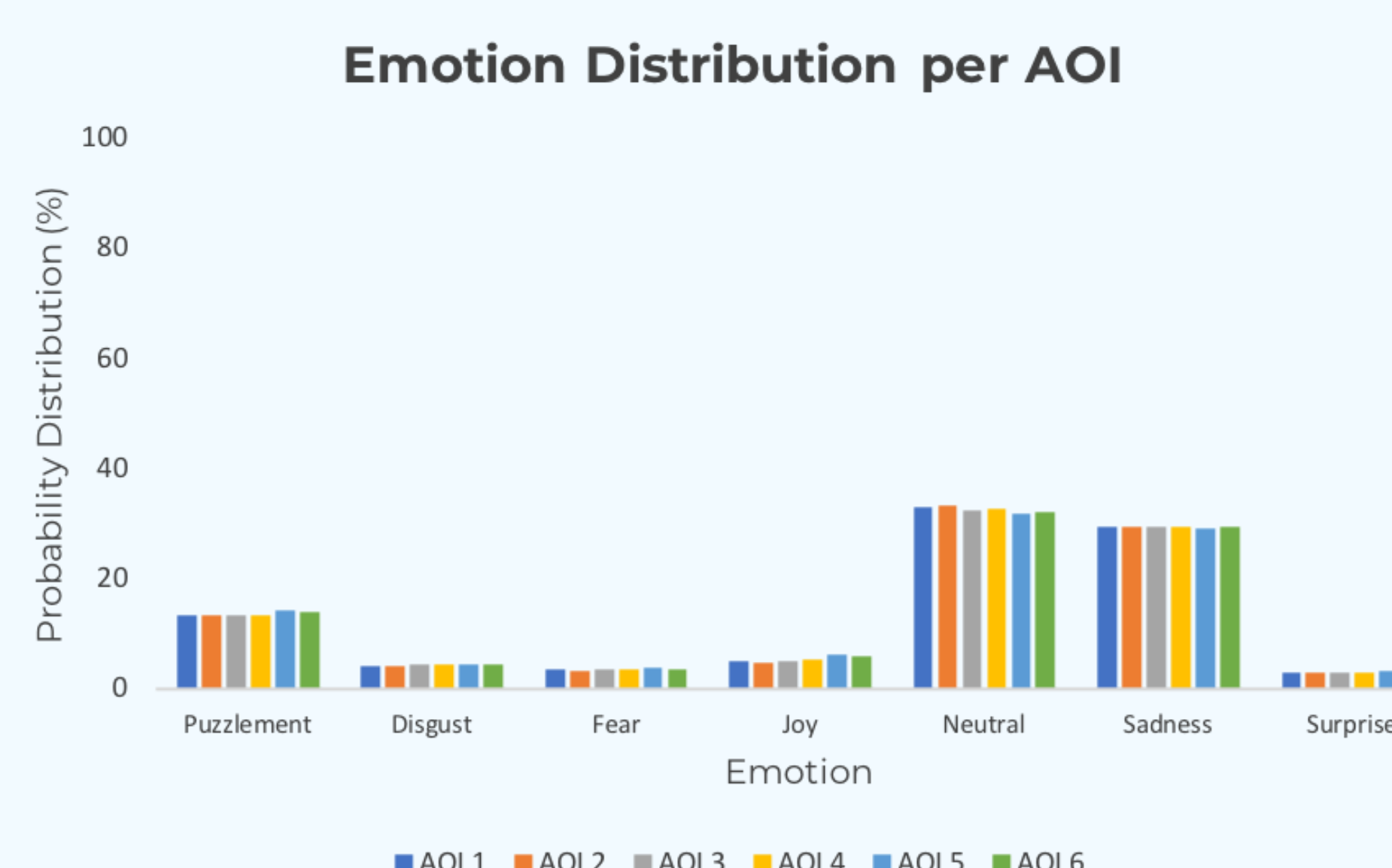


Figure 5. Elicited emotion per AOI.

QUESTION	RESPONDENT RATIO (%)
How often do you visit the website?	
Never	32.6
Very rarely	25.6
Rarely	6.9
Occasionally	25.6
Frequently	6.9
Very frequently	2.3
Why are you visiting this website?	
To learn more about the offered courses	25.5
To get updates on events	21.8
To read interesting news	16.4
To learn about research opportunities	18.2
Other	18.2
How easy was it to navigate this website?	
Very hard	4.5
Somewhat hard	15.9
Neither hard nor easy	34.1
Somewhat easy	25
Very easy	20.5
What would you like to change in this website?	
Nothing	45.7
Design/Colors/Text	42.9
Everything	2.9
I don't know	8.6
What is the name of the recent award that OBC got?	
Student Choice Awards	2.6
Wrong Answer	15.8
I don't know	81.6

Table 1. Survey answers.

CONCLUSION and RECOMMENDATIONS

- Eye-tracking metrics suggest that top parts of the OBC's homepage are noticeable, especially the ones in the eye-level height
 - It is suggested to position all the important information regarding offered courses, events, and research opportunities there
 - In that way, not only visitors' attention will be grabbed but most importantly, the information of their interest will be immediately noticeable and perhaps they will be even motivated to scroll down the page
- Observed sadness, puzzlement, and neutrality regardless of the AOI could be attributed to the color scheme used (overly stimulating), difficulties with reading the material due to inadequate color-text contrast, and a mismatch between the order of presented information on the homepage and respondents reasons for visiting the page
 - Supported with the observed increase in the intensity of positive mood and decrease in the aversiveness in the areas of homepage where images with the muted color scheme were used
 - It is suggested to use neutral colors for backdrops and one or two stimulating bright colors to highlight material of interest (Wenham & Zaphiris, 2003)
 - Even the noticed information, did not get encoded and recalled due to inappropriate text-color contrast on the homepage (Heimlich & Wang, 1999)

Mood during Website Browsing

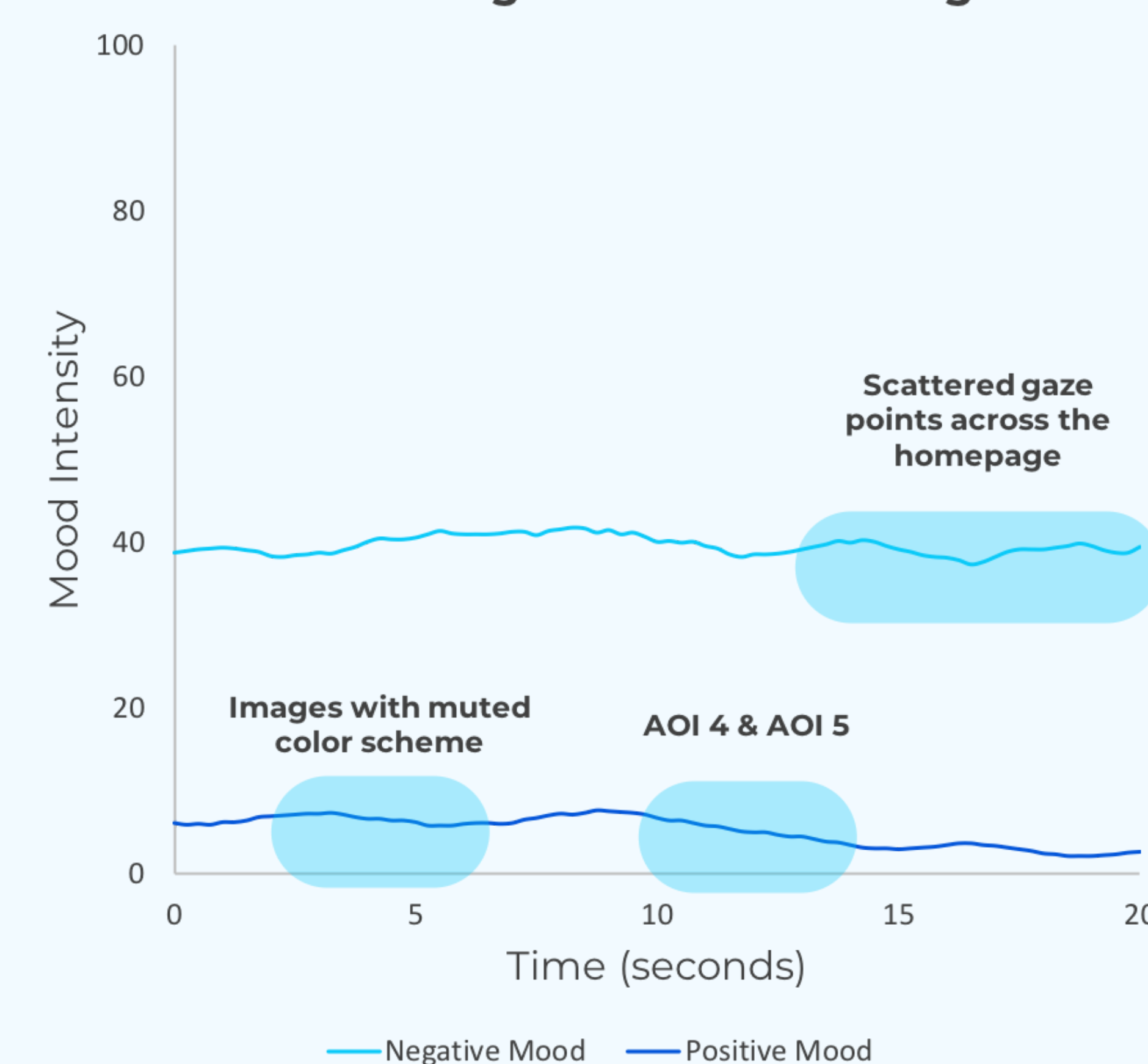


Figure 6. Mood intensity during OBC's homepage browsing.