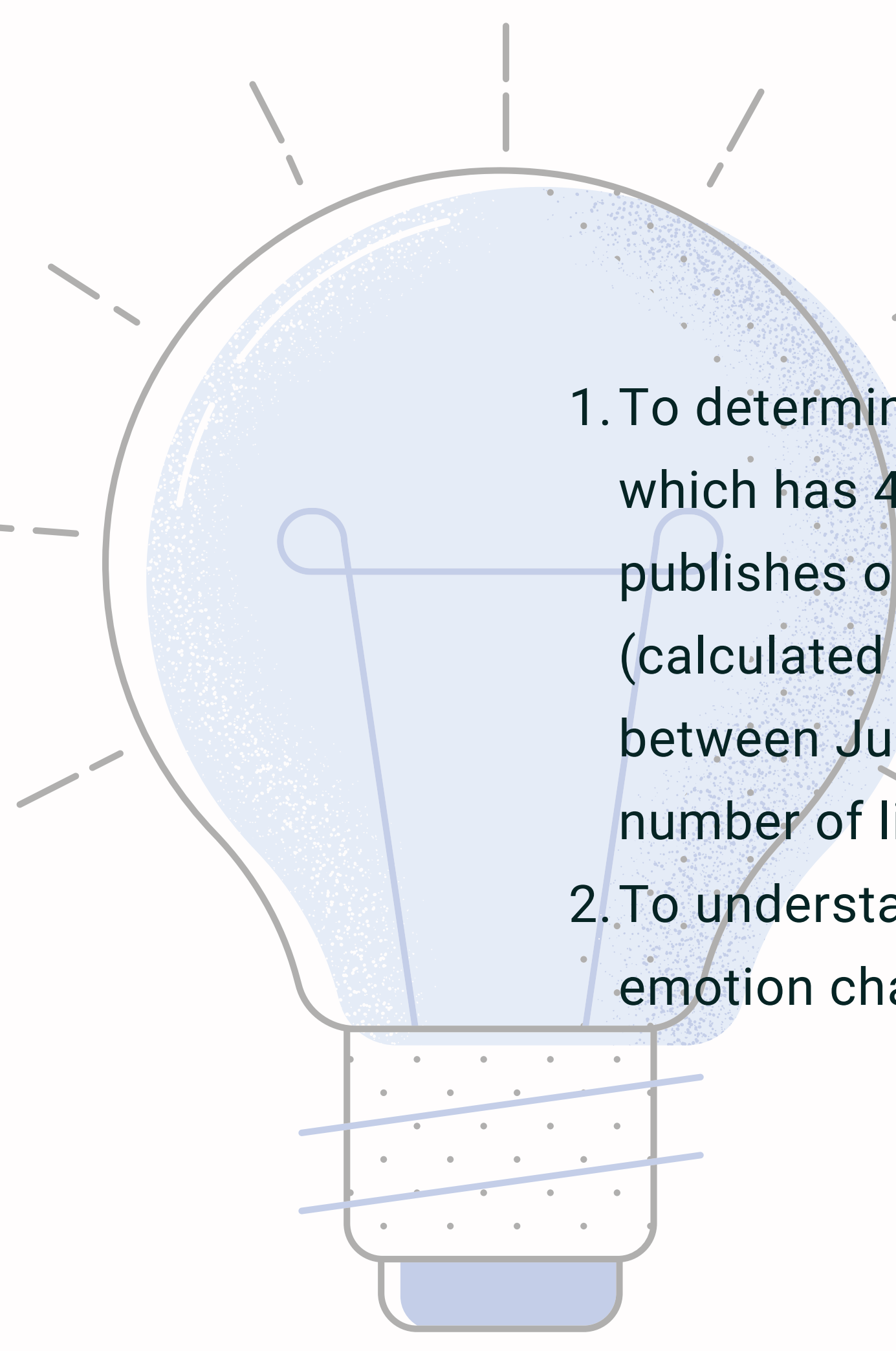


THE EFFECT OF FACEBOOK PAGE ON EMOTION CHANGE AND BEHAVIOURAL ENGAGEMENT:

Neuromarketing Research in Higher Education



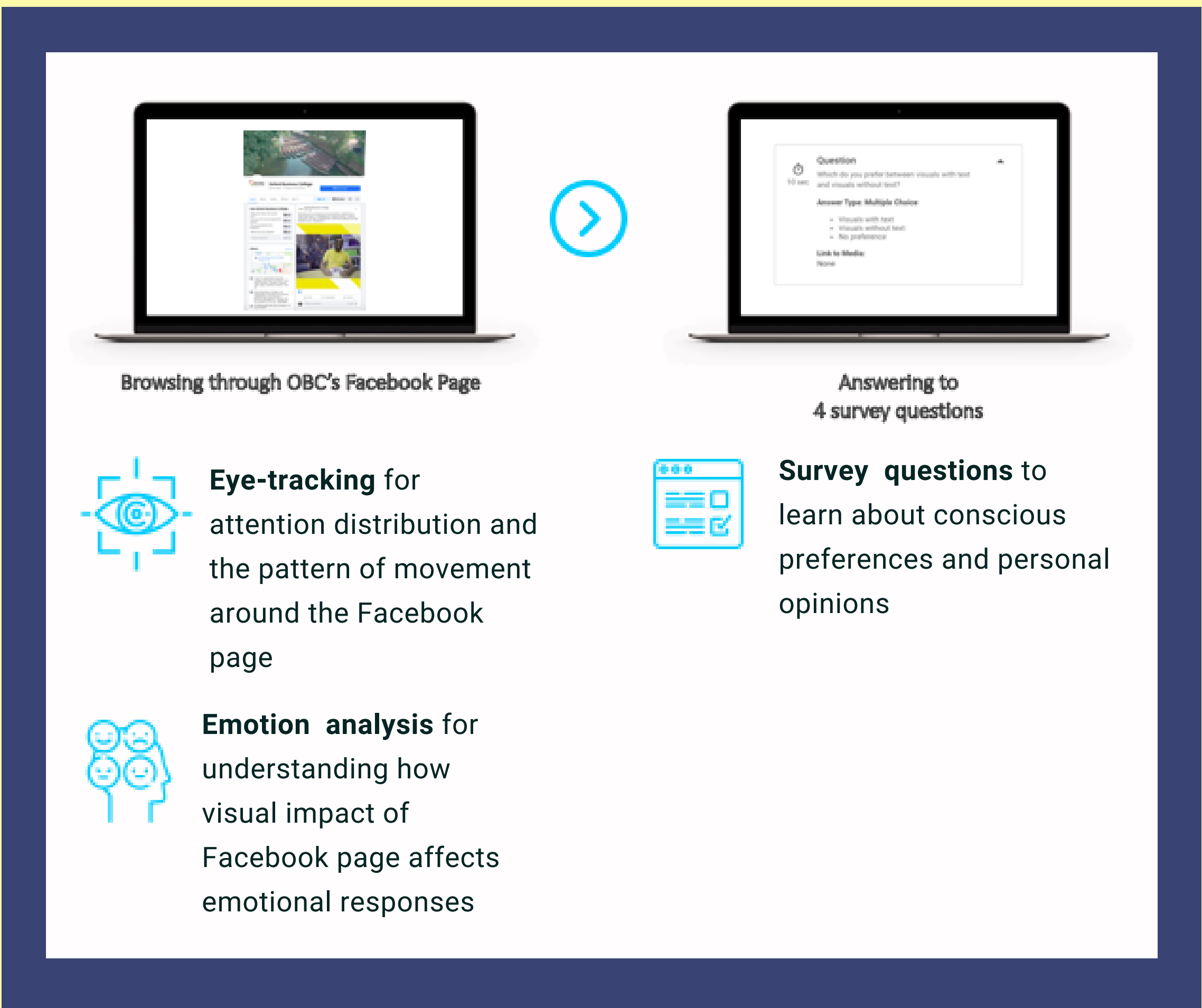


OBJECTIVE

- To determine why Oxford Business College, which has 410 000 Facebook followers and publishes on average 1.6 posts per day (calculated on a sample of 54 posts in the period between July and August 2021), has a very low number of likes per post.
- To understand how Facebook page affects emotion change and behavioural engagement.

METHODOLOGY

- A sample of 90 OBC students, professors, and followers of the official OBC's FB page (both genders, 18-50)
- 5 areas of interest (AOIs) marked on the FB page to test in detail whether the problem is in the length of the texts or in the designed posts that are published on the FB page
Long text, image & logo, Short text & image, Long text & image with text, Image & logo, Short text, image & logo
- Study set up on the last 20 posts which were pre-recorded in the form of scrollable image with the duration of 35 seconds
 - authentically illustrated the original FB platform: subjects could click on / skip / return to posts
- The online platform for advanced quantitative research 'Tobii Sticky' used to measure eye-tracking and facial coding
- A set of 4 questions used to learn about conscious preferences and opinions



RESULTS

Table 1. Obtained neurometrics using eye-tracking device.

	Areas of Interest					Statistics
	LTIL	LTIT	STI	IL	STIL	
Number of Fixations	159.25	128	99.33	85	61	$F(4,36) = 4.442, p = 0.005$ *
TTF (s)	20.34	21.27	21.04	28.60	21.77	$F(4,16) = 0.393, p = 0.811$
Dwell Fixation Time (s)	1.20	1.14	0.75	1.40	0.99	$F(4,16) = 2.113, p = 0.127$
Percentage Fixating	41.18	41.18	41.18	22.93	22.93	$F(4,16) = 0.563, p = 0.693$

Table 2. Survey results.

Survey Question	Percentage
What do you prefer between visuals with text and visuals without text?	
a. Visuals with text	57.9
b. Visuals without text	36.8
c. No preference	5.3
Which do you prefer between visuals with a logo and visuals without a logo?	
a. Visuals with logo	42.1
b. Visuals without logo	31.6
c. No preference	31.6
OBC's FB has well-designed visuals.	
a. Strongly agree	15.8
b. Agree	31.6
c. Cannot decide	42.1
d. Disagree	10.5
e. Strongly disagree	0
When looking through OBC's FB page I mostly felt	
a. Sadness	0
b. Neutral	78.9
c. Joy	10.5
d. Puzzlement	10.5
e. Fear	5.3
f. Surprise	10.5
g. Disgust	0

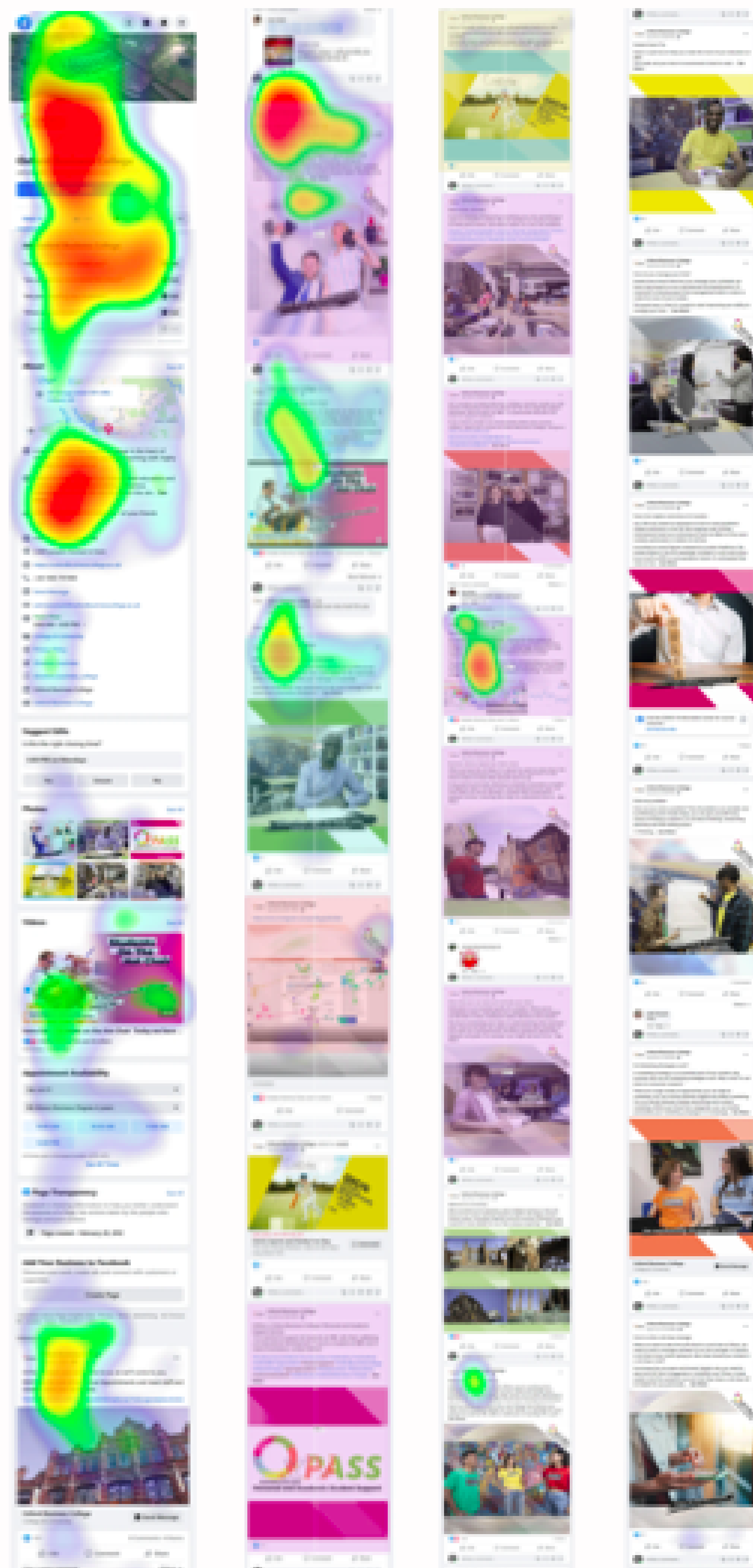


Figure 1. Heat map showing general distribution of gaze points.

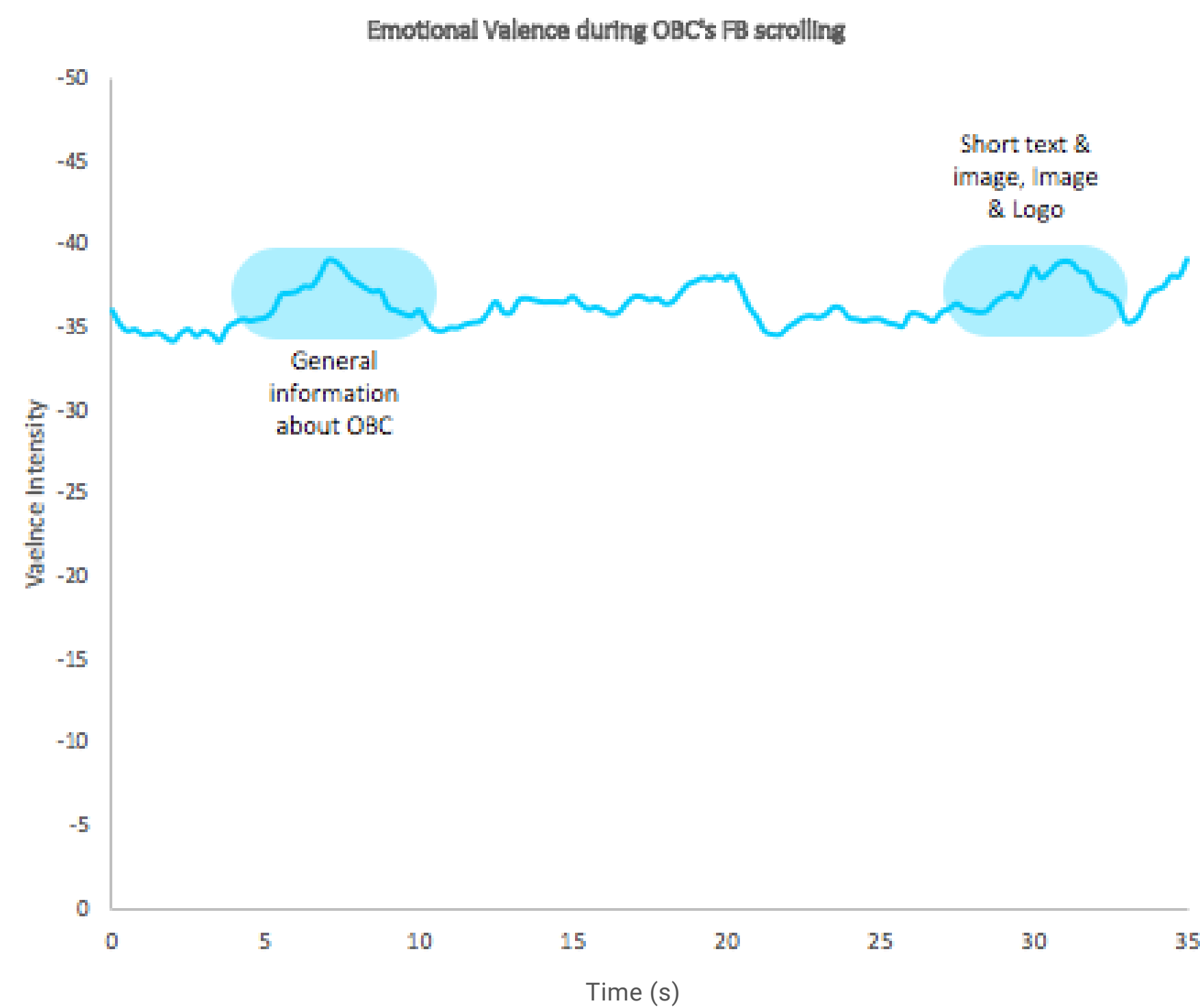


Figure 2. Emotional valence while browsing through OBC's Facebook page.

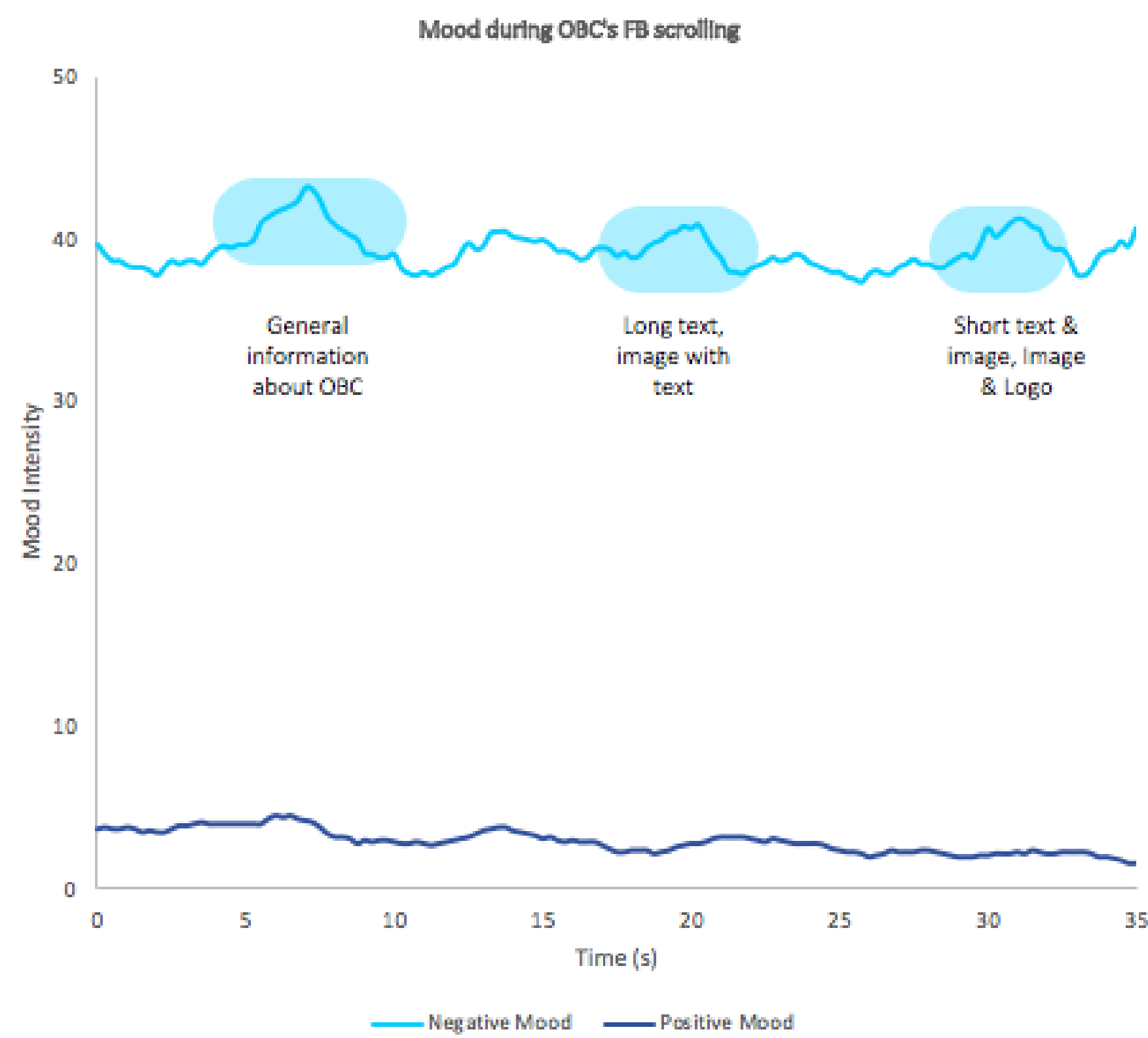


Figure 3. Mood intensity while browsing through OBC's Facebook page.

CONCLUSION & RECOMMENDATIONS

Based on the eye-tracking behavioural neurometrics and emotion analysis, a re-design is desirable as the material presented is not as visually appealing to be effectively catching the attention immediately:

- It takes more than 20 seconds to notice **any** post on the OBC's FB page
- Regardless of the post type, subjects spent on average 1 second looking at the post
- A higher number of fixations within the FB posts containing longer text and image when compared to posts with a shorter text attributed to the fact that naturally, people use more fixations for reading a longer text (Buari and Md-Isa, 2020)
- A relatively small number of subjects who fixated on the post actually saw the content

The discrepancy between survey and eye-tracking results highlights the issues of traditional research methods focused on surveys and group discussions

In-depth emotional analysis showed higher intensity of negative emotion and aversiveness towards the seen material, particularly when looking at the general information about the OBC, FB posts with long text and image as well as FB posts with short text and image and posts with image only.

Detected emotions of sadness, puzzlement, surprise, and fear can be attributed to the discrepancy between the image and text within one post. Namely, in most instances, the images used did not reflect the main message of the text.