

VISUAL ATTENTION TO INFLUENCER MARKETING CONTENT IN DECORATIVE COSMETICS: EVIDENCE FROM AN EYE-TRACKING EXPERIMENT

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ABSTRACT

This study examines how selected elements of influencer marketing content affect consumer attention and perception in the context of decorative cosmetics. Primary data were collected through an eye-tracking experiment and follow-up in-depth interviews with 35 women aged 18 to 34. The experiment used visual and audiovisual stimuli based on social media content and included several A/B comparisons, such as user comments, number of hashtags, product arrangement, product photography style, make-up application, and the use of a well-known person's face. The results suggest that product arrangement and photographic style influenced visual attention, while celebrity presence and make-up application did not lead to statistically significant differences in observation time. Interviews showed that participants generally perceived influencer reviews positively, especially when they appeared authentic, critical, and based on real product use. Most participants also preferred influencers to disclose paid cooperation.

Keywords: influencer marketing; decorative cosmetics; eye-tracking; social media; Instagram; consumer attention; sponsored content

JEL Code: C91, D91, M31

1 INTRODUCTION

In January 2019, Relatable (2019) conducted a survey of 351 marketers from around the world and concluded that 94% of respondents considered influencer marketing to be an effective form of promotion. The survey also indicated that Instagram was the most popular platform for influencer campaigns. According to statistics available at that time, approximately 1 billion users were active



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on Instagram. Interestingly, 68% of Instagram users were women. The platform was particularly popular among teenagers and people aged 18 to 29 (Aslam, 2019). For comparison, according to surveys from the last quarter of 2018, there were nearly 4.2 billion active Internet users worldwide, while 3.4 billion people were active on social networks (Kemp, 2018).

According to Hennessy (2018), Instagram is the platform to which the vast majority of marketing campaigns involving influencers are directed. Aslam (2019) reports that up to 78% of influencers prefer Instagram as a branding platform, and more than half of influencers also use the Stories feature for sponsored campaigns.

The Influencer Marketing Hub study (Conick, 2018) shows that the value of influencer marketing as an industry was USD 1.7 billion in 2016, USD 3 billion in 2017, USD 4.6 billion in 2018, and an estimated USD 6.5 billion in 2019. In a study conducted by CPC Strategy (2018) on a sample of 1,571 Americans aged 13 and older, consumers' perceptions of influencer recommendations were examined. When participants knew that influencers had been paid for cooperation, the largest group of respondents (44%) stated that it was difficult to answer without further information. They usually indicated that it depended on how well they knew and trusted the influencer. At the same time, the study showed that the most common reason why consumers considered influencers' recommendations credible was that the influencers used the products themselves. In contrast, participants reported that the number of followers played a less important role in influencer credibility.

From a global perspective, the cosmetics market has been growing steadily, with 2018 showing the largest increase, namely a 5.5% increase in sales compared with the previous year (Statista, 2019). A study by Allied Market Research (Rajput, 2016) expected this growth trend to continue due to factors such as the growth of global economies, lifestyle changes, increasing demand for sun protection cosmetics related to changing climatic conditions, and a growing preference for natural and organic cosmetics.

1.1 Influencer marketing

Newberry (2019) defines influencer marketing as a form of collaboration between a brand and an individual whose role is to promote a particular product, service, or campaign. In general, anyone with influence can be considered an influencer (Hennessy, 2018). According to Janouch (2014, p. 184), influencer marketing is based on identifying leaders of key communities on social networks. These leaders are typically able to present products and influence the opinions of others.

According to Conick (2018), influencer marketing differs from other forms of online advertising because it is less intrusive, more flexible, and seeks to build consumer trust. It offers an opportunity to reach a new generation of consumers who are accustomed to skipping, ignoring, or actively avoiding online advertising. In their study, Pitz, Köhler and Esch (2018) found that influencer campaigns affect brand perception, with a stronger effect observed for lesser-known brands than for strong brands.

Stokes (2017) examined the success of influencer marketing from a psychological perspective. In this respect, he refers to the mere exposure effect. In simplified terms, Zajonc's (2001) theory suggests that repeated exposure to certain content can increase preference for that content over time. Another relevant phenomenon is conformity, which refers to the adaptation of an individual's behaviour to surrounding groups, sometimes at the expense of suppressing one's own opinion. This tendency has been rooted in human social behaviour since ancient times, when group belonging was important for survival. Today, similar tendencies can be observed in the way users form communities on social networks, follow influencers, and allow their opinions to be influenced, either consciously or subconsciously.

The success of influencers may also be supported by the so-called halo effect, which refers to the formation of an overall opinion about a person based on one dominant impression that overshadows other characteristics. Social media users may therefore be inclined to believe, based on what they see online, that an influencer lives an admirable life and represents an attractive personality.

If a company is looking for a suitable influencer in its field, it is useful to observe several typical characteristics that influencers should possess (Řezníček and Procházka, 2014). Influencers regularly comment on issues and news in their field, have a broad community of people connected to them in some way, are considered influential by others in the field, and are able to influence the opinions of others.

A beauty influencer can be understood as a person known on social networks for expertise in skin care, hair care, or make-up. Such influencers gather audiences that trust their beauty advice and product recommendations. Collaboration between these influencers and brands usually aims to create sponsored content featuring the brand's product and to generate impact on social networks (Mediakix, 2018).

The aim of this paper is to present the results of research focused on the use of influencer marketing in the promotion of cosmetic products. Special emphasis is placed on identifying factors that influence the perception of selected forms of product presentation on social networks. Based on the findings, recommendations are formulated.

2 DATA AND METHODS

A combination of several techniques was used to collect primary data, namely eye-tracking research and in-depth interviews. The eye-tracking research was conducted in March 2019 in the ETLab eye-tracking laboratory at the Faculty of Business and Economics, Mendel University in Brno. SMI Experiment Center and SMI iView X software were used for stimulus presentation and data recording. A remote SMI RED 250 eye-tracker was used for the research, with the recording frequency set to 120 Hz. Individual stimuli were presented to participants on a 22-inch monitor with a 16:10 aspect ratio. Each experiment started with a five-point calibration followed by four-point validation. For calibration purposes, a calibration deviation of up to 0.6 degrees on the X and Y axes was accepted.

A total of 13 stimuli were investigated, of which four were audiovisual and nine were visual. This paper presents the results of six visual stimuli and two audiovisual stimuli. The research was designed in an A/B testing mode, meaning that some stimuli were modified. Participants were divided into two groups: one group was exposed to the original version of a stimulus, while the other group was exposed to its modified version. Before each stimulus, a fixation cross was displayed for 1,000 ms to unify the initial gaze position of all participants. Each stimulus was followed by one or two questions related to the stimulus. The duration of the individual experiment, including the in-depth interview, was approximately 45 minutes.

The design of the experiment was divided into four thematically different blocks in which stimuli of the same or similar character were grouped together. These blocks were: (i) video, (ii) post, (iii) post comparison, and (iv) news feed. Individual stimuli within each block were randomized and displayed in random order. The order of the blocks was always the same.

SMI BeGaze software was used to evaluate the eye-tracking data. Areas of interest (AOIs) were created in this software. Using these AOIs, the metrics needed to verify the assumptions and hypotheses were obtained. The main metrics tracked for each AOI were dwell time, expressed as the

percentage of time spent observing the selected AOI, and the sequence order of the selected AOI in relation to the other AOIs presented in the given stimulus. Detailed statistical data were generated for all stimuli and processed using Statistica 12 software. Student's t-test and the Mann–Whitney U test were used to analyse the data obtained from the eye-tracking experiment.

In-depth interviews followed immediately after each eye-tracking experiment. Their purpose was to identify participants' shopping habits and preferences in the area of decorative cosmetics, their attitudes towards social networks and influencers, and their perception of promotion through influencer marketing. The interviews also referred to selected stimuli displayed during the eye-tracking experiment in order to interpret the eye-tracking results in more detail and to obtain additional information that could not be captured by the eye-tracking device.

The research focused on women aged 18 to 34 years. A total of 35 participants aged 21 to 31 took part in the experiment. Snowball sampling was used. All participants confirmed that they purchased decorative cosmetics, although the frequency of purchase varied among them. Most often, participants stated that they purchased decorative cosmetics approximately once every two months (10 out of 35 participants) or once a month (9 out of 35 participants). When asked which social networks they used, all participants answered Facebook. The second most frequently used network was Instagram, which was mentioned by 32 participants.

3 RESULTS AND DISCUSSION

In the first stimulus, the impact of user comments on the perceived value of the product was examined. An Instagram post showing an Essence lip gloss together with user comments was used. The nature of the comments differed between the two groups. Group A was exposed to a version of the post containing positive or neutral comments about the product, such as "I am looking forward to it". Group B was exposed to a version containing negative comments, for example comments mentioning the unpleasant smell of the product or problems with colour stability.

The aim was to observe whether attention paid to the comments would differ between the two groups and whether the nature of the comments would be reflected in the perceived value of the product, expressed as the price that participants considered acceptable. The eye-tracking results showed that participants in Group A spent 20.4% of the total stimulus display time looking at the comment section. In Group B, the average dwell time on the comment section was higher, reaching 32.7% of the total stimulus display time.

The average acceptable price also differed between the groups. Participants in Group A stated an average price of CZK 133.47, corresponding to EUR 5.13 when using an exchange rate of approximately CZK 26 per EUR. Participants in Group B stated a lower average price of CZK 97.93, corresponding to EUR 3.76. Because the data did not meet the normality assumption, the Mann–Whitney U test was used to test the price difference. The resulting p-value of 0.0695 was higher than the significance level of $\alpha = 0.05$. Therefore, the difference in the values participants were willing to offer was not statistically significant. Although the p-value was close to the rejection region, the assumed effect of negative comments on the perceived value of the product was not statistically confirmed.

Another stimulus used in the experiment was a post depicting Urban Decay Troublemaker mascara. In version A, the post did not contain hashtags. In version B, a total of 34 hashtags were displayed in the post description, for example #czechgirls, #makeupaddict, #slave2beauty, #makeuplook, and #makeupartist. In this case, the aim was to determine whether the presence of a large number of hashtags would influence the perceived value of the promoted product.

Because the input data did not meet the normality assumption required for the parametric test, the Mann–Whitney U test was used. The resulting p-value of 0.036100 was lower than the selected significance level of $\alpha = 0.05$. It can therefore be stated that there was a statistically significant difference in perceived price between stimulus versions A and B. Based on these findings, the use of a high number of hashtags may have a negative effect on the credibility of the post and may consequently influence the perceived value of the presented product.

The third and fourth stimuli focused on attention paid to the person shown in the Instagram news feed. In the third stimulus, the aim was to determine whether there was a difference in observation time between a photograph showing an influencer without applied make-up and a photograph showing a face with applied make-up. Version A presented the face without applied make-up, while version B presented the same type of visual content with applied make-up, as shown in Figure 1.

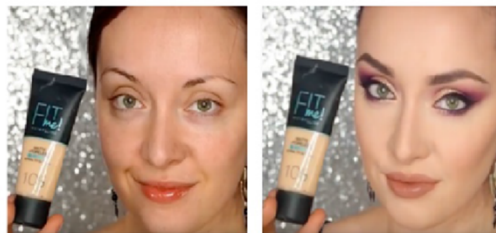


Fig. 1: Attention to face without and with applied makeup

Student's t-test was used to test differences in observation time because the data met the normality assumption, as determined by the Shapiro–Wilk test. The resulting p-value was 0.284658. At the significance level of $\alpha = 0.05$, the results did not show that the use of make-up had a statistically significant effect on the observation time of the influencer's face.

The fourth stimulus was used to determine whether there was a difference in observation time between a photograph depicting an unknown person and a photograph depicting a celebrity. As in the previous stimulus, the Instagram news feed format was used. For Group A, a photograph of an unknown person was used. For Group B, the stimulus was modified so that a photograph of Angelina Jolie was presented together with the product.

In version A, participants spent 7.52% of the total stimulus observation time looking at the face. In version B, the observation time devoted to the celebrity's face was slightly higher, reaching 8.85% of the total observation time. The data were normally distributed, and Student's t-test was therefore used. The resulting p-value of 0.334962 indicated that there was no statistically significant difference between the mean observation times for the two stimulus versions at the significance level of $\alpha = 0.05$. Therefore, it can be stated that, in this Instagram news feed stimulus, the use of a celebrity face did not lead to significantly higher attention compared with the use of an unknown face.

Another set of stimuli was presented as pairs of images, from which participants chose the version that attracted them more. To avoid an order effect, the order of the images was reversed between the groups. For Group A, the first image was presented on the left side, while for Group B the same image was presented on the right side.

The content of these stimuli differed in product arrangement. One photograph showed cosmetic products neatly and systematically arranged, while the other showed products chaotically scattered, as if the influencer had taken them out of a handbag. The examined hypothesis concerned whether

there was a difference in observation time between a photograph depicting organized products and a photograph depicting unorganized products.

Based on the result of the Shapiro–Wilk test, which confirmed data normality, Student's t-test was used. The resulting p-value of 0.002697 indicated a statistically significant difference between the observation times of the two photographs at the significance level of $\alpha = 0.05$. The photograph with systematically arranged cosmetic products accounted for 40.86% of the average dwell time, while the photograph with the disordered arrangement accounted for 48.81% of the total observation time. These results suggest that photographs presenting products in an unorganized way may receive more visual attention than photographs showing products systematically arranged. However, participants' stated preferences differed from their visual attention patterns. A total of 23 out of 35 participants stated that they preferred the organized composition, in which the objects were systematically arranged.

Another pair of stimuli presented the same products in two different photographic styles. The aim was to compare attention to a detailed product photograph with attention to a still-life product photograph. As in the previous case, the analysis tested which image received more attention. Because the data met the normality assumption, Student's t-test was used. The resulting p-value of 0.003683 indicated a statistically significant difference in the mean observation times of the two stimuli at the significance level of $\alpha = 0.05$.

The average dwell time for the detailed product photograph was 41.04% of the total observation time, while the still-life product photograph accounted for 48.38% of the total observation time. It can therefore be stated that still-life product photography received more attention than detailed product photography. In addition, 28 participants stated that they considered the still-life version more attractive than the detailed version. Based on this finding, still-life photography appears to be more suitable for attracting attention than a detailed product photograph in this type of presentation.

Audiovisual presentations were also included in the experiment. These consisted of video presentations by influencers focused on fashion and beauty. The first video used in the experiment was a video tutorial in which the presenter demonstrated the use of three products: Catrice HD Liquid Coverage make-up, NYX HD Concealer corrector, and the NYX Ultimate colour palette. The length of the video tutorial was 63 seconds. The first product, Catrice HD Liquid Coverage make-up, was visible for 6,256.25 ms. The second product, NYX HD Concealer corrector, was visible for 2,377.38 ms. The third product, the NYX Ultimate colour palette, was visible for 1,292.96 ms.

For the purpose of A/B testing, the video presented to Group B was modified by removing the original audio, which contained the presenter's spoken commentary on the products. Music was used instead, and no speech was audible. The video presented to Group A was the original version without any modifications. The results for this stimulus are presented in Table 1.

Tab. 1 Attention to products in video tutorial

Product	version	dwell time [ms]	test	p-value
make-up HD liquid	A	4,005.90	t-test	0.466899
	B	4,251.44		
corrector HD	A	351.80	Mann-Whitney U test	0.105827
	B	544.53		
color palette	A	1,160.00	Mann-Whitney U test	0.228328
	B	1,246.59		

When looking at the mean values, there appeared to be some differences between the version with spoken commentary and the version without spoken commentary. For the first product, the version without spoken commentary had an average dwell time that was 245.54 ms longer. For the second product, the dwell time was 192.79 ms longer in the version without spoken commentary. The smallest difference was observed for the third product, where the average dwell time differed by 86.59 ms.

However, according to the statistical tests, there was no statistically significant difference in dwell time between versions A and B. Thus, the character of the audio background did not have a statistically significant effect on the observation time of the products presented in the tutorial video.

The second video used in the experiment focused on the perception of a male reviewer of decorative cosmetics. This video was not modified for A/B testing. Instead, it was presented in its original version to all participants in order to collect their opinions on this form of presentation of products primarily targeted at women. The protagonist of the video was Jeffree Star, an American YouTuber listed among influential beauty influencers. In the video, the use of Maybelline Age Rewind liquid concealer was demonstrated. The video was 54 seconds long, and the presented product was visible for 11,011 ms. The mean dwell time on the presented product was 3,643.14 ms.

During the interview that followed the video presentation, participants were asked how they perceived this type of product presentation. In total, 13 out of 35 participants stated that male reviewers of decorative cosmetics did not fit this product category, seemed unusual to them, or bothered them. Six participants expressed a neutral attitude. However, the largest group of participants, 16 out of 35, reacted positively to this type of presentation. Seven participants mentioned, based on their own experience, that male reviewers can often demonstrate make-up application better than some female reviewers.

In general, 31 out of 35 participants perceived reviews by decorative cosmetics influencers positively. These participants considered such product presentations to be a useful source of inspiration. Participants usually did not base their purchase decisions on only one review, but tried to collect more information or compare multiple reviews. During the interviews, participants also mentioned that when a reviewer is critical and attempts to be objective, it increases the credibility of the influencer. Participants also appreciated reviews that demonstrate products in real-life situations.

Four participants perceived influencer reviews negatively. They mentioned that there were too many such presentations and that they considered them a waste of time. Almost two-thirds of participants, namely 23 out of 35, stated that they had been consciously influenced by influencers when purchasing decorative cosmetics. Half of the participants, 17 out of 35, stated that they had purchased a decorative cosmetics product directly based on an influencer's recommendation.

According to the interviews, 31 out of 35 participants preferred influencers to disclose paid cooperation in their social media posts. Three participants stated that they did not care about this information, and one participant stated that influencers had the right not to disclose paid partnership in the post.

4 CONCLUSION

The eye-tracking research showed that, in visually oriented social media environments such as Instagram, consumers pay attention not only to visual content but also to accompanying text. The findings suggest that consumers may, in some cases, pay considerable attention to textual elements of a post. This implies that influencers should focus not only on the photograph or video itself, but also on the quality, originality, and credibility of the accompanying description.

The use of an excessive number of hashtags appeared to be inappropriate in the context of the examined stimuli. Based on the findings, it is recommended to use only a limited number of hashtags that are relevant to the post and its content. Although textual elements received a considerable degree of attention, the eye-tracking results also showed that participants usually looked at the photograph first. Therefore, if the visual aspect of the post does not attract consumers' attention immediately, there is a risk that they may skip the post without reading the accompanying text.

The eye-tracking results further showed that products may receive more attention when they are presented in a loosely scattered or unorganized arrangement. However, many participants stated that they preferred images in which products were systematically arranged. This suggests that visual attention and stated preference do not necessarily correspond. Similarly, still-life product photography received more attention than detailed product photography and was also evaluated as more attractive by most participants.

The results also showed that the use of a famous person's face did not lead to significantly higher visual attention than the use of an unknown person's face. Likewise, a face without applied make-up did not attract significantly more attention than a face with applied make-up. In the case of audiovisual stimuli, the presence or absence of spoken commentary did not have a statistically significant effect on the observation time of the presented products.

The follow-up interviews showed that most participants perceived influencer reviews of decorative cosmetics positively and considered them a useful source of inspiration. Participants appreciated reviews that appeared authentic, critical, objective, and based on real product use. A substantial proportion of participants also stated that they had been influenced by influencers when purchasing decorative cosmetics. Finally, the interviews indicated that most participants preferred influencers to disclose paid cooperation in their social media posts.

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