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Augmented Reality in Instagram Story Filter for Increasing Awareness through Learning Interactivity and Enjoyment

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ABSTRACT

The learning process is essential for education. Interactivity and enjoyment in the learning process are crucial elements that can improve awareness. The use of technology in the learning process is overgrowing, one of which is Augmented Reality (AR). This study investigates how AR as a filter in Instagram stories can affect user awareness and attitudes in the learning process. It explores user experience and examines its effect on interaction and enjoyment in social media related to the learning process. Furthermore, quantitative methods using frequencies and correlation data analysis were used to measure user perceptions about increasing the awareness of using AR filters on interactivity and enjoyment of social media. The result of this experiment is AR as an effective tool in Instagram stories as a media platform to increase awareness in the learning process with experiential methods of interactivity and enjoyment.

Keywords: Education, User interactive, Enjoyment learning, Augmented reality, Digital media design.

1. INTRODUCTION

As technology advances, augmented reality (AR) is being applied in various fields such as business, education, and hospitality [1]. The growth of augmented reality did not escape from the academic and digital industry. The use of augmented reality in the learning process becomes famous because it has many advantages as a part of entertainment for the consumer experience. These features of augmented reality become people's virtual experience that can raise their excitement. Many well-known brands, such as Coca-Cola and McDonald's, already use AR as part of their marketing to educate their market [2]. Other big companies using AR as their part of marketing are Sephora and L'Oréal, which introduce an AR mirror to make the customer experience virtual facial makeup [3]. IKEA uses Mobile Augmented Reality (MAR) in their catalogue to see the product placed in their home [4]. This experience makes a significant difference rather than guess how the product could match with other furniture or things they already have.

What is interesting about the advertising using AR is now they put it on social media. As we know, no AR in social media with learning process topics. Since social media users increase rapidly, in two decades, many brands using this media to introducing their products [5]. Most people waste their time playing on social media. The reason was social media gives so much news faster than any other media. Social media spread quickly and can be seen by so many people, wide range age and large area. This can be beneficial for the learning process. One of the popular platforms for education is Instagram. Instagram has a significant influence in the marketing field since it had a 74% competitive advantage [6].

1.1. Augmented Reality as Instagram Story Filters

Instagram is one of the media platforms that has become huge [7]. Before the story feature was added in August 2016, Instagram only focused on sharing photo and video platforms. The newly added feature was inspired by the success of Snapchat. After Instagram acquired Snapchat, the other sharing media platform

start to include the story as their feature. In Instagram Story, some filters are applied by users before sharing their posts. Filters not only just added something to enhance the photo or video colors. When applied to the post, the filters can have meaning, like monotone colors to emphasize the severe or gloomy mood [8]. Some of the filters in Instagram Story adapted AR technology to make it more exciting and valuable for the learning process.

Many people like using the story feature to share their moment because it's more personal and the post lasts only 24 hours for other people to access [8]. AR has the ability that can show the virtual object become one of the user's environments [3]. This makes AR an interactive technology supported with the device that enables AR ability such superimposition. The user can placed text, images, or video in their viewing to blend with their environments through the device [9]. AR aims at simplifying by bringing virtual information not only immediate surroundings but also to any indirect view of the real-world environment. It enhances the perception of and interaction with the user's actual environment [10]. With this realization, the academics understood that this is a great chance to use it as a digital media design strategy in education.

1.2. Interactivity and Enjoyment

One of the essential features of advanced technology is enabling users to interact and enjoy the content easily. Interactivity needs user motivation and participation. Interactivity has two roles in operationalizing AR effectiveness. First, technological outcome, and second is as user perception [3]. Functional mechanism of AR, The most relevant media characteristics of augmented reality are the following: interactivity, virtuality, specificity of location, mobility, and augmentation [9]. Interactivity also remains a concept for assessing digital and virtual media. With interactivity, users can interact to the extensive influence of each other [9].

Enjoyment is an intrinsic motivation variable when they use some information system [11]. It has a pleasure response of the person when they do or use something [12]. Enjoyment has a vital role in increasing the interactivity in using Instagram Story. The enjoyable feeling that the user gets when playing with the system tends to make them keep using it [11].

1.3. Awareness of Social Media

Awareness refers to the consumers that can recall or recognize a thing [13]. Social media are used as a marketing tool to create "relationships" [14]. Awareness plays an essential role in consumer decisions [15]. It results from consumers' exposure to products or services and the strength of presence in their minds [16]. The impact of awareness with decision-making is

connected with the individual recognition, knowledge dominance, and recall of the products or services [17]. Familiarity with the product or services can increase awareness [18].

One of the cheaper ways to increase and spread awareness is using social media [19]. Digital marketing through a digital system such as the internet can connect the consumer and company globally [4]. With this strategy, the opportunity to enhance awareness becomes high. Interaction and enjoyment in social media can spread the product or services more easily since social media already become part of people's daily lives.

This research attempts to find how effective the use of AR in Instagram story as filters for the learning process is to increase awareness through interactivity and enjoyment. The filters in Instagram stories act as tools. When the users use the filters and share it in their story, they contributed to spreading the ad whether they realized it.

2. METHODS

In this study, a survey questionnaire is used to predict the interactivity, enjoyment, and awareness of AR in story filter Instagram users related to the learning process [20]. The target participants of this study are Indonesians in young-adult groups with age range 20-35 years old with 39 participants. An invitation consist of a Google form was sent randomly to people that suit the group. The data used for the analysis is in the form of primary data obtained directly from the subject using a questionnaire and a picture of the sample learning topic (Fig.1 and Fig.2). Data analysis using frequency distribution tables and using correlation analysis with significant differences in 0.05.

Figure 1 The example of using AR in Instagram filter for education (architecture topic).

Figure 2 The example of using AR in Instagram filter for education (agriculture topic).

3. RESULTS

3.1. Participant Responses

For interactivity, 10 people (25.6%) have low interactivity towards an Instagram story, and 29 people (74,4%) have high interactivity towards the Instagram story filter with augmented reality (Table 1). The enjoyment result has 11 people (28.2%) has low enjoyment, and 28 people (71.8%) has high enjoyment towards Instagram story filter with AR (Table 2). Furthermore, from 39 participants, there are 10 people (25,6%) who have low awareness, and 29 people (74,4%) have a high awareness for brands in Instagram story filter with augmented reality (Table 3).

Table 1. Interactivity towards AR in Instagram story

Interactivity			
Parameter	Frequency	Percent	Valid Percent
Low	10	25.6	25.6
High	29	74.4	74.4
Total	39	100.0	100.0

Table 2. Enjoyment towards AR in Instagram story

Enjoyment			
Parameter	Frequency	Percent	Valid Percent
Low	11	28.2	28.2
High	28	71.8	71.8
Total	39	100.0	100.0

Table 3. Brand awareness towards AR in Instagram story

Brand Awareness			
Parameter	Frequency	Percent	Valid Percent
Low	10	25.6	25.6
High	29	74.4	74.4
Total	39	100.0	100.0

3.2. Correlation between Interactivity and Enjoyment to Brand Awareness

Table 4. Correlation between interactivity and awareness towards AR in Instagram story

	Interactivity			*p*-value
Awareness	Parameter	Low	High	Total	
	Low	6	4	10	
	High	4	25	29	0.014
	Total	10	29	39	

Judging from the *p*-value < 0.014, thus the probability smaller than 0.05 $(0.001 < 0.05)$, the result shows a correlation between interactivity and brand awareness (Table 4).

Table 5. Correlation between enjoyment and brand awareness towards AR in Instagram story

	Enjoyment			*p*-value
Awareness	Parameter	Low	High	Total	
	Low	6	4	10	
	High	5	24	29	0.029
	Total	11	28	39	

Judging from the *p*-value < 0.014, thus the probability smaller than 0.05 $(0.001 < 0.05)$, the result shows a correlation between interactivity and brand awareness (Table 5).

4. DISCUSSION

4.1. Participants Characteristic

Participants for this survey consisted of 39 people with the age range 20-35 years old. This age range can be categorized as young adulthood. The participant also categorized as Millennials since they born within 1980-2000 [21]. The reason for choosing this group age for participate in this study because the range age is in higher education and related with learning process. And since they are still in the early stage of adulthood and

being a millennial, they are more familiar with the current technology have many advantage with it [22].

4.2. The Participant with Interactivity and Enjoyment in the Learning Process using AR Instagram Story

The result shows that the participant with high interactivity in the Instagram story with augmented reality filter is 29 people from 39 people. This can be a good result since the number of people who feel the interactivity in Instagram story is more than half since interactivity is really needed when using social media and specific technology such as the internet. The enjoyment result from this data turned out to be a good result with 28 people feels enjoy when they use Instagram story filter, especially when using augmented reality to learning some topic. This result shows that people can feel the interactivity from the Instagram story and enjoy using the apps, especially on the learning process through AR filter.

4.3. Interact and Enjoy to Increase the Awareness of the Learning Process using AR in Instagram Story

The result shows that both interactivity and enjoyment have an impact on increasing awareness. Both interactivity and enjoyment affect the people to recognize the learning process, especially when the ad using augmented reality. The interactivity can improve people's curiosity to quickly notice the concept of the learning process and lead to increased awareness. The enjoyment can also lead to awareness since the people would like to use the filter again and again so they can spread it to their followers or see it from the other post.

5. CONCLUSION

This research sought how the filter with augmented reality in the Instagram story can affect the awareness of the learning process through interactivity and enjoyment. Consumer interaction with the education in social media improves their connection to the learning material, increasing their awareness of the learning process. This becomes a kind of communication in digital marketing and affects the consumer. Instagram story filter with augmented reality can be one of the new marketing tools to increase awareness, especially in education. The approach from the interactivity and enjoyment from using Instagram story filter with augmented reality has a positive result with the awareness. This can be related to the consumer's curiosity and enjoy feeling when they are using it. Moreover, future studies may include more variables and any specific digital media tools issue that can affect consumer awareness.

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