


Chapter in Book

Augment Your Marketing Efforts: The Design of Augmented Reality Experience Ads for SME Brand

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Abstract: *The implementation of augmented reality (AR) in advertising opens up opportunities to boost the efficiency of the advertisements and stimulates a positive reaction from the targeted audience. Past researchers have found that engaging Generation Z (Gen Z) in ads is far more challenging than Generation Y. It is a crucial issue that needs to be highlighted as the spending power of Gen Z has expanded and become the target market for every brand. Furthermore, implementing AR advertising in Malaysia is still vague and warrants further research. Thus, the researchers investigate the user experience (UX) and the acceptance of augmented forms of advertisement among Gen Z. The experiment was conducted in a studio that was participated by the gen Z cohort of university students. The key variables of UX are learnability, effectiveness, memorable, erroneous, satisfaction, and open-ended questions on experience. As a result, a positive reaction among the respondent to the AR advertisement due to ease of use, more information provided in AR content, and exciting ways to attract the audience. The findings have meaningful implications for how the industry can adopt AR as a fascinating effort to attract the audience.*

Keywords: Augmented reality; Generation Z; Usability; Acceptance.



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1. INTRODUCTION

Augmented reality has the potential to facilitate product evaluation by allowing customers to virtually test things before purchasing (Tan, Chandukala, & Redd, 2022). Prior research has underlined the relevance of direct product encounters in helping customers learn about product benefits and determine product suitability (Bell, Gallino, and Moreno 2018). The introduction of augmented reality enables consumers to visually experience things without tangible products, thereby controlling their expectations and fostering buying confidence (Porter and Heppelmann, 2017). The study investigates

the user experience and acceptance of AR advertisements among the Gen Z audience using the local SME brand.

2. METHOD & MATERIAL

The design and development of augmented reality advertisements via sketching, pre-production, and production/digital processes (figure 1). There are three stimuli of AR ads created and tested in the experiment. The experiment design used a within-subject in which the same participant will experience three different conditions. The researchers have collaborated with the local SME brand of Daflab Skincare with mutual agreement and approval to use the brand as a case study since Gen Z's most preferred product category for online purchasing is health and beauty products (Nielsen, 2019). A local brand is chosen since it is relatively new to the market to avoid bias. Based on Aristotle's (1984) ethos, pathos, and logos principles, three types of advertisements were designed and implemented as augmented reality (AR) markers. Aristotle (1984) defines persuasion as the use of personal influence (ethos), emotional appeals (pathos), and logical reasoning (logos) (Aristotle, 1984). The stimuli rename as A.1 logos, A.2 pathos, and A.3 ethos (figure 2).



Figure 1. Process of Design and Development

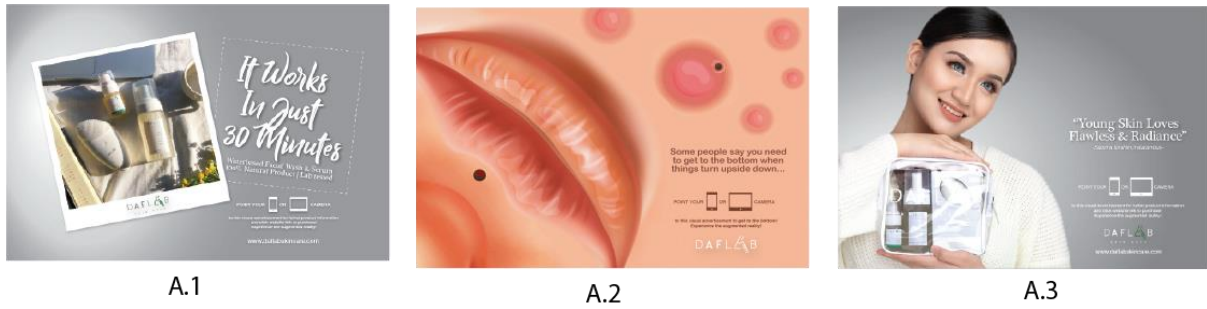


Figure 2. Augmented reality markers

3. FINDINGS

The results were based on the following variables to address the research question: (1) what are the expectations of experiencing an augmented reality advertisement among Gen Z? (2) how does Gen Z respond to augmented reality advertisements? Participants of Generation Z discussed and reflected on their experiences with the advertisement's augmented reality integration. The beta testing of the AR prototype was conducted and analyzed (figure 3).

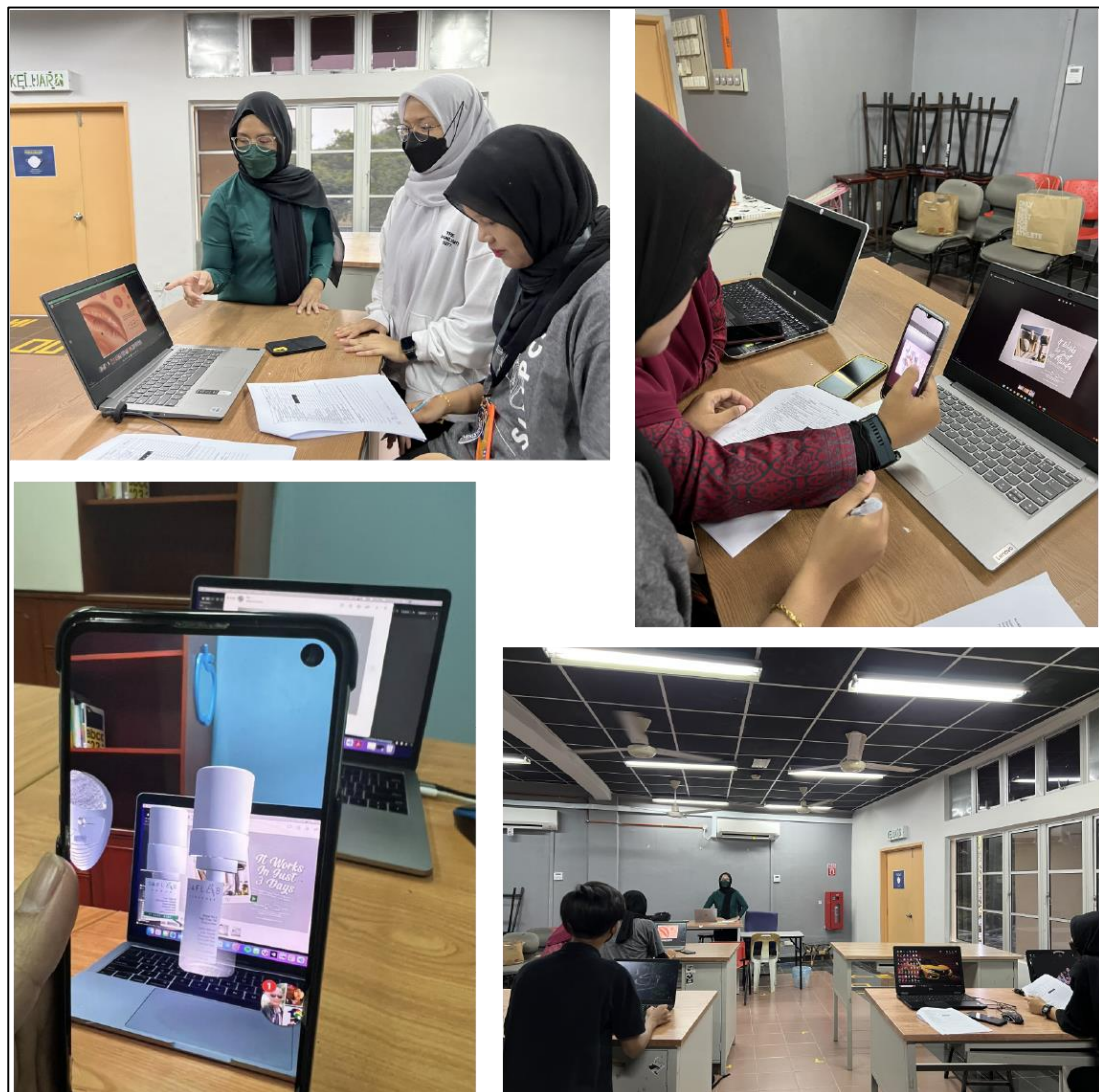


Figure 3. Beta testing of Augmented Reality Ads

3.1 Learnability

As respondents explored the second and third conditions, the duration of time they spent interacting with augmented reality decreased. This indicates that as more individuals engage with augmented reality ads, less time is required to operate the AR feature ads (Table 1)

Table 1. Duration time to learn and use the AR.

Respondent	A.1	A.2	A.3
N1	5 minutes	1 minute	1 minute
N2	12 minutes	3 minutes	2 minutes
N3	5 minutes	2 minutes	0.5 minutes
N4	6 minutes	2 minutes	1 minute
N5	4 minutes	2 minutes	1 minute
N6	7 minutes	2 minutes	0.5 minutes
N7	6 minutes	2 minutes	0.5 minutes
N8	5 minutes	1 minute	0.5 minutes
N9	6 minutes	2 minutes	0.5 minutes

3.2 Effectiveness

The majority of respondents did not make errors or made errors less frequently while using the AR feature advertisement, indicating that the majority of respondents found the AR advertisement feature easy to use (Table 2).

Table 2. frequency of making errors

Respondent	A.1	A.2	A.3
N1	0	0	0
N2	3	1	1
N3	0	0	0
N4	0	0	0
N5	1	0	1
N6	3	1	0
N7	0	0	0
N8	0	0	0
N9	0	0	0

3.3 Satisfaction & Memorability

The items were analyzed using the interrater reliability test to show the mutual agreement items (table 3). The result shown as below(table 4)

Table 3. Items for UX

Items	Criteria/Question
	Screen
7	A. Alphabet Character
8	A. AR marker & Content Layout
9	A. Ads message position
10	A. Ads subject matter position
11	A. Button Design
12	A. Sound Clarity
13	A. Ads Content Clarity
14	A. Interactivity
	Terminology

15	A.Language Comprehension
16	A.UI easy to use
17	A.UI easy to control
18	B. Easily to memorize the step to use the AR feature
19	B. AR feature helps you to memorize the content of the ads
20	B. Information in AR advertisements is easy to memorize

A: Satisfaction

B: Memorability

Table 4. Respondents Agreement

Items	A.1			A.2			A.3		
	Ne	I-CVI	K Interpretation	Ne	I-CVI	K Interpretation	Ne	I-CVI	K Interpretation
7	6	0.67	Good Agreement Beyond chance	9	1	Excellent Agreement	8	0.89	Excellent Agreement
8	8	0.89	Excellent Agreement	8	0.89	Excellent Agreement	7	0.78	Excellent Agreement
9	6	0.67	Good Agreement Beyond chance	8	0.89	Excellent Agreement	9	1	Excellent Agreement
10	9	1	Excellent Agreement	7	0.78	Excellent Agreement	9	1	Excellent Agreement
11	6	0.67	Good Agreement Beyond chance	NIL	NIL	NIL	NIL	NIL	NIL
12	7	0.78	Excellent Agreement	7	0.78	Excellent Agreement	6	0.67	Good Agreement Beyond chance
13	8	0.89	Excellent Agreement	8	0.89	Good Agreement Beyond chance	8	0.89	Excellent Agreement
14	5	0.56	Good Agreement Beyond chance	6	0.67	Excellent Agreement	8	0.89	Excellent Agreement
15	7	0.78	Excellent Agreement	7	0.78	Excellent Agreement	7	0.78	Excellent Agreement
16	9	1	Excellent Agreement	8	0.89	Good Agreement Beyond chance	9	1	Excellent Agreement
17	7	0.78	Excellent Agreement	6	0.67	Excellent Agreement	8	0.89	Excellent Agreement
18	9	1	Excellent Agreement	7	0.78	Excellent Agreement	8	0.89	Excellent Agreement
19	9	1	Excellent Agreement	9	1	Excellent Agreement	8	0.89	Excellent Agreement

20	8	0.89	Excellent Agreement	9	1	Excellent Agreement	9	1	Excellent Agreement
	S-CVI/Ave	0.83		S-CVI/Ave	0.85		S-CVI/Ave	0.89	

Cohen (1960) suggested the Kappa result be interpreted as follows: values ≤ 0 as indicating no agreement and 0.01–0.20 as none to slight, 0.21–0.40 as fair, 0.41– 0.60 as moderate, 0.61–0.80 as substantial, and 0.81–1.00 as almost perfect agreement. The acceptable standard for S-CVI are recommended minimum of 0.81. Thus, the overall items of A.1=0.83, A.2=0.85, A.3=0.89 are acceptable.

3.4 Acceptance

A positive reaction among the respondent to the AR advertisement due to ease of use, more information provided in AR content, and exciting ways to attract the audience. The respondent also suggests adding more features in the layout, such as ‘go to web’ and attractive design buttons. The majority of the respondents felt satisfied and agreed on AR integration in the advertisement.

4. DISCUSSION

Augmented reality integration in an advertisement can entice and attract the audience to the product due to the feature allowing the user to see the interactive content that overlay in the reality world. Even though they were given three AR markers, the researcher found that the respondents were eager to use the feature ads and finish all the tasks. Thus, AR usage among gen Z meets the researcher’s expectation that it provides alternative marketing strategy to attract the youth segmentation from the gen Z cohort.

5. CONCLUSION

Integration of augmented reality feature in the advertisement for SME brands in Malaysia is one of the exciting ways to promote the product and avoid advertisement waste. Recently, there have been many new features in AR that can be used for marketing purposes. However, there are limitations to this study that need to further study in terms of sampling, improvisation of prototype, and variation of markers that can be tested.

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References

Aristotle (1984). “Rhetoric”, Barnes, J. (Ed), The Complete Works, Princeton University Press, Princeton,NJ, pp. 2152-2269.

Bell, D. R., Gallino, S., & Moreno, A. (2018). Offline showrooms in omnichannel retail: Demand and operational benefits. *Management Science*, 64(4), 1629-1651.

Nielsen. (2019). Understanding Malaysia’s Gen Z... And How To Reach Them. <https://www.nielsen.com/insights/2019/understanding-malysias-gen-z/>

Tan, Y. C., Chandukala, S. R., & Reddy, S. K. (2022). Augmented reality in retail and its impact on sales. *Journal of Marketing*, 86(1), 48-66.

Porter, M. E., & Heppelmann, J. E. (2017). Why every organization needs an augmented reality strategy. *HBR'S 10 MUST*, 85.