# THE ONLINE SHOPPING EXPERIENCE USING SENSES THROUGH AI

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## INTRODUCTION

Artificial intelligence (AI) has revolutionized all industries and made the business world more competitive and brutal. Wherein consumers' demands grow more and more, with their increasing use of online shopping they look towards a more enhanced experience online. Especially with the Metaverse in the works hence this study is made to explore sensory enabling technology specifically Augmented Reality (AR) to provide consumers with a more immersive online shopping experience. This was scarcely explored, revealed after reviewing previous literature. This paper proposes a new well-rounded model to test the acceptance of consumers toward multi-sensory AR. The main of this study is to identify the effect of SETs specifically AR on consumers' online shopping experience in emerging markets.

## LITERATURE REVIEW

The success of online apparel retailing nowadays is very hard as businesses need to differentiate themselves and enhance the shopping experience to make it more immersive for consumers in the online context. As consumers' demands have climbed higher and higher that it has become very difficult to actually make the purchase online as it is perceived as riskier as they do not physically examine the product hence the lack of sensory information such as touch is disadvantageous. This can be partially solved through the employment of SETs which simulates the functionality and appearance of a product thus providing more product information the contrary to a static image or description(Kim and Forsythe, 2009:1101-1102)

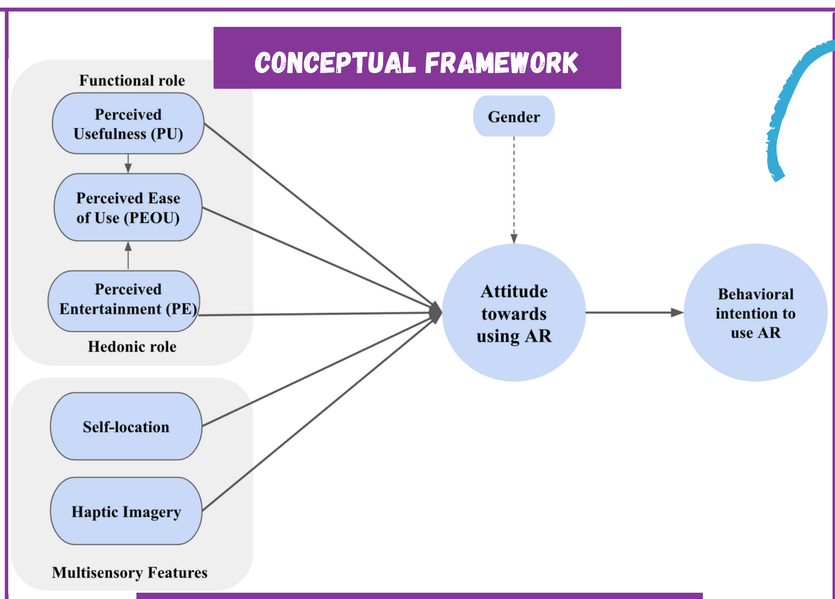
The use of AR is very beneficial to consumers as it allows them to actually see themselves with the product on without actually wearing it in real life this is especially true in online apparel shopping thus providing the consumer with better product information and understanding. In addition, it gives consumers the feeling of enjoyment of seeing themselves wearing the product and evaluating how it looks on their unique physical features. As it permits them to see the product themselves closer through zooming and from various angles. This enriches the online shopping experience for consumers as it saves transportation and shopping time (Kim and Forsythe, 2008:902; Yim et al., 2017:92; Smink et al., 2019:1).

To test the impact of SETs we explored Kim and Forsythe (2008:1102; 2009:904) acceptance model in which they were the first two to propose an acceptance model exclusive toward SET which they named the Sensory Enabling Technology Acceptance Model (SE-TAM). SE-TAM explains the process of adoption of SETs in online apparel shopping by studying the relationship between the following variables perceived usefulness (PU), perceived ease of use (PEOU), and perceived entertainment (PE) value of SETs, the effect that these variables have on consumers attitude towards SETs also known as attitude towards using SET(ATT) and how these attitudes impact actual use of SETs (USE).

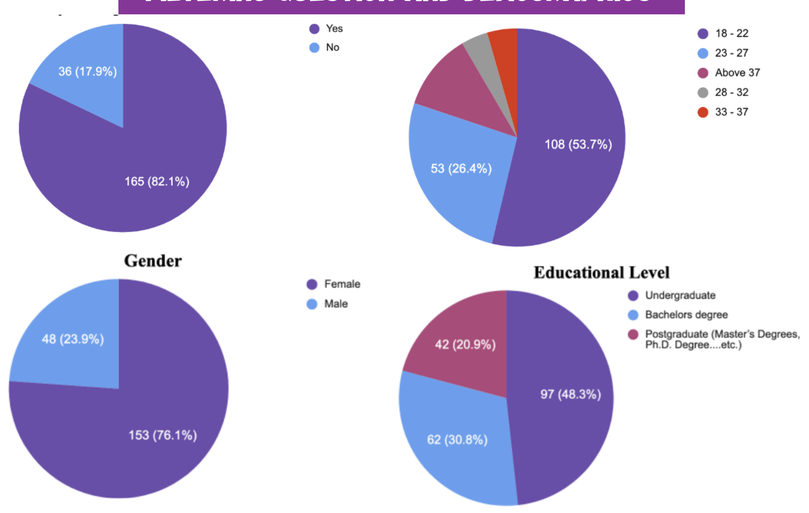
Kim and Forsythe (2008:903) provided a definition for each variable in the SE-TAM. Wherein perceived usefulness is the extent to which a person believes that using this technology will improve task-related performance. Perceived ease of use is the extent to which the usage of this technology will be effortless. Perceived entertainment is defined as the degree to which the action of using this technology is believed to be enjoyable regardless of performance results.

Previous literature by Huang and Liao (2017:450-451) explores the creation of a multisensory e-shopping experience through the use of AR. This study mainly explores the effect of 2 main multisensory features on their role in immersing and providing a realistic sensory experience (Huang and Liao, 2017:454). The first multisensory feature is the Sense of Self-location which refers to an online consumer's feeling towards being actually inside an avatar or the screen(Huang and Liao, 2017:457). The second multisensory feature is Haptic imagery wherein its main function is to simulate the sense of touch to create the illusion of actually having control over a real object to induce a sense of body ownership. The second main benefit of haptic imagery is that it enables shoppers to accurately and efficiently see themselves reflected thus increasing their level of immersiveness.

## CONCEPTUAL FRAMEWORK




## FILTERING QUESTION AND DEMOGRAPHICS




## METHODOLOGY

Descriptive conclusive research was conducted through the use of a questionnaire in order to quantify and be able to generalize the results of this paper to the entire population. The sampling technique used is convenience. The targeted sample is based on having internet, shopping online, and youth as they constitute around 60% of the Egyptian population in 2021, as per the World Bank Database. The sample size is 201 respondents. The results of the questionnaire will be analyzed using SPSS software. Wherein the filtering question and the demographics will be run through the descriptive statistics, in particular the frequency test. The different tests that were run include correlation, regression, and independent t-test.

## RESULTS

### CORRELATION

| Variables | Significance | Pearson Correlation (r) |
|---|---|---|
| Perceived usefulness | 0.633 | 0.000 |
| Perceived entertainment | 0.682 | 0.000 |
| Perceived ease of use | 0.498 | 0.000 |
| Self-location | 0.572 | 0.000 |
| Haptic imagery | 0.586 | 0.000 |
| Attitude towards using AR | 0.727 | 0.000 |

### MULTIPLE REGRESSION

| Variables | Significance | Beta |
|---|---|---|
| Perceived usefulness | 0.000 | 0.261 |
| Perceived entertainment | 0.000 | 0.353 |
| Perceived ease of use | 0.081 | 0.093 |
| Self-location | 0.001 | 0.190 |
| Haptic imagery | 0.083 | 0.109 |

### LINEAR REGRESSION

| Variables | Significance | Beta |
|---|---|---|
| Attitude towards using AR | 0.000 | 0.727 |

### RESEARCH HYPOTHESES

| Hypotheses | Accepted | Rejected |
|---|---|---|
| Perceived usefulness has a positive impact on attitude towards using AR | ✓ | |
| Perceived entertainment has a positive impact on attitude towards using AR | ✓ | |
| Perceived ease of use has a positive impact on attitude towards using AR | ✓ | |
| Self-location has a positive effect on attitude towards using AR | ✓ | |
| Haptic imagery has a positive effect on attitude towards using AR | ✓ | |
| Attitude towards using AR is positively related to behavioral intention to use AR | ✓ | |
| Females have more positive attitudes towards using AR | | ✗ |

## CONCLUSION

The main results of this research paper have supported the first six hypotheses as they indicate a significant positive relationship between attitude towards using AR, perceived usefulness, perceived ease of use, perceived entertainment, self-location, and haptic imagery. This result is in line with the study conducted by Kim and Forsythe (2009:1113-1115) meaning that the more the perceived usefulness, perceived ease of use, perceived entertainment, self-location, and haptic imagery of AR, the more the consumer's attitude towards using AR is higher. Moreover, set location and haptic imagery which were added as a contribution to the model approved a significant impact on the attitude towards using AR, specifically self-location. Nonetheless, there was no significant impact of gender on the attitude towards using AR.

Hence, this study and technology are important as they will not only impact future sustainability through the reduction of greenhouse gas emissions by reducing transportation. Moreover, AR technology helps brands prioritize environmental impact by reducing the carbon footprint consumers leave from physical; product sampling.

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