

Augmented Reality and Impulsive Purchasing Among Gen Z Consumers

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Abstract - Online retailers increasingly offer augmented reality (AR) tools such as virtual try-on and three-dimensional product views. This paper reports how a group of survey respondents see AR in the context of web-based shopping and spur-of-the-moment purchasing. An online questionnaire produced 73 usable responses, which were summarised with counts, percentages and mean scores on five-point agreement scales. Of the 73 respondents, 43 (58.9%) had tried AR shopping features at least once, whereas 30 (41.1%) had never done so. Average agreement with the seven AR and impulse-buying statements fell between 3.07 and 3.29 on a five-point scale. The highest-scoring item was buying a product online because AR made it appear more appealing (mean = 3.29), although many answers were neutral. When asked for an overall judgement, 46 respondents (63.0%) rated AR's effect on their impulse buying as moderate. The evidence points to a mixed and mostly moderate perceived effect; it cannot show that AR causes impulse purchases. Small sample size, self-reported data and the presence of respondents with no AR experience limit the conclusions.

antecedents of unplanned purchasing. Mehrabian and Russell's Stimulus-Organism-Response framework [3] holds that cues in the surrounding environment shape a person's internal state, which then drives behaviour. Davis[4] proposed the Technology Acceptance Model, in which perceived usefulness and perceived ease of use determine whether people adopt a technology.

Work on AR in retail has looked at the ways interactivity and virtual augmentation shape the customer's experience. Javornik [5] examined how the media characteristics of AR affect consumers, and Hilken et al. [6] studied how AR can enrich service encounters. Poushneh and Vasquez-Parraga[7] connected AR-based retail experiences to satisfaction and the intention to buy. Together these studies justify asking whether interest in, and confidence from, AR goes hand in hand with self-reported impulsive buying.

3. RESEARCH GAP

Earlier studies have looked at AR shopping experiences and at impulse buying, but the link between them probably differs by user and by setting. The present survey adds to this by recording how familiar respondents are with AR, how much they use it, and how strongly they believe it affects unplanned purchases. As the data are purely descriptive, they cannot reveal causal effects or support a full structural model.

4. PROBLEM STATEMENT

AR tools can help shoppers assess products, but they can equally make items more tempting and nudge people toward unplanned purchases. Understanding how online shoppers view the usefulness and appeal of AR, and how they connect it to impulse buying, is therefore worthwhile.

5. OBJECTIVES

- To outline how familiar respondents are with AR shopping features and how much they use them.
- To assess how useful respondents consider AR features when shopping online.

Key Words: Augmented Reality, Impulse Buying, Gen Z, Online Shopping, Consumer Behaviour.

1. INTRODUCTION

An impulse purchase is a buying decision taken on the spur of the moment, with hardly any prior planning. Online stores lower the barriers to such decisions through quick payment, tailored suggestions and round-the-clock access to catalogues. Augmented reality (AR) goes a step further by letting a shopper see how an item would look on their body or in their room, using a phone camera or a simulated scene, before they commit.

Such previews can help buyers judge how a product looks and whether it suits them, yet they may also raise curiosity and excitement about the item. Drawing on survey data, this paper describes how well respondents know AR shopping tools, how often they have used them, and whether they link AR with spontaneous or unplanned buying.

2. LITERATURE REVIEW

Rook [1] characterised the buying impulse as a sudden, emotionally driven urge. Beatty and Ferrell [2] identified browsing, mood and situational circumstances as

- To summarise the level of agreement with statements tying AR experiences to spontaneous and unplanned buying.
- To determine how strongly respondents feel AR affects their own impulse buying.

6. RESEARCH QUESTIONS

- How well do respondents know AR shopping features, and how many have tried them?
- How do respondents evaluate the usefulness and attractiveness of AR features?
- How far do respondents agree that AR may prompt spontaneous or unplanned buying?

7. RESEARCH METHODOLOGY

A quantitative, cross-sectional design was adopted, with data gathered through an online questionnaire. The final dataset holds 73 completed responses, collected from 24 September onward until the last date logged in the response sheet. Questions covered age group, gender, how often respondents shop online, earlier familiarity with AR, AR usage, the kinds of AR features used, perceived usefulness, seven agreement statements and one question on overall perceived influence.

Data were analysed with descriptive statistics only: frequencies, percentages and means. The seven agreement statements were scored from 1 (Strongly disagree) to 5 (Strongly agree), and two differently capitalised versions of “strongly agree” were merged into one category. Personal identifiers such as names and email addresses are excluded from the reporting. Because respondents who had never used AR were retained, the results describe the whole group instead of experienced AR users alone.

Methodological note: this work is not a PLS-SEM study. The paper makes no claims about reliability, validity or structural paths, and its descriptive results must not be read as evidence that AR causes impulse buying.

8. RESPONDENT PROFILE

Seventy-three responses were analysed. Most respondents were aged 18–22 (42, or 57.5%), followed by those aged 23–27 (23, or 31.5%); three were under 18 and five chose the 27–28 band. Since minors are included and the age bands overlap slightly, the sample cannot be described as limited to 18–28 year-olds.

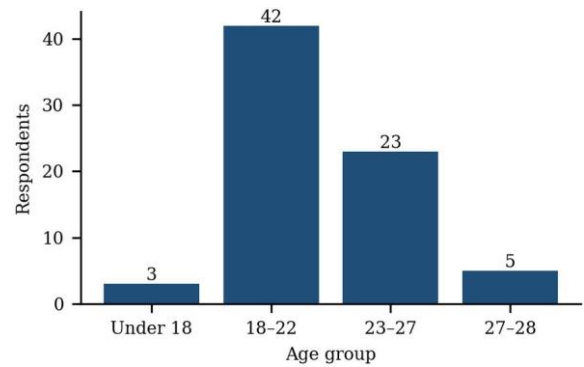


Fig -1: Respondents by age group (n = 73).

Table -1: Gender distribution

Gender	Respondents	Percentage
Male	44	60.3%
Female	29	39.7%

There were 44 men (60.3%) and 29 women (39.7%). Shopping frequency differed across the group: 20 respondents (27.4%) bought online several times a week, 19 (26.0%) two to three times a month, 19 (26.0%) rarely, 8 (11.0%) every day and 7 (9.6%) once a week.

9. DATA ANALYSIS AND INTERPRETATION

9.1 Familiarity with AR

Table -2: Prior familiarity with AR

Familiarity	Respondents	Percentage
Yes	33	45.2%
No	22	30.1%
May Be	18	24.7%

While 33 respondents (45.2%) reported knowing AR shopping features, 22 (30.1%) did not, and 18 (24.7%) answered “May Be”. Awareness of AR was therefore far from universal in this sample.

9.2 Use of AR Shopping Features

Table -3: Use of AR shopping features

AR usage	Respondents	Percentage
No, never	30	41.1%
Once or twice	14	19.2%
Yes, occasionally	17	23.3%
Yes, frequently	12	16.4%

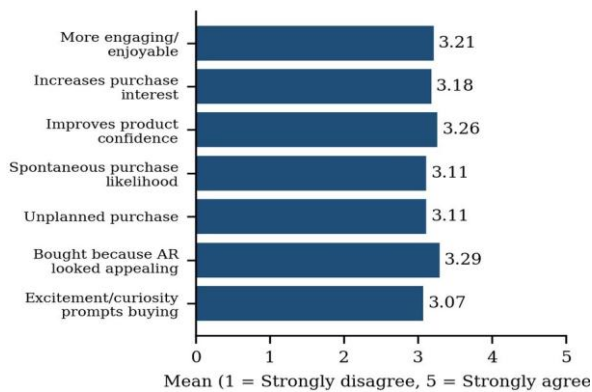


Fig -2: Self-reported use of AR shopping features (n = 73).

Thirty respondents (41.1%) said they had never used AR while shopping online. The other 43 (58.9%) had some experience: 14 had tried it once or twice, 17 used it now and then, and 12 used it often. With over two in five respondents lacking any hands-on experience, part of the opinions collected may rest on expectations or general impressions instead of actual use.

The multiple-choice item on particular AR features produced inconsistent entries, such as combined selections and at least one answer that ticked "I have not used any AR feature" together with other options. For that reason, category-level counts for individual features are left out of this version because they cannot be trusted.

9.3 Perceived Usefulness

Table -4: Usefulness rating (1-5)

Rating	Respondents	Percentage
1	11	15.1%
2	10	13.7%
3	28	38.4%
4	16	21.9%
5	8	11.0%

Usefulness averaged 3.00 out of 5, and the modal rating was 3 (28 respondents, 38.4%). Respondents therefore judged AR as neither clearly useful nor clearly useless, and their evaluation was lukewarm instead of strongly favourable.

9.4 Agreement with AR and Impulse-Buying Statements

Table -5: Agreement with seven statements

Statement	Mean	Agree / S. agree	Neutral	Disagree / S. disagree
More engaging/enjoyable	3.21	25 (34.2%)	40 (54.8%)	8 (11.0%)
Increases purchase interest	3.18	25 (34.2%)	38 (52.1%)	10 (13.7%)
Improves product confidence	3.26	27 (37.0%)	36 (49.3%)	10 (13.7%)
Spontaneous purchase likelihood	3.11	20 (27.4%)	41 (56.2%)	12 (16.4%)
Unplanned purchase	3.11	22 (30.1%)	35 (47.9%)	16 (21.9%)
Bought because AR looked appealing	3.29	30 (41.1%)	29 (39.7%)	14 (19.2%)
Excitement/curiosity prompts buying	3.07	20 (27.4%)	39 (53.4%)	14 (19.2%)

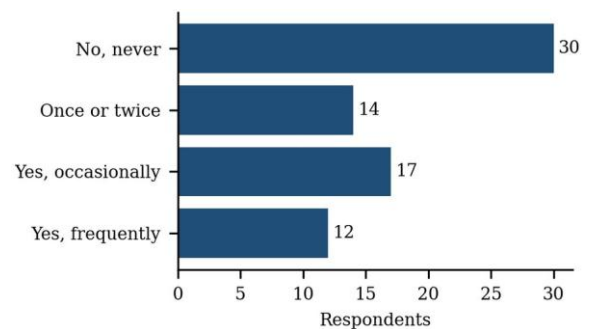


Fig -3: Mean agreement scores for the seven AR related statements.

The top-scoring statement (mean = 3.29) was having purchased an item online because AR made it look more appealing. Thirty respondents (41.1%) agreed or strongly agreed with it and 29 (39.7%) were neutral. Although this was the most favourable result of the seven, it does not mean that most respondents had actually made such a purchase.

The lowest mean (3.07) belonged to the statement that excitement or curiosity leads to an unplanned purchase. For the statement that AR makes spontaneous buying more likely, the mean was 3.11: 20

respondents (27.4%) agreed or strongly agreed, 12 (16.4%) disagreed or strongly disagreed, and 41 (56.2%) were neutral. Neutral answers were frequent on all seven items, which suggests that many respondents were unsure or held no firm opinion.

9.5 Overall Perceived Influence

Table -6: Overall perceived influence of AR

Perceived influence	Respondents	Percentage
No influence	6	8.2%
Low influence	5	6.8%
Moderate influence	46	63.0%
High influence	13	17.8%
Very high influence	3	4.1%

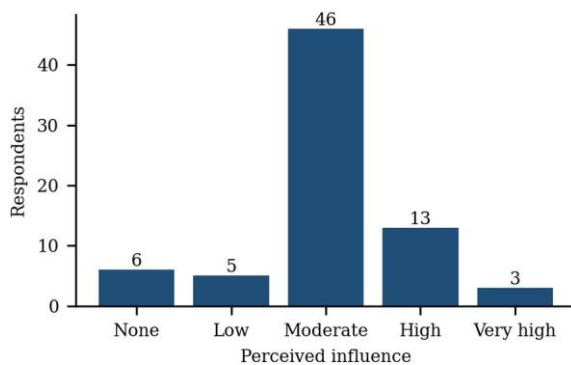


Fig -4: Respondents' overall perceived influence of AR on impulse buying.

"Moderate influence" was the most frequent answer (46 respondents, 63.0%), followed by high influence (13, or 17.8%) and very high influence (3, or 4.1%). Only six respondents (8.2%) reported no influence and five (6.8%) a low one. In total, 62 respondents (84.9%) chose a moderate, high or very high level. These figures reflect what respondents believe about themselves and do not amount to a measured causal effect.

10. DISCUSSION

The results show that familiarity with AR, and its use, differ considerably within the sample: 43 respondents had tried an AR shopping feature, but 30 never had. A mean usefulness score of 3.00 and the many neutral answers indicate that opinions are divided and neither strongly positive nor strongly negative.

Purchasing because AR made a product look more attractive was the most supported item, yet fewer than half of the respondents agreed with it. Statements on spontaneous and unplanned buying drew more restrained answers. This fits the idea that AR can raise a product's appeal for certain shoppers without necessarily turning every one of them

into an impulse buyer.

Nothing in these data allows us to say what causes impulse buying, or whether enjoyment, usefulness, social influence or perceived risk are significant predictors of it. Answering such questions requires multi-item scales and inferential testing. The findings are best read as an exploratory picture of these 73 respondents.

11. PRACTICAL IMPLICATIONS

- Retailers can offer AR as a tool for evaluating products, while keeping prices, delivery terms and return policies clearly displayed.
- AR experiences should not rely on pressure tactics that hurry shoppers into a decision.
- Stating plainly what an AR preview can and cannot show may help shoppers choose with better information.
- Later surveys should treat AR users and non-users separately and keep response options consistent.

12. LIMITATIONS

The study rests on 73 self-reported responses and may not represent Gen Z shoppers in general. The sample includes minors as well as people who have never used AR shopping tools. Inconsistent multi-select answers on the AR-feature question prevent any conclusion about which features are most popular. A cross-sectional descriptive design cannot establish causality, and the answers may be affected by how well respondents understood AR and how accurately they remembered earlier purchases.

13. FUTURE SCOPE

Subsequent studies could draw a larger and more representative sample, restrict participation to the intended age range, and compare AR users directly with non-users. The questionnaire could be rebuilt around validated multi-item scales for enjoyment, usefulness, social influence, perceived risk and impulse buying. With enough respondents and suitable measurement checks, associations could then be tested through inferential methods or structural equation modelling.

14. CONCLUSION

On the evidence of 73 survey responses, many respondents see AR shopping features as having a moderate link to impulse buying instead of a uniformly strong one. The most supported statement was buying a product because AR made it look more appealing

(3.29 out of 5), and the overall influence question was most often answered “moderate” (63.0%). Even so, neutral answers were common and 30 respondents had never used AR when shopping. The results offer an exploratory snapshot of perceptions and do not demonstrate that AR causes impulse buying. Testing the relationship properly will need larger studies with a more clearly defined sample and validated measures.

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