Online Clothing Shopping Behaviors and Intention among College Students

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Abstract
This study is to verify the shopping tendencies on online shopping of fashionable clothing. This study selected the convenience sampling method to verify online shopping behaviors among undergraduate college students, who are completely comfortable with online technology. The purposes of this study were to explore how product attributes style and brand attributes impact online purchasing intention among college students. This study revealed that clothing involvement in style and brand attributes ultimately affecting internet shopping intention. When college students were looking for their clothing through the internet, they first recognized the famous brand names or the well-known brand products. However, when they made a purchasing decision online shopping, the style attributes more strongly impacted on the online shopping intention rather than the brand attributes. Hence, many college students show stronger clothing concerns associated with style attributes rather than brand attributes before purchase decision. This study concludes that product attributes are the main factors that improve online business among the college students.

Keywords: online shopping behavior, product attributes, clothing involvement, shopping intention, college consumers

1. Introduction
The aim of this study is focus on African American college students to understand of their online shopping behaviors in fashion since there is a little research about the target consumers. Knowing what product attributes these young online consumers considers while purchasing their clothing will help online retailers improve their clothing selection process. This study proposes an integrate model that demonstrates the effects of product attributes and clothing involvement on online shopping.

Currently, online markets and stores has revolutionized shopping experiences for several customers. Especially due to the Coronavirus 19 (COVID-19) pandemic, the popularity of online shopping has skyrocketed and has become an integral part of everyday life. After all it is estimated that over 300 million Americans will shop through online platforms by 2023, and that nine out of ten Americans (91% U.S. population) will do so with electronic devices, such as cellphones, laptops, and i-pads (Ouellette, 2022; Mohsin, 2020). In addition, online shoppers usually spend around $21.00 to $50.00 for fashionable clothing, footwear, and accessories (Sabanoglu, 2021).

African-American consumers are more frequently to shop online than the average Americans (Nielsen, 2020). While African Americans consist only of 14% of the total population in U.S. (Cavill, 2019), their purchasing power will reach $1.8 trillion in 2024, up from $1.4 trillion in 2019. Hence, African-American consumers are an important market segment in an American economy as they shop for clothing, which is the number one item in online shopping categories (Nielsen, 2020).

Additionally, college students and young consumers between the age of 18 and 34, which is 38% of the African Americans population, greatly affect online markets and retails (Cavill, 2019). Many African Americans college students buy many different categories of clothing from a variety of online applications (APPs) and marketplaces, such as Amazon.com, Target.com, and Walmart.com, even if they cannot directly touch, feel, and try the clothing (Pinkett, 2020; Sabanoglu, 2021; Ouellette, 2021).
The market of African American college students is a big potential growth market. Especially since young college consumers are growing up with high technology like computers, smartphone, electronic devices, and internet, online shopping has become an integral part of college students’ social lives. In fact, among the online fashion clothing shoppers, around 50% of college students actively use the fashion shopping applications (APPs) to buy their clothing (Sabanoglu, 2021; Ouellette, 2021; Lissitsa, & Kol, 2016). Hence, as young consumers play a great role in the consumption process of fashion products (Nielsen, 2020), it is rather important to especially understand the online shopping behaviors of African Americans college students in order to prepare the future online marketing strategies in fashion.

Hence, this study will focus on the online shopping behaviors in African American college, specifically in fashion, which could tremendously help retailers.

2. Literature Review and Hypotheses Development

2.1 Involvement

Involvement is generally considered the most important concept to understand the consumers’ shopping and purchasing behaviors in marketing and retailing research area over the last 6 decades (Krugman, 1965, Tigert et al., 1976; Bloch et al., 1986; Rothschild, 1984; Zaichkowsky, 1986). Involvement is highly linked to consumers’ feeling of interest, inherent needs, values, and enthusiasm for various product categories (Tigert et al., 1976; Rothschild, 1984; Zaichkowsky, 1986). Each person has the different degree of involvement in product categories. The level of involvement is closely related to the personal relevance of objects, and is deeply influenced by the consumers’ behaviors and attitudes (O’Cass, 2000). If consumers have a high level of product involvement, they are searching for a product a long time with the help of various resources; these products tend to be highly priced and durable (Tigert et al., 1976; Zaichkowsky, 1986; Evrard & Aurier, 1996; O’Cass, 2000; Warrington & Shim, 2000; Seo et al., 2001; Michaelidou & Dibb, 2006; Seo & Namwamba, 2014; Seo, 2016; Johnson et al., 2017; Dillahunty & Seo, 2019).

There are many methods of measuring involvement because involvement is related personal characteristics and lifestyle. While it is hard to measure involvement directly, according to the results of Fairhurst, Good, and Gentry’s research (1989), the Personal Involvement Inventory (PII) of Zaichkowsky (1986) has a highly reliable and valid measurement for product involvement including clothing. Hence, this study uses PII of Zaichkowsky (1986) for measuring clothing involvement. Within this measurement, the level of involvement is significantly associated with product attributes, such as product style, brand image, brand preference, and brand loyalty (Warrington & Shim, 2000; Chandrashekaran & Grewal, 2003; Seo & Namwamba, 2014).

2.2 Product Attributes

Clothing tends to have a high product involvement because of its durability, long-term ownership after consumer purchase, and self-expression in everyday life. According to the results of Shim and Kotsiopulos (1992), consumers who have a high-involvement are also likely to purchase brand names of clothing and aware of fashion trend. Finally, research has shown that high levels of involvement is highly associated with the product attributes. Consumers tend to pay attention to product attributes before or during purchasing their clothing such as clothing style, fit, color, fashion brand, image, quality, design, and price (Shim et al., 1992; Warrington & Shim, 2000; Seo et al., 2001; Jin et al., 2010; Lee & Nguyen, 2017; Seo & Namwamba, 2014; Johnson et al., 2017; Samala & Singh, 2019). Even with the importance of product attributes, little is known in respect to African-American consumers’ shopping behaviors. Thus, an empirical study is conducted to show the influence of product attributes on the online shopping intention of African American online consumers.

3. Research Method

3.1 Research Hypotheses

This study investigates clothing involvement related to product attributes. In order to understand African-American college students’ online shopping behaviors, the following hypotheses are suggested to demonstrate the online shopping intention.

H1a. African-American college students with high Clothing Involvement tend to have a positive effect on Style Attributes.

H1b. African-American college students with high Clothing Involvement tend to have a positive effect on Brand Attributes.

H2. African-American college students’ positive Style Attributes highly lead to shopping intention online.

H3. African-American college students’ positive Brand Attributes highly lead to shopping intention online.
To summarize, the hypotheses are constructed to be tested in a structural model with online shopping intention as the performance variable (see Figure 1). The concept of online shopping intention is regarded as a planned commitment.

![Proposed hypotheses model of structural model for African-American college students’ online shopping intention](image)

**Figure 1. Proposed hypotheses model of structural model for African-American college students’ online shopping intention**

### 3.2 Data Collection

This study used convenience sample of African-American college students from the randomly selected classes at two universities in the Southeastern region in United States. A self-administered questionnaire was conducted for this study. After deleting incomplete responses of questionnaire, 240 responses comprise the final samples for this study. The responses spend 15 to 20 minutes to complete the questionnaire. The data are analyzed to explain the unique online shopping intention among African-American college students using structure equation modeling (SEM). The path coefficient in SEM is made to test the hypotheses.

### 3.3 Questionnaire Development

Multi-items scales were used to measure all independent variables. The short version of Zaichkowsky’s Personal Involvement Index (PII) (1986) was used to measure clothing involvement. Participants were asked to evaluate level of 7 items on 7-point bipolar scales by indicating their opinion about clothing involvement (e.g., “important (7)” - “unimportant (1)”, “Valuable (7)” - “worthless (1)”, etc). Eight selected items were adopted from Warrington and Shim (2000) to measure product attributes. Participants were requested to indicate their level of the importance of each product attribute description on a 7-points Likert-type scale (1= “of no important” to 7= “extremely important”). Four questions were employed to measure online shopping intention from the Georgia Institute of Technology of Graphics Visualization and Usability (GVU) Center’s 10th WWW user survey (1998). These four questions were modified by researchers to suite this study. Participants were requested to evaluate the level of agreement on each statement utilizing a 7-point Likert scale of 1= “strongly disagree” to 7= “strongly agree.” The questionnaire included 9 questions about demographic information.

### 4. Data Analysis and Results

The data of 240 questionnaire consisted of all African-American college students with various major areas. The majority of participants were female (62.5%), and 89.2% of respondents were single within the range of 18 through 24 years old. In addition, 58.3% of participants were employed in part- or full-time job during their academic year.

Principle component factor analysis with Varimax rotation was conducted to maintain the scale’s dimensionality. The factor loading less than 0.50 were eliminated, and items with factor loading greater than 0.50 were retained as a factor. As a result, a model of four factors with 16 items appeared. Every factor loading ranged from 0.76 to 0.96 was acceptable. If the loading values were lower than 0.70, the researcher eliminated three statements. All factor loading were significant, exceeding 0.75, and t-values ranged from 3.57 to 21.97. To assess reliability of observed items, Cronbach’s alpha (α) was calculated. The composite reliabilities ranged from 0.79 to 0.93. The Cronbach’s alpha (α) values of all variables were greater than 0.79, which indicated that the items under constructs had a strong reliability (Bagozzi & Yi, 1988). The average variance extracted (AVE) and the composite reliabilities (CR) estimates of all indicators of constructs were calculated. All AVE were greater than the threshold of 0.50. The results of the measurement model, including four latent constructs with 16 items as shown in Table 1, exhibited an excellent model fit. The results of mean, standard deviation (SD), median, and Cronbach’s alpha (α) are provided in Table 2. Discriminant validity of the model was tested by comparing maximum squared correlations squared variances (MSV) with the AVE estimates. The all AVE estimates for all
constructs (ranged from .81 to .91) exceeded the MSV estimates (ranged from .10 to .32) that suggest that all the constructs are sufficiently distinctive from each other, which supports discriminant validity. A matrix of AVE and MSV for discriminant validity is shown in Table 3.

Table 1. Results of measurement model

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Items</th>
<th>α</th>
<th>CFA Loading</th>
<th>t-value</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing Involvement</td>
<td>Clothing is:</td>
<td>.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Important</td>
<td>.87</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Essential</td>
<td>.87</td>
<td>18.03***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valuable</td>
<td>.84</td>
<td>16.95***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Needed</td>
<td>.80</td>
<td>15.40***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Concerns</td>
<td>.78</td>
<td>14.89***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Matters</td>
<td>.77</td>
<td>14.58***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beneficial</td>
<td>.76</td>
<td>14.56***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet Shopping Intention</td>
<td>Future:</td>
<td>.94</td>
<td>.96</td>
<td>21.97***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I intend to purchase from the internet apparel (clothing) retailer in future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business:</td>
<td></td>
<td>.89</td>
<td>19.17***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I have a favorable attitude toward continuing to do business with the internet apparel (clothing) retailer over the next few years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Visit:</td>
<td></td>
<td>.87</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I intend to continue to visit the Internet apparel (clothing) retailer’s site in the future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Years:</td>
<td></td>
<td>.85</td>
<td>17.88***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I intend to continue doing business with the Internet apparel (clothing) retailer over next few years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Style Attributes</td>
<td>Good Match to my image and figure</td>
<td>.88</td>
<td>.87</td>
<td>14.09***</td>
<td>.88</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td>Nice Color and stylish design</td>
<td></td>
<td>.86</td>
<td>13.95***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good Fit</td>
<td></td>
<td>.80</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Attributes</td>
<td>Well-Known brand</td>
<td>.79</td>
<td>.82</td>
<td>3.57***</td>
<td>.90</td>
<td>.91</td>
</tr>
<tr>
<td></td>
<td>Brand Symbol affixed to clothing</td>
<td></td>
<td>.80</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes. Standard estimate, $\chi^2 = 181.58 \ (df = 96), \ p < .0001; \ AGFI = .88, \ GFI = .92, \ NFI = .94, \ CFI = .97; \ Standardized SRMR = .05; \ RMSEA = .06, \ "p < 0.05; \ "p < 0.05, \ "p < 0.001
Table 2. Descriptive statistic results of variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Cronbach’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing Involvement</td>
<td>5.60</td>
<td>1.45</td>
<td>6.00</td>
<td>0.93</td>
</tr>
<tr>
<td>Style Attributes</td>
<td>5.99</td>
<td>1.25</td>
<td>6.50</td>
<td>0.88</td>
</tr>
<tr>
<td>Online Shopping Intention</td>
<td>4.43</td>
<td>1.71</td>
<td>4.50</td>
<td>0.94</td>
</tr>
<tr>
<td>Brand Attributes</td>
<td>4.35</td>
<td>1.70</td>
<td>4.50</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Notes: Scores ranged from 1 (Of No Important) to 7 (Extremely Important) or Scores ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). Correlation is significant at the 0.05 level (2-tailed).

Table 3. Discriminant validity assessment matrix of the measurement model

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Clothing Involvement</th>
<th>Style Attributes</th>
<th>Online Shopping Intention</th>
<th>Brand Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing Involvement</td>
<td><strong>0.81</strong></td>
<td>0.10</td>
<td>0.10</td>
<td>0.08</td>
</tr>
<tr>
<td>Style Attributes</td>
<td>0.10</td>
<td><strong>0.84</strong></td>
<td>0.32</td>
<td>0.24</td>
</tr>
<tr>
<td>Online Shopping Intention</td>
<td>0.10</td>
<td>0.32</td>
<td><strong>0.89</strong></td>
<td>0.19</td>
</tr>
<tr>
<td>Brand Attributes</td>
<td>0.08</td>
<td>0.24</td>
<td>0.19</td>
<td><strong>0.91</strong></td>
</tr>
</tbody>
</table>

Notes: Boldfaced: Average variance extracted (AVE). Other estimate are Maximum Shared squared Variances (MSVs)

4.1 Hypotheses Testing

The paths to be tested were four hypotheses, which were evaluated within the model as a whole. The dependent variable was online shopping intention. The overall Structural Equation Modeling (SEM) model fit was adequate: χ² = 181.58, df = 96, p = .000; AGFI = .88, GFI = .92, NFI = .94, CFI = .97; Standardized SRMR = .05; RMSEA = .06. The result indicated that the relationship between clothing involvement and style attribute (H1a) was not significant (β = 0.10, p = 0.142); however, the significant effect of clothing involvement on the brand attributes (H1ab) was identified (β = 0.18, p < 0.05). Therefore, H1a was not support, and H1b was supported. Interestingly, there was a strong positive affect of style attributes on online shopping intention (β = 0.29, p < 0.001) in H2. The result of H2 was significant and supported. The result of H3 demonstrated that brand attributes had a significantly positive impact on online shopping intention (β = 0.16, p < 0.05). Therefore, H3 was supported. The results of the hypotheses are displayed in Figure 2.

5. Discussion

As predicted by the hypotheses model of SEM, clothing involvement and product attributes (style and brand attributes) had the most influences on online shopping intention. The study finds that most African-American students have highly involvement with clothing. The mean score of clothing involvement is 5.60, which is higher than the median of 4 of 7-point bipolar scale, indicating African-American students’ strong interests in clothing and fashion. This study obtains that the median score of clothing involvement is 6.00, and standard deviation of clothing involvement is 1.45 as shown in Table 2. Hence, this study confirms the previous research (Shim & Kotsiopolos, 1992; Seo & Namwamba, 2014; Seo et al., 2001; Johnson, et al, 2017) that the clothing is an essential and important product in the life of college students. College students consider that clothing is beneficial and needed item to express their personality among their aged group.

An interesting find within this study is that when African-American college students search and browse the internet for clothing, they first consider well-known brand clothing and brand symbol. Young college consumers tend to trust that well-known brand companies carry – high quality, fashionable, and trendy products. They also believe that the brand named clothing with brand symbol can support developing personal image. Consistent with Warrington and Shim (2000), there is a positive relation between high level of product involvement and brand commitment.
However, when African American college students make a purchasing decision through internet, the factor of style attributes strongly impact on the online shopping intention rather than the brand attributes. After all, clothing is one of tools to show off consumers’ unique personal styles, appearance, and self-confidence. Thus, these college students mainly consider three variables: good fit of clothing, color, and good match of unique personal image. Good fit is one of the important variables when college students purchase their clothing online since they do not want to wear clothing that does not fit properly. The results of this study confirm the previous results of Zhang et al., (2002).

Additionally, the results of SEM model indicate that African-American college students’ attitude toward to buy a clothing has the positive online shopping intention in the future as shown in Figure 2. One of the reasons might be that African-American college students are satisfied with their online shopping experience; hence, they would like to maintain their online shopping behaviors, and online shoppers would have to take note of this trend.

Overall, this research has identified that the level of clothing involvement and product attributes (brand and style attributes) as significant factors to consumers’ online shopping intention. This result is important for retailers as they can improve their clothing selection process in order to result in higher sales; after all, knowing what the consumer wants as a seller is important.

6. Conclusion

With the increasing popularity of online shopping, it is important to understand the consumer’s intentions. This study determined African-American college students’ clothing involvement and online shopping behaviors. The model is composed of four latent variable with sixteen indicators. The result of SEM model fit reveals that the level of clothing involvement, which is one of the strong determinant factors in style and brand attributes, ultimately affecting the internet shopping intention. The factor of style attributes is more likely to influence than the factor of brand attributes when African-American college consumers are making an online shopping decision. African-American college students highly intend to continue purchasing their clothing through the online markets and have a unique purchasing pattern when they are shopping online.

7. Implications

The internet retailers should consider a niche market for African-American young consumers because these young consumers may hold a big potential of online consumption in the future. This study enhances the importance of clothing involvement and product attributes in African-American college consumers’ online shopping intention. In order to develop long-term business relationship with African-American young consumers, online clothing retailers should include in their website their brand image, product information, such as size, color, material, and style, user-friendly directions, and different delivery options in order to increase online shopping experiences and sales.

8. Limitations and Future Research

This study have several limitations. This research focuses only single product, which is clothing. Also, geographic and racial differences among college students can affect individual’s value weights which can influence purchasing behavior. Future studies could include other factors, such as price, quality, and online feedback, which
may influence the online shopping intention. In addition, future research would test the relationship between online and offline purchasing intention to understand consumers’ online shopping behaviors.

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