

A STUDY OF PURCHASE INTENTION ON SMARTPHONES OF COLLEGE STUDENTS IN HONG KONG

Anthony Tik-Tsuen WONG, Caritas Institute of Higher Education

ABSTRACT

Under the rapid development of recent years, the demand for smartphones is becoming more and more important for people. It has become one of the indispensable communication tools in our lives. College students as important consumer of the electronic markets became the objectives of our research. They also determine the mainstream development trend of the smartphone markets. This research provides a marketing strategy for the smartphone market by understanding the consuming characteristics of college students and the factors in purchasing mobile phone brands combined with their needs. This research can help the mobile phone companies understand college students' requirements for selecting smartphones and understand the factors that can affect college students in making decision when they are buying mobile phones. This study selected five factors to study the relationship between perceived quality, brand loyalty, electronic word of mouth, product design, brand awareness and purchase intention. The relationships between brand loyalty, brand awareness and purchase intention are proved to be significant whilst perceived quality, electronic word of mouth and product design do not affect purchase intention from the findings in this research. Therefore, smartphone manufacturers should pay attention to brand loyalty and brand awareness, thereby increasing the purchase intention of Hong Kong college students.

Keywords: Purchase Intention, Perceived Quality, Brand Awareness, Design, Loyalty, Electronic Word of Mouth.

INTRODUCTION

With the development of technology and the progress of mobile Internet, smartphones have become the leader in the electronic market. The development of this type of mobile smart device has changed many people's lifestyles and feelings about traditional communication tools. Cassavoy (2013) said that smartphone can be defined as a device that enables users to make calls remotely, while having multiple functions that enable users to do special activities that were not possible in the past, except on a computer. And smartphones offer users different functions, such as playing games, messaging, online shopping and social media. A research by Counterpoint (2019) released a statistical report on global smartphone market shipments. The results show that the top three brands are still Samsung, Huawei and Apple, and their combined share accounts for more than half of global smartphone shipments. According to Zahid & Dastance (2016), understanding the factors that influence buying intentions is sure to help smartphone brands develop a better promotional mix. So, the survey will help some global smartphone brands with low market share in Hong Kong to develop their marketing portfolios. On the other hand, established companies can adjust their value proposition to accommodate growth in the region and target market share. The objective of this research studies the important factors such as perceived quality, brand loyalty, electronic word of mouth, product design, and brand awareness.

There by using the results obtained in the research to provide strategies for smartphone

manufacturers. The results help them build strong brand equity and brand image to increase sales.

LITERATURE REVIEW

The objective of this section is to briefly discuss the existing literature on purchase intention, perceived quality, brand loyalty, electronic word of mouth, product design and brand awareness. Finally, there is the research model and hypothesis.

Purchase Intention

With the rapid development of smartphone, it has become a part of our daily life, so when considering whether to buy a smartphone, consumers will consider different factors before buying. Therefore, this research studies whether purchase intention is influenced by perceived quality, brand loyalty, electronic word of mouth, product design and brand awareness.

Ibraheem & Maria (2018) believe that purchase intention means the willingness of customers to purchase specific products or services. They also said that the intention to behave in a particular way was considered as a prerequisite for actual action. The research by Alrwashdeh, et al. (2019) refers that purchase intention is considered to be a one of the important components of consumers' purchase behavior, because it affects consumers' choice of a brand among several brands in the market. At the same time, they show that purchase intention provides the possibility to determine whether consumers are willing to purchase goods. Since the higher purchase probability, the stronger purchase intention so purchase intention is the willingness of consumers to buy specific goods and services in a short time in future. Once individuals decide to buy a particular product from a particular store or company, they have been driven by their previous intentions and have developed about the product. Zahid & Dastance (2016) explain that purchase intention is important to purchase behavior and has an essential impact on future consumption. And the study of Yu & Lee (2014) also shows that purchase intention can be used to estimate demand in the future. It may, therefore, if a company wants to predict future market trends, it should focus on the purchase intention of consumers, and the factors that can impact the purchase intention of customers.

In addition, Zahid & Dastance's (2016) research shows that perceived quality significantly affects youth's willingness towards global smartphone brands. The results of Yunusa & Rashidb's (2016) research also indicate that perceived quality is significantly related to purchase intention of Chinese mobile phone brands. Both studies suggest that the perception of the quality of a product or service depends on the analysis of different information, such as the country in making this product. However, although the consumer has enough information, they may not have enough time and inspiration for further discussion or judgment, and they can only choose a few important information to evaluate the quality. And the research by Grace & Hyeokmin (2017) showed that product quality had a positive effect on purchase intention. According to Heriyati & Siek (2011), word of mouth and perceived quality are influenced by gender, and have an essential positive impact on consumers' decision to buy blackberry smartphones. Rahmawati & Do (2014) said that loyalty programs are one of the ways to influence consumers' shopping motivations, and they found that the consequence is consistent with previous research that loyalty programs can influence buying intentions Singh et al. (2012).

A lacking awareness leads to low purchase intention for all types of new products on the market. In Singh et al. (2012) study, low pre-test scores for product awareness and purchase intention suggest that consumers will not buy a product if they do not know its features and benefits. However, convictive communication in the form of lectures improves

product awareness and ultimately leads to an increase in purchase intentions. Alrwashdeh, et al. (2019) said that electronic word of mouth (eWOM) communication messages can reduce consumers' hesitation when purchasing brands and products, thus their purchase intention can be more effective. According to these studies, purchase intention may be related to perceived quality, loyalty, brand awareness and eWOM. Consumers will search for information about different products before making a purchase decision, and then compare and evaluate. If the product can satisfy the needs of consumers which is valuable to them and their willingness to buy will be stronger, and the possibility of buying will be higher (Wong, 2019).

Perceived Quality

Perceived quality is generally regarded as the subjective evaluation of customers according to their own purposes of use and demand for products. Most of customers may find out something about the product before they buy. The more expensive or complicated product, they may need more time to think about it, and more information they need to learn. Perceived quality is defined as a consumers' evaluation of the performance of the brand based on external elements, such as durability and performance and internal elements, like brand reputation Asshidin, (2016). And brand is the quality perceived by the customer and is a perception that reflects the overall quality, which does not depend on the customer's understanding of perceived quality Andervazh, (2016); Heriyati & Siek (2011) said that quality is related to satisfaction. In other words, this relationship is the gap between perceived performance of the product and consumers' expectation. A study by Yaman (2018) said that the perceived quality created by people who have purchased a product or service before is the most significant factor affects the purchase preferences of potential customers. And he also said that customer satisfaction results when the perceived quality is higher than the expected quality. When the expected quality is higher than the actual quality, it indicates that the enterprise cannot provide satisfactory services. From the findings of these studies, perceived quality may affect the customer's satisfaction with this company or product.

In the context of store brands, perceived quality is considered to be one of the most correlative factors to explain store brand preference and purchase intention in influencing consumers' purchasing decisions Calvo-Porrall & Levy-Mangin, (2017). Perceived quality can also serve as a value reference for consumers, providing them with reasons to buy, and will differentiate competing brands. Since consumers with strong value consciousness have high purchase intention, perceived quality becomes one of the important factors affecting purchase intention, which is determined by the intention of consumers and the brand. Ibraheem & Maria (2018); Sharma (2017) said that it is necessary to attract these customers through quality to build up and maintain their loyalty to the smartphone brands.

Brand Loyalty

According to Akkucuk & Esmaili (2016), when customers purchase from one brand repeatedly, they become loyal to that brand. And they found that there are a lot of factors that affect customer loyalty, and only the best strategy to attract and retain customers can get customer loyalty. Sharma (2017) comments that brand loyalty has a positive effect on company's sales and profits, so it makes consumers to purchase again and again, and they are less vulnerable to competing brands.

Forsido's report (2012) also said that brand loyalty makes an important impact in a brand. Wong's (2018) study also said that brand loyalty means that the customers choose to repeat purchases the products of the same company, rather than a substitute product by competitor. Brand loyalty will be an important part of marketing. It reduces production costs; this is because sales increase when customers are loyal to the brand. In addition, when

consumers fall in love with a brand, they will tend to recommend the product. Companies do not have to spend a lot of money on marketing their products. It can be seen as an opportunity for companies to keep more of their revenues and invest the money in other areas. And he concluded that brand loyalty would directly affect their buying intentions. According to Odoom (2016), it may be a mistake for marketers to market brands solely based on consumer preferences without more detailed consideration of their ultimate connection to actual brand loyalty.

Electronic Word of Mouth

Research by Chiosa (2014) described that, as time goes on word of mouth has adapted, moving from face-to-face to online communication. A study by Du (2017) found that the form of electronic word of mouth could be consumers checking out brand content in their newsfeed and choose to like it or not, share or comment on it. And Wong (2017) commented that the type of electronic communication application such as social networking becomes a platform for exchanging online shopping experience and product feedback. At the same time Wong's (2017) study indicated that online opinions and suggestions are important for online shoppers as they can receive new information such as product or service information and quality. By Kucukemiroglu & Kara's (2015) study, they also said that consumers are easy to provide online comments and experiences related to the consumption of products, and this information can reach many geographically dispersed populations. A study by Wong (2018) found that when consumers experience high levels of information quality through social media, their willingness to buy increases. The positive impact of perceived usefulness on respondents' online purchase intentions through social media seems to recommend that the more respondents believe online social media helps them shop online, the more likely they are to have purchase intention. And Wong (2018) also indicates that many fake reviews were written by people who employed by some agents from the Internet. As this situation becomes more frequent, some consumers may not believe others' reviews, because the reviews may be unreliable and not reflect the truth. While the results show that some consumers do not trust other people's reviews of products or services, but a positive electronic word of mouth (eWOM) can still impact consumers' purchase intention. In addition, electronic word of mouth is the basis for potential customers to obtain empirical information from customers who have already used it. Even if they intersect at certain points, the difference is notable Poturak & Turkyilmaz, (2018). Their research also expresses that strong word of mouth mainly depends on the ideas and opinions expressed by customers about the products they use.

Product Design

In the era of brands, brands have become an indispensable part of consumers' lives, and brand image also occupies the main position of corporate competition. Design innovation includes aesthetic, functional, emotional or symbolic aspects, and is a prerequisite for perceived value, which in turn determines purchasing behavior (Kim, 2017).

It can be seen that product design plays a vital role in purchasing decisions in product brand communication and the brand visual image is the most direct and effective. Parameshwaran (2015) explains that considering the design as the overall characteristics of the product requested by the consumer, it will affect the appearance, function and problem-solving ability of the product. Decer (2017) explains that manufacturers need to place customer demands into design consideration, as well as fine design techniques, keen observation, abilities to market analysis and development; which by collaborate these factors to create high value products, and the advantage of design is to promote substantial benefit

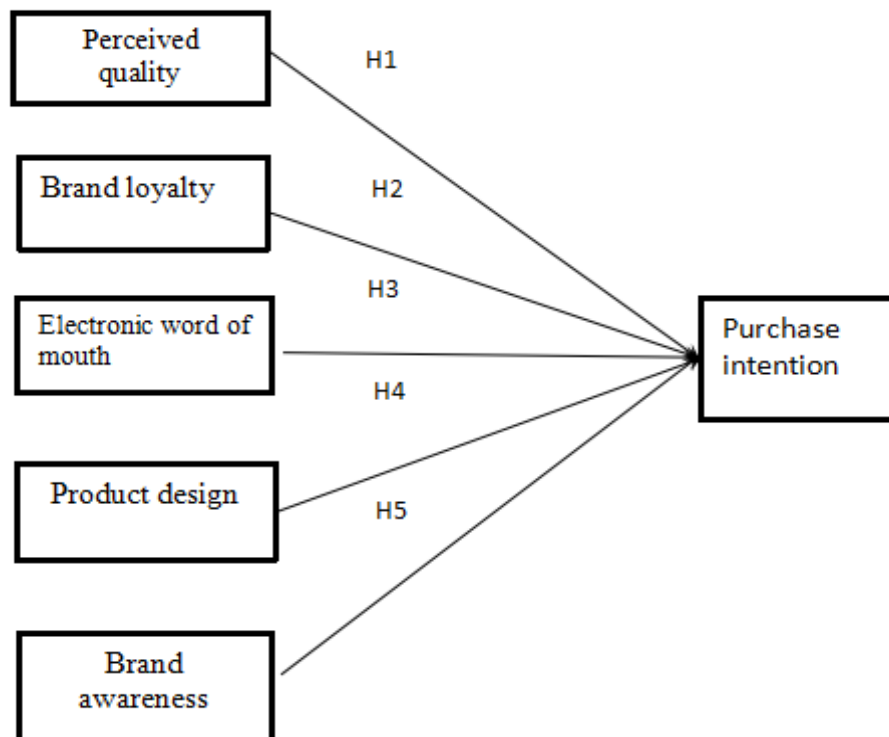
and brand image for companies Jannick & Klaus-Peter Wiedmann (2019). Based on their logo liking, consumers can inference about product design based on their attitude. These findings indicate that Inferred product appearance can affect consumers more than inferred product function. Landwehr (2012) acknowledged that product design has proven the importance of aesthetics in production important consumer response. Good product design is the key to winning customers, thereby improving the overall image of the product.

Brand Awareness

Brand is the core content of products. In developed markets, brand awareness has replaced product identification and has become the only element of market choice (Langaro, 2018). The process of building brand awareness is articulated into two dimensions: brand recall and brand recognition. It will capture the potential brand usability in the minds of consumers. Kutay (2015) explains that people live in a rapidly changing world. In the past, adapting to change itself was sufficient for companies to ensure their survival and continued survival. However, a lot of research shows that companies that can build brand awareness and corporate image are more likely to succeed. Brand is critical to the business and is an important factor influencing consumers' purchasing choices. Branding is critical to the business and is an important factor influencing consumer buying choices. Therefore, it is often said that companies produce products and consumers purchase brands. Shahid (2017) explained that consumers prefer to buy brands they are familiar with. Their results state that consumers are always reluctant to buy new brands. If someone knows any adverse information about a product, he will not buy it. Therefore, it can be said that it must work very hard to establish a positive image of its brand company. In order to know whether consumers understand their brand and maintain their customers, the company will have to constantly trigger its brand and do more and more advertising so that a huge number of people know their brand. Bilgili & Ozkul (2015) explained that brand awareness includes brand recognition, potential to be remembered, information and ideas about products. Their finding states that brand awareness and the information nodes in the memory as well as the ability of customers to identify brands in a sort of conditions reflect their brand. Hidayat (2018) explained that if consumers understand the product, it will form an active attitude of consumers, and will continue the product consumption process.

Research Model

According to the literature review, they show that the value of consumers in the five constructs including perceived quality, brand loyalty, electronic word of mouth, product design, as the main variables that influence consumers to make new smartphone purchase decisions and are worth studying. Therefore, a research model is proposed as shown in Figure 1.



**FIGURE 1
RESEARCH MODEL**

Hypotheses

Based on the research model, five hypotheses are proposed as below.

Hypothesis H1: Purchase intention is significantly affected by perceived quality.

Hypothesis H2: Purchase intention is significantly affected by brand loyalty.

Hypothesis H3: Purchase intention is significantly affected by electronic word of mouth.

Hypothesis H4: Purchase intention is significantly affected by product design.

Hypothesis H5: Purchase intention is significantly affected brand awareness.

METHODOLOGY

The following descriptions provide a summary of methodology of this research.

Sampling

The research population consists of Hong Kong college students, and the responses were collected through questionnaire. In order to effectively reach the target respondents, the questionnaires were spread by using the web link and posted on Facebook and WeChat. The total number of responses is 104.

Data Collection

In this study, the target groups are Hong Kong college students, with the goal of exploring the influence of five factors on the purchase intention of smartphone, they are perceived quality; brand loyalty; electronic word of mouth; product design; brand awareness. The primary data will be collected through an online questionnaire. Questionnaires are jointly designed by studying and reviewing the relevant literature and Google Form was used to make the questionnaires online. In addition, demographic information such as gender, age and education level was collected.

Questionnaire Design

Under the literature review above, the study presents the research model in Figure 1. Perceived quality, brand loyalty, electronic word of mouth, product design and brand awareness are independent variables. Purchase intention is the dependent variable. Those questions from previous studies were used because of their proven satisfactory level of reliability and validity. They contribute to the significance of this research. This study uses an online questionnaire survey method to summarize the results of this study by collecting visitors' responses to the questionnaire. Since the design of the questions will affect the validity of the findings, the questions used in the questionnaires are in 5-point scale style, which raises the question and asks the respondents to give their preference from strong agreement to strong opposition. The codes of these five choices are strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). The questionnaire includes 23 questions for 6 factors and demographic information.

Measurement Items

All measures in the questionnaires are adopted from previous work. Table 1 shows all the measurement items and the corresponding sources. At the same time, some wording in the measurement items was modified. For example, the measurement items of perceived quality to use were adapted from the research of Heriyati & Siek (2011); Sharma (2017). Both reports focus on perceived quality of smartphones. It was cited because of the similarity, and the wording of the questionnaire was changed, from 'high' to 'good'. In addition, Heriyati & Siek (2011) also indicated that perceived quality has the characteristics of durable and reliable, so the questionnaire has applied these two characteristics. And the measurement items of product design were adapted from Bettels & Wiedmann (2019), the research is about the brand logo. In order to better match the research of customers on the premise of owning mobile phones, their question "*I expect a product from this brand to be good looking.*" was changed to "*I like the design of the brand X*". According to Sharma's (2017) and Forsido's (2012) studies, their research is similar to this study, so all the measurement items in their questions of brand loyalty are adopted. The measurement items of electronic word of mouth are adopted from Wong (2018). The measurement items of brand awareness are adopted from Langaro, Rita & Salgueiro (2018). The measurement items of purchase intention are adopted from Ibraheem & Maria (2018). In addition to measuring these six factors, an additional question is asked at the beginning "*What is your smartphone brand?*" The phone brand selected by the respondents was represented by X in other questions.

Data Analysis Methods

The data collected was tested for reliability and validity in order to prepare reliable data for further statistical analysis. The five hypotheses were tested by using multiple linear

regressions.

Constructs	Measurment items	Reference
Perceived quality	PQ1: Brand X offers product with very good quality. PQ2: Brand X offers products with consistent quality. PQ3: Brand X offers very durable products. PQ4: Brand X offers very reliable product.	Heriyati & Siek, 2011 Sharma, 2017
Brand loyalty	Q6: I consider myself to be loyal to brand X. Q7: Brand X will be my first choice. Q8: I will not buy other brands if brand X available at the store.	Sharma, 2017 Forsido, 2012
Electronic word of mouth (eWOM)	eWOM1: I often read other consumers'/friends' post to make sure I buy the right product/brand. eWOM2: I often read other consumers'/friends' post to know what products/brand make good impression on others. eWOM3: I often read other consumers'/friends' post to gather information about products/Brands.	Wong, 2018
Product design	PD1: I like the design of the brand X. PD2: I expect the design of this product from X to be helpful to distinguish myself from the mass.	Bettels & Wiedmann, 2019
Brand awareness	BA1: I recognize the characteristics of brand X. BA2: I remember the brand X often. BA3: I feel familiar with brand X product.	Langaro et al., 2018
Purchase intention	PI1: Consider this smartphone is my first choice if I buy same Smartphone product through online. PI2: I prefer to buy my smartphones brand. PI3: It is very likely that I will buy this smartphone brand.	Ibraheem & Maria, 2018

RESULTS AND ANALYSIS

Demographic Analysis

After data collection, 83 valid responses suitable for this study were selected from 104 total responses by screening abnormal data. The analysis of demographic variables of this study is shown in Table 2. The ratio of male to female is about 2 to 1. Most of the respondents are between the ages of 18 to 34. 31.32% of the respondents have a college education. 53.01% of the respondents have a university education. 15.66% of the respondents have a master's degree or above.

		Frequency	Percentage
Gender	Male	56	67.46%
	Female	27	32.53%
Age	17 or below	1	1.20%
	18-24	25	30.12%
	25-34	54	65.06%
	35-50	3	3.61%

Education level	Post-secondary school/	26	31.32%
	Associate Degree/Diploma University	44	53.01%
	Master's Degree or above	13	15.66%

Validity Test

Exploratory factor analysis was used to verify the validity of the collected data, and the results are shown in Table 3. Most of items loaded into a single component and have a relatively high factor loading greater than 0.7. The factor loading of PQ2, BA3 and PI3 are 0.69, 0.61 and 0.62 respectively; these items are only a little bit lower than 0.7, so they were kept for further statistical analysis. Since Ertz, et al. (2016) expected that factor loading of 0.4 or above as acceptable in factor analysis when exploring environmental consumer behavior. But the loading of PI2 is 0.25 which is quite lower than 0.40, therefore, item PI2 was removed from purchase intention, and only the responses of PI1 and PI3 were used for further statistical analysis.

Constructs	Component	Factor Loading
Perceived quality	P11	0.73
	P12	0.69
	P13	0.83
	P14	0.78
Brand Loyalty	BL1	0.78
	BL2	0.85
	BL3	0.86
Electronic word of mouth	ewom1	0.87
	ewom2	0.77
	ewom3	0.84
	ewom4	0.70
Product design	PD1	0.87
	PD2	0.73
Brand awareness	BA1	0.73
	BA2	0.72
	BA3	0.61
Purchase intention	P11	0.83
	P12	0.25
	P13	0.62

Reliability Test

Cronbach's Alpha test was used for reliable analysis. As shown in the result in Table 4, the value of perceived quality, brand loyalty, eWOM, brand awareness and purchase intention are well above the commonly accepted thresholds 0.7. And the Cronbach's Alpha of product design is 0.67 which is within the acceptable limits.

Construct	Cronbach's Alpha	No. of Items
Perceived quality	0.77	4
Brand Loyalty	0.86	3
Electronic word of mouth	0.83	4
Product design	0.67	2
Brand awareness	0.81	3

Purchase intention	0.77	2
--------------------	------	---

Regression Analysis

This study verified the influence of five independent constructs: perceived quality, brand loyalty, electronic word of mouth, product design and brand awareness on purchase intention through multiple regression analysis. The model shown in Table 5 shows that perceived quality, brand loyalty, electronic word of mouth, product design and brand awareness have an essential impact on purchase intention (Adjusted $R^2=0.64$, $p<0.05$). Table 6 shows that the significance value of the model is 0.00, which is lower than 0.05. Therefore, the model is of great significance. In addition, the purchase intention relationship for each construct was then tested.

R	R square	Adjusted R Square	Std. Error of the Estimate
0.81	0.66	0.64	0.9

	Sum of squares	df	Mean Square	F	Sig.
Regression	125.94	5	25.18	30.68	0
Residual	63.21	77	0.82		
Total	189.15	82			

In coefficient analysis, the relationships between independent and dependent constructs are shown in Table 7. Perceived quality ($p>0.05$), electronic word of mouth ($p>0.05$) and product design ($p>0.05$) do not have significant relationship with purchase intention. In addition, both the significance p-values of brand loyalty and brand awareness influence are 0.00, which is lower than 0.05. These results show that brand loyalty and brand awareness have significant impact on purchase intention. The results of testing the individual hypothesis are summarized in Table 8 below.

	Unstandardized coefficients		Standardized coefficients		
	B	Std. Error	Beta	t	Sig.
Constant					
Perceived quality	1800	1.206		1.493	0.14
Brand Loyalty	0.003	0.063	0.004	0.055	0.956
Electronic word of mouth	0.255	0.051	0.0458	5.021	0
Product design	0.02	0.041	0.036	0.495	0.622
Brand awareness	-0.009	0.089	0.007	-0.099	0.921
Purchase intention	0.39	0.082	0.443	4.746	0

Hypotheses	Results
H1: Purchase intention is significantly affected by perceived quality	Not Supported
H2: Purchase intention is significantly affected by perceived quality	Supported
H3: Purchase intention is significantly affected by perceived quality	Not Supported
H4: Purchase intention is significantly affected by perceived quality	Not Supported
H5: Purchase intention is significantly affected by perceived quality	Supported

DISCUSSION

The first hypothesis H1 states that perceived quality will positively affect purchase intention. However, the research findings do not support this hypothesis. As a matter of fact, the research outcomes are against such expectations. A possible explanation for such difference between the expected outcomes and the research results is that different customer groups or demographics tend to prioritize different aspects of a product, such as design innovation, pricing level or the hedonic design etc. As pointed out by Kim (2019), the intrinsic and extrinsic attributes of the product and their benefits are the manifestation of the perceived value of the product. For instance, some tech-savvy may still spend money on products with impressive technology innovation and flaws in perceived quality. In other words, the varying customer prioritization of product attributes help to explain the reason the research outcomes differ from the findings in previous research that perceived quality will positively impact purchase decision. Second is the prioritization or preferences of different customer groups, the limited sample size may be another reason why the research outcomes do not support the hypothesis H1. Another possible explanation is that consumers' understanding of perceived quality is reflected in their expectation of service or the impression. It is not a simple understanding of the quality of a product. Heriyati & Siek's (2011) results also suggest that having a good impression of perceived quality is one of the most important factors affecting consumers' purchase of smartphones. According to Yaman (2018), perceived quality includes consumers' perception of what and how services are provided based on their needs, customers' experience, and their expectations of the current service process. These perceptions will influence consumer buying behavior.

Even if a vast majority of customers will make their purchasing decisions based on their perceived quality of products, a relatively small sample size involved in this research may result in deviation from the previous findings.

The hypothesis H2: Brand loyalty will positively affect purchase intention is supported in this study. The result found in this study is consistent with previous research. Akkucuk & Esmaeili (2016) have mentioned that when customers purchase from one brand repeatedly, they will become loyal to that brand. And they found that there are many factors that affect customer loyalty, and only the best strategy to attract and retain customers can get customer loyalty. Wong's (2018) study also said that brand loyalty means that the customers choose to repeat purchase the products of the same company, rather than a substitute product produced by a competitor. Odoom (2016) has mentioned that it may be a mistake for marketers to market brands solely on the basis of consumer preferences without further consideration of their ultimate connection to actual brand loyalty. This may further help in improving the consumer's brand quality perceptions and hence a better word of mouth which may further lead to an increase in brand loyalty. Therefore, this research further supports that brand loyalty will affect purchase intention. Rapid technological development and short product life are fatal flaws in the smartphone market, and new market participants will dominate the market. Mobile phone developers should focus on understanding the latest market conditions and allow employees to take various administrative measures. The main purpose is to increase brand loyalty to avoid losing customers to competing brands.

According to regression analysis in this study, there is no positive relationship between purchase intention and electronic word-of-mouth (eWOM). Hypothesis H3 is not supported in this research shows that eWOM has no significant effect on purchase intention. The result is similar to the finding by Wong (2017). Wong (2017) concludes that eWOM in online shopping does not positively affect consumers' trust in online stores.

It is because it is difficult for consumers to trust online stores that subsequently affect their purchase intention. Wong (2017) also mentioned a news report from ET Net, it stated

that people seldom initiatively write reviews about good service or products when they appreciate some good products or service. So, when consumers want to check out something from a eWOM, most of the reviews are negative. The results of this study are inconsistent with the findings of Wong (2018); Du (2017). The reason for the inconsistent results may be that the information provided on the Internet is two-sided, positive and negative. Positive information can increase consumers' willingness to buy. In contrast, negative information can reduce intentions. Inconsistencies in scope may be the cause of inconsistencies in research results. But Wong's (2018) research also points out that many of the fake reviews were written by people hired by some brokers. As this situation becomes more frequent, some consumers may not believe others' reviews which, may be unreliable and not reflect the truth. Although eWOM cannot significantly influence purchase intention in this research, it is mentioned in Du's (2017) study that eWOM is conducive to the establishment of connections between enterprises and target audiences and the maximum range of communication and influence. Chiosa (2014) also said that living in a digital world where everything is happening, consumers can directly express their opinions, provide feedback, appreciate or question a brand's behavior.

Another hypothesis H4 is that product design will positively influence purchase intentions. Nevertheless, the research outcomes also stand against such a convention. As pointed out by Landwehr, et al. (2012), aesthetics can make consumers respond well, and attractive designs become more convincing when paired with strong brands. This suggests that the impact exerted by product design upon customers' buying intention may be weakened if the product brands enjoy little brand awareness or acceptance. Supposed some brands have poor brand image or customer recognition, it could be quite hard for targeted customer groups to pay attention to or get obsessed with the product design. Therefore, the brand awareness and market presence are possibly a precondition for product design to positively affect purchase intention.

Another probable factor that results in the deviation of the research outcomes from the hypothesis is that intended customers' perception about the same product design may differ a lot. This can result in their strong or weak buying intentions. For instance, while some intended audiences tend to view certain product designs as positive and attractive, others simply find those designs dull and meaningless to them. In the research of Lee & Johnson (2016), product design is not only the design of product appearance (color, shape, texture, etc.), but also the design of functions (call quality, screen pixels, etc.). This is a subjective issue that depends on cultural differences, educational backgrounds and life experiences of a large customer base. Under such a circumstance, product design could be perceived in different manners and becomes a factor to either help or hold customers in making purchasing decision.

The hypothesis H5: brand awareness will positively affect purchase intention is supported in this study. Shahid (2017) has mentioned that consumers will prefer to buy the brand they know well. Hidayat (2018) commented that if consumers understand the product, it will form a positive attitude of consumers, and will continue the product consumption process. When customers do not have time to consume, they will subconsciously identify the product they need. The results of the above studies and other previous studies indicate that brand awareness is one of the factors that affect customer's purchase intentions. For any company, building a brand awareness to build a strong brand is the key to maintaining strategic leadership. The concept is the soul of the product and must be given special attention. Through promotion and advertising, to increase customer awareness of the brand is the key to enhancing brand awareness.

CONCLUSION

Smartphones are not just ordinary mobile phones. It provides most services; it was previously done by a computer. Now, it has become a part of consumers' daily life. It is not a matter of fashion rather, it is necessary. This study discusses the factors that affect the purchase intention of smartphones of Hong Kong college students. These factors are perceived quality, brand loyalty, electronic word of mouth, product design, brand awareness, and how they affect the purchase intention. A total of 83 valid responses collected in this study. For Hong Kong university students, electronic word of mouth, product design and perceived quality have not obtained effective results in research, however, this study found that brand loyalty and brand awareness are important factors influencing purchase intention. In this era, college students are important target customers for mobile phone manufacturers. They should focus on understanding the latest market conditions and allow employees to take various administrative measures, the main purpose is to improve brand loyalty and avoid losing customers because of competing brands. To establish a strong brand is the key to maintaining brand competitiveness and through promotion and advertising to increase customer purchase intention of the brand.

Limitations and Recommendations

Based on the discussion about potential explanations for the deviation of the research outcomes and the hypotheses, the findings suggest that the research has some limitations. First, the responses of this study are 83 respondents, which is small, so it may not accurately reflect what factors affect the purchase intention of college students in Hong Kong. Therefore, it is recommended to increase the number of respondents while maintaining the authenticity of the data.

Secondly, the ratio of male to female in this study is 2 to 1, so men and women may have different demands for smartphones. For example, male may pay more attention to performance, while female may prefer to take photos. Therefore, this study may be influenced by gender. The third limitation is that not considering other variables can indirectly or directly affect the five independent variables proposed in this study, and then affect the purchase intention, which will limit the usefulness of the results of this research. This study suggests that more independent variables should be studied in future. At the same time, in the eWOM factor, the results of the study may be influenced by too many negative comments, which may cause consumers to misunderstand. Finally, in the part of the questionnaire, the questions may not be comprehensive enough, which will lead to the deviation of the results. Therefore, the questions in the questionnaire need to be more relevant to the topic to make the research more accurate. This study suggests that future research can further investigate and understand the limitations identified here.

REFERENCES

- Akkucuk, U., & Esmaili, J. (2016). The Impact of Brands on Consumer Buying Behavior. *International Journal of Research in Business and Social Science* (2147-4478), 5(4), 1-16.
- Alrwashdeh, M., Emeagwali, O., & Aljuhmani, H. (2019). The effect of electronic word of mouth communication on purchase intention and brand image: An applicant smartphone brands in North Cyprus. *Management Science Letters*, 9(4), 505-518.
- Andervazh, L., Shohani, M., Tamimi, H., Diyaleh, P., & Alnasere, S. (2016). The Effects of Brand Perceived quality and awareness on Brand loyalty (Case Study: Carbonated drinks). *International Journal of Advanced Biotechnology and Research*, 7(1), 301-322.
- Asshidin, N.H.N., Abidin, N., & Borhan, H.B. (2016). Perceived quality and emotional value that influence consumer's purchase intention towards American and local products. *Procedia Economics and Finance*, 35(3), 639-643.

- Bilgili, B., & Ozkul, E. (2015). Brand awareness, brand personality, brand loyalty and consumer satisfaction relations in brand positioning strategies (A Torku brand sample). *Journal of Global Strategic Management/ Volume*, 9(2).
- Calvo-Porrá, C., & Lévy-Mangin, J.P. (2017). Store brands' purchase intention: Examining the role of perceived quality. *European Research on Management and Business Economics*, 23(2), 90-95.
- Cassavoy, L. (2013). What Is a Smartphone? Retrieved from: http://cellphones.about.com/od/glossary/g/smart_defined.htm.
- Chiosa, A.R. (2014). Word of mouth on social media. *SEA-Practical application of science*, 2(06), 37-42.
- Counterpoint. (2019). Available at: <https://www.counterpointresearch.com/devices/smartphones/>
- Decerf, B. (2017). Why not consider that being absolutely poor is worse than being only relatively poor?. *Journal of Public Economics*, 152, 79-92.
- Du Plessis, C. (2017). The role of content marketing in social media content communities. *South African Journal of Information Management*, 19(1), 1-7.
- Ertz, M., Karakas, F., & Sarigöllu, E. (2016). Exploring pro-environmental behaviors of consumers: An analysis of contextual factors, attitude, and behaviors. *Journal of Business Research*, 69(10), 3971-3980.
- Forsido, M.Z. (2012). Brand Loyalty in Smartphone, Master Thesis.
- Muni-Awudu, G., & Hyekomini, K. (2017). *Consumer perceptions of Country of Origin Brand image and product quality on the purchase intention of high-tech products: A multi-country study of Ghanaian, Norwegian and South Korean consumers* (Master's thesis).
- Heriyati, P., & Siek, T.P. (2011). Effects of word of mouth communication and perceived quality on decision making moderated by gender: Jakarta blackberry smartphone consumer's perspective. *Contemporary Management Research*, 7(4).
- Al Koliby, I.S., & Rahman, M.A. (2018). Influence Dimensions of Brand Equity on Purchase Intention Toward Smartphone in Malaysia. *VFAST Transactions on Education and Social Sciences*, 15(1), 7-19.
- Bettels, J., & Wiedmann, K.P. (2019). Brand logo symmetry and product design: The spillover effects on consumer inferences. *Journal of Business Research*, 97, 1-9.
- Kim, S.J., Kim, K.H., & Choi, J. (2019). The role of design innovation in understanding purchase behavior of augmented products. *Journal of Business Research*, 99, 354-362.
- Kucukemiroglu, S., & Kara, A. (2015). Online word-of-mouth communication on social networking sites. *International Journal of Commerce and Management*.
- Landwehr, J.R., Wentzel, D., & Herrmann, A. (2012). The tipping point of design: How product design and brands interact to affect consumers' preferences. *Psychology & Marketing*, 29(6), 422-433.
- Lee, S., & Johnson, Z.S. (2017). The effect of new product design and innovation on South Korean consumer's willingness to buy. *Asia Pacific Journal of Marketing and Logistics*.
- Odoom, R. (2016). Brand marketing programs and consumer loyalty—evidence from mobile phone users in an emerging market. *Journal of Product & Brand Management*.
- Parameshwaran, R., Baskar, C., & Karthik, T. (2015). An integrated framework for mechatronics based product development in a fuzzy environment. *Applied Soft Computing*, 27, 376-390.
- Poturak, M., & Turkyilmaz, M. (2018). The impact of eWOM in social media on consumer purchase decisions: a comparative study between Romanian and Bosnian consumers. *Management and Economics Review*, 3(2), 138-160.
- Rahmawati, R., & Do, B.R. (2015). Shopping Motivation on Purchase Intention: Can Loyalty Program and Corporate Image Enhance Such Relationship?. *APMBA (Asia Pacific Management and Business Application)*, 2(3), 154-169.
- Shahid, Z., Hussain, T., & Zafar, F. (2017). The impact of brand awareness on the consumers' purchase intention. *Journal of Marketing and Consumer Research*, 33(3), 34-38.
- Sharma, R. (2017). Perceived quality and brand loyalty of smartphones: an empirical investigation of celebrity endorsements in Indian market. *Abhigyan*, 35(2), 1-15.
- Singh, T., Hangloo, M., & Kaur, H. (2012). Impact of persuasive communication on product awareness and purchase intention: A Quasi-experimental study of probiotic products. In *PRIMA 3* (1) 28.
- WONG, A.T.T. (2017). A STUDY OF FACTORS AFFECTING TRUST IN ONLINE SHOPPING. *Journal of Global Economics, Management and Business Research*, 7-16.
- ANTHONY, T.T.W. (2018). A STUDY OF THE RELATIONSHIPS OF CUSTOMER SATISFACTION AND BRAND LOYALTY TO PURCHASE INTENTION ON FREEZE-DRIED FRUITS. *Journal of Global Economics, Management and Business Research*, 1-8.
- Wong, A.T.T. (2018). A TAM Approach of Studying the Factors in Social Media and Consumer Purchase Intention in Hong Kong. *Journal of Economics, Management and Trade*, 1-17.
- Wong, A.T.T. (2019). A Study of Purchase Intention on Smartphones of Post 90s in Hong Kong. *Asian Social Science*, 15(6), 78-87.
- Yaman, Z. (2018). The Effect of Word of Mouth Marketing on the Purchase Behavior Via Brand Image and

- Perceived Quality, *Montenegrin Journal of Economics*, 14(2), 175-182.
- Yu, Y., & Lee, K. (2014). A study on factors influencing purchase intention of smartphones on Chinese university students. *Journal of Digital Convergence*, 12(1), 253-261.
- Yunus, N.S.N.M., & Rashid, W.E.W. (2016). The influence of country-of-origin on consumer purchase intention: The mobile phones brand from China. *Procedia Economics and Finance*, 37, 343-349.