Consumer Online Shopping Behavior:
The Effect of Internet Marketing Environment, Product Characteristics, Familiarity and Confidence, and Promotional Offer

Norazah Mohd Suki, Norbayah Mohd Suki

Abstract—Online shopping enables consumers to search for information and purchase products or services through direct interaction with online store. This study aims to examine the effect of Internet marketing environment, product characteristics, familiarity and confidence, and promotional offers on consumer online shopping behavior. 200 questionnaires were distributed to the respondents, who are students and staff at a public university in the Federal Territory of Labuan, Malaysia, following simple random sampling as a means of data collection. Multiple regression analysis was used as a statistical measure to determine the strength of the relationship between one dependent variable and a series of other independent variables. Results revealed that familiarity and confidence was found to greatly influence consumer online shopping behavior followed by promotional offers. A clear understanding of consumer online shopping behavior can help marketing managers predict the online shopping rate and evaluate the future growth of online commerce.

Keywords—Internet Marketing Environment, Product Characteristics, Multiple Regression Analysis, Malaysia.

I. INTRODUCTION

THE internet has changed the way people shop and day-to-day lives. Internet usage has grown rapidly over the past years and has become a common means for delivering and trading information, services, and goods [1]. In recent years, shopping online has become the norm and all over the world consumers prefer to shop online as it has many advantages [2]. The Internet-based electronic commerce environment enables consumers to search for information and purchase products or services through direct interaction with online store. Although, purchasing online is still a small part of Internet usage, most analysts expect it will increase dramatically when consumers feel convinced and secure about their purchases and protection of their privacy. Internet shopping in Malaysia is in its infancy [3]. Web-retailers can only offer certain ranges of products and services to web-shoppers, including e-banking services, technology gadgets, cosmetics, clothing, and the booking of airline tickets [4]. The first groups of products are ones consumers do not need to see personally before purchasing.

Norazah Mohd Suki is an associate professor with the Labuan School of Business & Finance, Universiti Malaysia Sabah, 87000 labuan F.T., Sabah, Malaysia (e-mail: azahsuki@yahoo.com).

Norbayah Mohd Suki is a senior lecturer with the Labuan School of Informatics Science, Universiti Malaysia Sabah, 87000 labuan F.T., Sabah, Malaysia (e-mail: bayasuki@yahoo.com).

These products include e-banking services and the booking of airline tickets. This group of products is suitable for Internet shopping because the Internet provides transaction and communication functions. The second groups of products are items consumers prefer to see and touch before purchasing. These products include technology gadgets, cosmetics, and clothing. This group of products is not suitable for Internet shopping because the images and information about the product may not be accurate or sufficient for consumers to perform Internet-based transactions. This study aims to examine the effect of Internet marketing environment, product characteristics, familiarity and confidence, and promotional offers on consumer online shopping behavior.

II. LITERATURE REVIEW

Online shopping has eliminated on the consumer's side such traditional shopping inconveniences as battling crowds, standing in long checkout lines, and fighting for parking spaces at a busy mall [2]. The customers are able to evaluate the available products and their prices from a multiplicity of diverse outlets through the Internet. These comparison-shopping sites may save customers' time and money because they can see which retailer has the best price without visiting many websites. Thus, it allows consumers to browse online shopping websites in the privacy of their home [2].

A. Internet Marketing Environment

Internet marketing environment is related to a paperless environment where a computer is used as a medium to recognize, reproduce, and store product information that enable online businesses to be operated without limits anytime and anywhere in 24 hours a day, 7days a week and 365 days a year principle [5]. Consumers are free to shop at different websites and they are able to switch from one website to another in just a click [2]. Shoppers are more attracted to well-designed online shopping sites that are easy-to-navigate and visually appealing. Thus, the website design does influence shoppers' purchases [6]. Through a superior understanding of the web shopper's online purchase intention, web retailers will be able to enlarge valuable and efficient web-shopping strategies to create a centre of attention for new and potential web-shopping customers [4]. Internet marketing is becoming a more and more important strategy for the company to promote, advertise and interact more with online customers.

World Academy of Science, Engineering and Technology
International Journal of Economics and Management Engineering
Vol:7, No:3, 2013

With a good understanding of the web shoppers' online purchase intentions, web retailers will be able to develop effective and efficient web-shopping strategies to attract new and potential web-shopping customers [7]. Therefore, the study hypothesizes that:

H1. The Internet marketing environment will have a significant impact on consumer online shopping behavior.

B. Product Characteristics

The product is related to anything that can be offered to a market that can satisfy the customers' needs and wants which include services [8]. In order to provide more accurate information and a better shopping experience, most of the online retailers are turning to merchandise that allows shoppers to interact with the products and examine them online [9]. Product characteristics are very important in developing the online business. Besides that, products can include more tangible objects such as cars, computers or cell phones, and these products also include services, events, persons, places, organizations, ideas or a mixture of these [8]. Before the consumers purchase products through the Internet, they use the Internet as a cue to identify the characteristics and the brand of a product itself [10]. In order to provide more accurate information and a better shopping experience, most of the online retailers are turning to the product virtualization technology that allow the shoppers to interact with the products and examine the products online [11]. Thus, it is expected that:

H2. Product characteristics will have a significant impact on consumer online shopping behavior.

C. Familiarity and Confidence

Familiarity is related to the amount of goods in relation to experience that has been accumulated by the consumers [12]. The familiarity of the customer with the computer and the Internet and frequency and length of his or her usage, were found to be positively associated with adoption behavior in general [13]. Kim and Jihyun [9] highlight the importance to assess the consumer confidence when they going to shop with the online retailer. When the product familiarity is increased, it can improve the consumers' cognitive structures and task performance as well as their ability to analyze, elaborate and remember the product information [12]. Familiarity becomes more important to increase customer satisfaction and it differentiates between familiar and unfamiliar fields [8]. Thus, a better understanding of the technology and its operating processes will definitely alleviate concerns and lead to higher usage of online shopping [13]. Accordingly, the study hypothesizes that:

H3. Familiarity and confidence will have a significant impact on consumer online shopping behavior.

D. Promotional Offer

Promotion is related to a form of strategic communication to inform, persuade, and remind the potential buyers of a product in order to influence an opinion or elicit a response [14]. Promotion can bring benefits to the consumers for enjoying shopping and searching for information [15]. Sales promotion, a part of the marketing campaign, consists of a diverse collection of incentive tools, mostly short term designed to stimulate quicker or greater purchase of particular products or services by consumers [8]. Sales promotions enhance consumer's number of shopping trips to the store. Hence, the study posits that:

H4. Promotional offer will have a significant impact on consumer online shopping behavior.

Hence, the study proposed the following theoretical framework (Fig. 1):
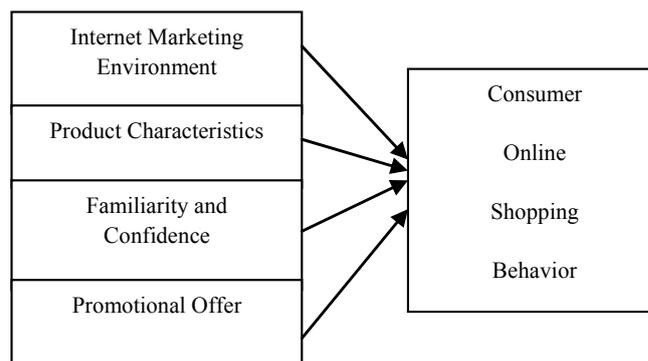

Fig. 1 Theoretical framework

III. METHODOLOGY

200 questionnaires distributed to the respondents who are students and staff in a public university in the Federal Territory of Labuan, Malaysia following simple random sampling method. All respondents were asked to complete the questionnaire which comprised of three sections. Section A consisted of demographic profile which consists of gender, age, level of education, and monthly income and helps to identify the group of consumers. While section B examined the consumer Internet shopping experience. Section C examined the consumer shopping behavior via the Internet. All of these questions were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The four factors applied consisted of Internet marketing environment, product characteristics, familiarity and confidence, and promotional offers adapted from Haque, Khatibi, and Mahmud [16]. Statistical Package for Social Sciences (SPSS) version 17 computer program was utilized in order to calculate the descriptive analysis. Descriptive analysis is used to portray the basic features that include means, variances, standard deviation, and can also evaluate qualitative analysis of data. These also provide a simple summary about the measures and the sample. Then, multiple regression analysis is used. This statistical measure attempts to determine the strength of the relationship between one dependent variable and a series of other independent variables. The advantage of regression is it provides the forecasts and also explains the variations in the forecast variable in the past.

World Academy of Science, Engineering and Technology
International Journal of Economics and Management Engineering
Vol:7, No:3, 2013

IV. DISCUSSION OF ANALYSIS

Table I depicts frequency analysis of the demographic profile of respondents. 122 (61%) of the respondents were female and 39% males. 77% were aged 21 to 25 years followed by 11% aged 26 to 30 years. More than half of the respondents (62%) held bachelor degrees. 11% of the respondents earned monthly income more than RM 2,001.

TABLE I
DEMOGRAPHIC PROFILE OF RESPONDENTS

	Frequency	Percentage
Gender		
Male	78	39
Female	122	61
Age (years old)		
Below 20	10	5
21-25	154	77
26-30	22	11
31-35	10	5
Above 36	4	2
Level of Education		
Primary	8	4
Secondary	46	23
Bachelor/Degree	124	62
Master/PhD	22	11
Monthly Income		
Less than 1000	144	72
1001-2000	34	17
2001-3000	16	8
Above 3001	6	3

A. Experiences with Online Shopping

Table II describes online shopping experience of the respondents. 158 respondents have shopped online this year and 42 respondents have yet to do so. 70 respondents choose the product itself as the main factor to affect their online shopping behavior followed by convenience and promotional offer factors. 88 respondents have shopped online within one to three years, 84 respondents in less than a year, and 16 respondents shopped online within three to five years. Next, 54 respondents purchased products through the Internet once every three months, followed by 50 respondents purchased products through the Internet once every six months and 14 respondents purchased products online once every twelve months. 72 respondents (36%) spent eleven to thirty minutes on searching before they found a piece of useful product information, 52 respondents (26%) spent thirty-one to sixty minutes, and 16 respondents (8%) spent less than ten minutes on searching before they found a piece of useful product information.

TABLE II
FREQUENCY ON PURCHASING WILLINGNESS

Experience	Frequency	Percentage
Shop online this year		
Yes	158	79.0
No	42	21.0
Factors affect online shopping behavior		
Web environment	22	11.0
Convenience	56	28.0
Promotional offer	52	26.0
Product itself	70	35.0
Period shopping online		
Less than 1 year	84	42.0
1-3 years	88	44.0
3-5 years	16	8.0
More than 5 years	12	6.0
Frequency shopping online		
Once a month	36	18.0
Once every 3 months	54	27.0
Once every 6 months	50	25.0
Once every 9 months	18	9.0
Once every 12 months	14	7.0
Never	28	14.0
Time spend searching for product online		
Less than 10 minutes	16	8.0
11-30 minutes	72	36.0
31-60 minutes	52	26.0
Don't know	60	30.0

B. Reliability Analysis

Reliability of measurement was tested using the Cronbach's Alpha in order to measure the internal consistency of the scales [17]. Table III infers that the Cronbach's alpha values of all variables were greater than 0.70, implying all variables are reliable and have high internal consistency. No item deletion was performed as the reliability for each factor was high.

TABLE III
RELIABILITY ANALYSIS

Variables	Number of Items	Cronbach's α
Consumer Online Shopping Behavior (COSB)	3	0.846
Internet Marketing Environment (IME)	4	0.810
Product Characteristics (PC)	4	0.835
Familiarity and Confidence (FC)	8	0.804
Promotional Offer (PO)	4	0.807

C. Correlation Analysis among Variables

Pearson correlations were calculated to identify the correlations between the five variables: consumer online shopping behavior, Internet marketing environment, product characteristics, familiarity and confidence, and promotional offers. The average score of the multi-items for a construct was computed since a single construct in the questionnaire was measured by multiple items, and the score was used in correlation analysis and regression analysis. The correlation coefficient value (r) should not go beyond 0.80 to avoid multicollinearity. Since the highest correlation coefficient is 0.636, which is less than 0.80, there is no multicollinearity problem in this research. All major variables were significantly correlated (Table IV).

World Academy of Science, Engineering and Technology
International Journal of Economics and Management Engineering
Vol:7, No:3, 2013

TABLE IV
CORRELATION ANALYSIS

	COSB	IME	PC	FC	PO
COSB	1.000				
IME	0.453**	1.000			
PC	0.123	0.235**	1.000		
FC	0.636**	0.449**	0.156*	1.000	
PO	0.593**	0.565**	0.277**	0.503**	1.000
Mean	11.110	13.440	13.150	27.040	14.280
SD	2.088	2.710	2.550	3.251	2.427

D. Multiple Regression Analysis

Multiple regression analysis was performed to test the hypothesis relationship between independent variables and dependent variable. Results were enumerated in Table V. The F-statistics produced ($F = 50.798$) was significant at 1 percent level (Sig. $F<0.01$), thus confirming the fitness of the model. Thus, significant relationship emerges among the four factors (i.e. Internet marketing environment, product characteristics, familiarity and confidence, promotional offer) and consumer online shopping behavior among students and staff in a public university in Federal Territory of Labuan, Malaysia. Adjusted $R^2 = 0.50$, indicating the independent variables explained 50 percent variance in the dependent variable.

TABLE V
REGRESSION ANALYSIS

	Standardized Beta Coefficients	t-value	Result
IME	0.075	1.196	Not supported
PC	-0.058	-1.116	Not Supported
FC	0.437*	7.333	Supported
PO	0.347*	5.296	Supported
	Adjusted R²	0.500	
F		50.798	
Sig, F		0.000	

* $p < 0.05$

H1 posited that Internet marketing environment would have a significant impact on consumer online shopping behavior . Table V demonstrated that results were insignificant (β_1=0.075; t=1.196; p=0.233). Thus, H1 is not supported where the Internet marketing environment does not have an impact on consumer online shopping behavior. H2 proposed that product characteristics would have a significant impact on consumer online shopping behavior. Results were also insignificant (β_2=-0.058; t=-1.116), signifying H2 is not supported. Next, H3 proposed that familiarity and confidence would have a significant impact on consumer online shopping behavior. A significant result was found (β_3=0.437; t=7.333; p=0.000). Its p-value was < 0.05, implying H3 is supported by the data. H4 posited that promotional offer would have a significant impact on consumer online shopping behavior. Results were $\beta_4 = 0.347$; $t = 5.296$. Its $p<0.05$, hence, H4 is significant and supported.

V. DISCUSSION

This study examined the effect of Internet marketing environment, product characteristics, familiarity and confidence, and promotional offer towards consumer online shopping behavior among 200 students and staff in a public university in Federal Territory of Labuan, Malaysia. Familiarity and confidence significantly influenced consumer online shopping behavior followed by promotional offer, implying hypotheses 3 and 4 were accepted. The beta coefficient for familiarity and confidence is greater than promotional offers in terms of its relationship with consumer online shopping behavior. It signifies that familiarity and confidence with the services is the most influential factor to affect consumer online shopping behavior. Similar results were found by Maenpaa, Kale, Kuusela, and Mesiranta [12]'s study. Consumers make a distinction between familiar and unfamiliar products online that can affect consumer satisfaction [16]. Kim [18] noted that company reputation, structural assurance, and trusting stance, and initial trust beliefs affects consumer attitude to shop online. The new e-vendors with unfamiliar brand name are affected greatly as their brand still not well position in consumer minds. Many customers believe that people who trust a traditional brick and mortar retailer will have a similar level of confidence shopping online for products with the retailer [9].

Promotional offer is the second factor that significantly influences consumer online shopping behavior. This result is comparable to Odunlami & Ogunsiji [15]'s study that promotional offer is a major determinant of consumer online shopping behavior. Sales promotion can be used to increase sales, usage or trial of products or services, and it is an important component of the overall marketing strategy which can provide an incentive that can reach the target audience. For instance, this promotion can bring benefits to the consumers for enjoying online shopping and searching the information [15]. Results also confirmed that consumers put less emphasis on the Internet marketing environment and product characteristics which were found to insignificantly impact consumer online shopping behavior. Inability to feel product is one of the limitation where consumers would want to touch and feel most of the goods before buying. This is due to the fact that the shoppers don't trust what product is in the box. Many of the consumers would want to have it opened and checked, right in front of their eyes but this process is not possible while shopping online. Delay in delivery by the web stores where the stock gets delivered after a week or two but shoppers will find out only after completing their payment. These limitations have caused shoppers to be wary about ordering products online. In other words, consumer confidence with online shopping is affected with issues such as shipping costs, privacy, and the inability to touch and feel products [19]-[24]. However, those who believe that online transactions are not secure enough to protect the payment information from disclosure and who tend to buy in great haste when the purchase becomes necessary may eventually be another group to become online shoppers. Experienced Internet users and experienced online shoppers are more likely to be potential future online shoppers.

World Academy of Science, Engineering and Technology
International Journal of Economics and Management Engineering
Vol:7, No:3, 2013

VI. CONCLUSION

Familiarity and confidence was found to exert a great influence on consumer online shopping behavior among students and staff in a public university in Federal Territory of Labuan, Malaysia followed by promotional offer. Consumers put less emphasis on the Internet marketing environment and product characteristics. Hence, the findings provide additional insight into consumers' online shopping behavior in Malaysia. Results of this study should encourage strategy development for the Internet marketing environment, product characteristics, familiarity and confidence, and promotional offers. A clear understanding of consumer online shopping behavior can help marketing managers predict the online shopping rate and evaluate the future growth of online commerce. Meanwhile, input regarding what motivates consumers to shop online would help e-vendors in formulating strategy, technology, and marketing decisions as well as website design [16].

The government should play an important role in increasing Internet usage among Malaysians and provide more secure online transactions. The retailer or any organization should develop and explore security issues of online transactions making sure they are secure and provide the consumers with confidence to shop online. With the help of government, providing the infrastructure Malaysians will be able to cope with the growth of new technologies and compete in the digital world. It is also recommended that additional studies be undertaken to examine consumer behavior and online shopping patterns in other regions and with larger samples. Demographics differences from the perspective of gender, income and education level should also be explored explicitly in order to examine the dissimilar perceptions of consumer online shopping behavior related to the adoption of and use of information technology [25], [26] and mobile commerce [27]. It would be interesting to investigate the effect of the proposed model using multivariate statistical data analysis such as structural equation modeling as the path coefficients can be calculated via the maximum likelihood technique and overall model fit and measurement model fit assessments can be considered beforehand.

REFERENCES

[1] A.N. Albarq, "Intention to Shop Online Among University Students in Jordan," http://www.tesionline.com/intl/pdfpublicview.jsp?url=../__PDF/14778/14778p.pdf. Last accessed on 2012-4-12, 2006.
[2] N. Ahmad, A. Omar and T. Ramayah, "Consumer lifestyles and online shopping continuance intention," *Business Strategy Series,* vol. 11, no.4, pp. 227-243, 2010.
[3] N. Delafrooz, L.H. Paim, S.A. Haron, S.M. Sidin and A. Khatibi, "Factors affecting students' attitude toward online shopping," *African Journal of Business Management,* vol. 3, no.5, pp. 200-209, 2009.
[4] C.L., Kwek, H.P. Tan and T.C. Lau, "Investigating the shopping orientations on online purchase intention in the e-commerce environment: A Malaysian study," *Journal of Internet Banking and Commerce,* vol. 15, no.2, pp. 1-22, 2010.
[5] A. Haque, J. Sadeghzadeh and A. Khatibi, "Identifying potentially online sales in Malaysia: A study on customer relationships online shopping," *Journal of Applied Business Research,* vol. 22, no.4, pp. 119-130, 2006.
[6] P., Sorce, V. Perotti and S. Widrick, "Attitude and age differences in online buying," *International Journal of Retail & Distribution Management,* vol. 33, no.2, pp. 122-132, 2005.
[7] C.L., Kwek, T.C. Lau and H.P. Tan, "The effects of shopping orientations, online trust and prior online purchase experience toward customers' online purchase intention," *International Business Research,* vol. 3, no.3, pp. 63-76, 2010.
[8] P. Kotler and G. Armstrong, "Principles *of Marketing,*" (14th ed.), "United States: Pearson Prentice Hall, 2012.
[9] H.H. Kim and K. Jihyun, "The effect of offline brand trust and perceived internet confidence on online shopping intention in the integrated multi-channel context," *International Journal of Retail and Distribution Management,* vol. 37, no.2 pp. 126-141, 2009.
[10] L.H., Kuo, C.C.L., Judy, Y.W., Xiang, P.L. Hsi and J.Y. Huei, "Antecedents and consequences of trust in online product recommendations: An empirical study in social shopping," *Online Information Review,* vol. 34, no.6, pp. 935-953, 2010.
[11] J. Kim and S. Forsythe, "Factors affecting adoption of product virtualization technology for online consumer electronics shopping," *International Journal of Retail and Distribution Management,* vol. 38, no.3, pp. 190-204, 2010.
[12] K., Maenpaa, S.H., Kale, H. Kuusela and N. Mesiranta, "Consumer perceptions of Internet banking in Finland: The moderating role of familiarity," *Journal of Retailing and Consumer Services,* vol. 15, pp. 266-276, 2008.
[13] K.C., Man, C. Waiman and S.L. Vincent, "Literature derived reference models for the adoption of online shopping," *Information and Management,* vol. 42, pp. 543-559, 2005.
[14] C., McDaniel, W.C. Lamb and F.J. Hair, "*Introduction to Marketing* (11th ed.)," Canada: International Edition, 2011.
[15] I.B. Odunlami and A. Ogunsiji, "Effect of sales promotion as a tool on organizational performance: A case study of sunshine plastic company," *Journal of Emerging Trends in Economics and Management Sciences,* vol. 2, no.1, pp. 9-13, 2011.
[16] A. Haque, A. Khatibi and S.A. Mahmud, "Factors determinate customer shopping behavior through Internet: The Malaysian case," *Australian Journal of Basic and Applied Sciences,* vol. 3, no.4, pp. 3452-3463, 2009.
[17] J.C. Nunnally, "Psychometric *theory* (2nd ed.)," New York: McGraw-Hill, 1978.
[18] J.B. Kim "An empirical study on consumer first purchase intention in online shopping: Integrating initial trust and TAM," *Electronic Commerce Research,* vol. 12, no.1, pp. 125-150, 2012.
[19] J.A. Castañeda and F.J. Montoro, "The effect of Internet general privacy concern on customer behavior," *Electronic Commerce Research,* vol. 7, no.2, pp. 117-141, 2007.
[20] G.G., Lim, J.Y., Kang, J.K. Lee and D.C. Lee, "Rule-based personalized comparison shopping including delivery cost," *Electronic Commerce Research and Applications,* vol. 10, no.6, pp. 637-649, 2011.
[21] Narayanasamy, D. Rasiah and T.M. Tan, "The adoption and concerns of e-finance K., in Malaysia," *Electronic Commerce Research,* vol. 11, no.4, pp. 383-400, 2011.
[22] N.M. Suki, "A Descriptive Investigation of Malaysian Internet Users' Adoption of Online Shopping," *Journal of Information Technology & Multimedia,* vol. 3, pp. 127-138, 2006.
[23] N.M. Suki and N.M. Suki, "Online buying innovativeness: Effects of perceived value, perceived risk and perceived enjoyment," *International Journal of Business & Society,* vol. 8, no.2, pp. 81-93, 2007.
[24] R. Ramanathan, "An empirical analysis on the influence of risk on relationships between handling of product returns and customer loyalty in E-commerce," *International Journal of Production Economics,* vol. 130, no.2, pp. 255-261, 2011.
[25] J.M. López-Bonilla and L.M. López-Bonilla, "Sensation seeking and e-shoppers," *Electronic Commerce Research,* vol. 8, no.3, pp. 143-154, 2008.
[26] F. Ulbrich, T. Christensen and L. Stankus, "Gender-specific on-line shopping preferences," *Electronic Commerce Research,* vol. 11, pp. 181-199, 2011.
[27] A.A. Ozok and J. Wei, "An empirical comparison of consumer usability preferences in online shopping using stationary and mobile devices: results from a college student population," *Electronic Commerce Research,* vol. 10, no.2, pp. 113-137, 2010.

Norazah Mohd Suki is an associate professor with the Labuan School of Business & Finance at Universiti Malaysia Sabah, Labuan International Campus, Federal Territory of Labuan, Malaysia. Her research interests include Electronic Marketing, E-Commerce, M-Commerce, Consumer Behavior, Mobile Learning and areas related to Marketing.

Norbayah Mohd Suki is a senior lecturer with the Labuan School of Informatics Science at Universiti Malaysia Sabah, Labuan International Campus, Federal Territory of Labuan, Malaysia. Her research interests include creative multimedia, m-learning, animation, interactive storytelling.