Influence of YouTube Advertising on Attitude of Young Consumers: A Study of Perceptions of Students of University of Delhi

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Abstract

Social media advertising is a media strategy that uses social media like YouTube, Facebook, Instagram, Twitter and such other platforms. The purpose of this study is to understand in depth how habitude variables like log-on-frequency, log-on-duration, length of usage and access influence the effectiveness of YouTube advertising. For this purpose students of University of Delhi have been taken as the population of the study to whom questionnaires were sent online. The study has adopted a descriptive survey design. The instrument for data collection is a questionnaire containing 12 items on a 5-point Likert scale. A pilot study was conducted to establish the reliability of the instrument in Indian environment. Reliability coefficient of 0.884 was obtained using Cronbach's Alpha. Thereafter online questionnaire was administered to 500 students of University of Delhi who were selected by purposive random sampling. Out of them 300 students submitted their responses. One-Way ANOVA was used for analysis. Subsequently post-hoc Bonferroni test was performed at 0.05 level of significance to examine the relevant pairwise comparisons. This research established that when log-on-frequency is daily and log-on-duration is three hours or more, YouTube advertising is effective whereas impact of length of usage is not statistically significant. When access is through mobile phone & PC both, YouTube is effective in creating awareness of brands. This in-depth analysis will help the stakeholders to acquire and utilize YouTube advertising to reach a greater number of young customers and satisfy them for their success in business.

Keywords: YouTube advertising, Perceptions, Consumers, Social Media

I. INTRODUCTION

Social media is an Internet-based channel that allows users to interact with both vast and small audiences who derive value from user-generated content and the perception of interaction with others (Carr & Hayes, 2015). In the past few years, social media has shown an exponential growth of user accounts. India, along with all countries has witnessed a massive growth in the usage of social media. Facebook is the most popular social media platform worldwide with more than 2.7 billion monthly active users, out of which 310 million users are from India only. Instagram has more than one billion monthly active users worldwide and YouTube also has more than 2 billion logged in monthly users (statista.com). The rapid digitalisation of media and the evolution of information and communication technologies have changed the advertising field drastically given the speed, urgency andreach of information between suppliers and recipients (Gaber & Wright, 2014).

II. LITERATURE REVIEW:

The most popular theory to understand human attitude is the Theory of Reasoned Action (TRA) developed by Martin Fishbein and Icek Ajzen in 1975. Reasoned Action predicts that behavioural intention is caused by two factors that are attitudes and subjective norms. Attitudes have two components that are the evaluation and strength of a belief (Fishbein & Ajzen, 1975). While belief is an antecedent of attitude, behavioural intention is an outcome which enhance the explanation about attitude towards advertising (Ting & Run, 2015). Attitudes, intentions, and behaviour are spontaneously activated and influence each other in a fixed hierarchy (Feldman & Lynch, 1998). An attitude can be defined as an individual's nature to respond favourably or unfavourably to an object, person, institution, event or to any discriminable aspect of individual's world (Ajzen, 1989). According to Duffett, R.G.(2017) the gender demographic variable does not have a large influence on the attitude components although female teenagers display higher level of liking in terms of social media marketing communications. According to Bannister et al.(2013) and Ruane and Wallace (2013) men exhibited less favourable attitudes than women regarding social media marketing communications. According to Saluja, D., and Singh, S.(2014) today everyone is using some social networking site or the other. If they are a professional, they use Linkedin. If they have a flair for writing they are either a regular blogger or use microblogging sites like Twitter. If they are interested in connecting with their old friends or finding new ones they are likely to use Facebook, Orkut and many others. According to Sache, H. (2017) the results of his study indicate that content creators of YouTube Let's Play videos positively influence the college students' intent to purchase. According to Lipsman *et al.*, (2012).Another benefit of a strong social media presence is the ability for a brand to foster a strong brand community. The idea of brand communities is an important one to marketers because companies know that committed customers who are engaged in a brand community are beneficial to the overall success of a brand. As brands are dependent on loyal customers for their success, it is not feasible to continually search for new customers without making an effort to retain current customers. Committed customers are often advocates for the brand and

help to spread positive word-of-mouth communications to those within their circle of influence. This positive word-of-mouth communication from a satisfied customer is much more valuable to a marketer than any paid advertisement. Research has shown that brands that reach out to the friends of their fans realize enhanced benefits to their brand. With the helpof social media platforms, individuals interact with each other, share their experiences,feedbacks, and views about different issues that they see in their lives (Heinrichs et al., 2011).Hallgrímsdóttir (2018) in his study concludes that social media advertising does affect the attitude and beliefs towards advertising and also towards the products and services.

III. PURPOSE OF STUDY
The purpose of this study is to understand how habitude variables like log-on-frequency, log-on-duration, length of usage and access influence effectiveness of YouTube advertising.

IV. RESEARCH METHODOLOGY
The study has adopted a descriptive survey design. The standardized questionnaire prepared by Duffett, R.G. in 2015 was adapted for collection of data. A pilot study was conducted to establish the reliability of the instrument (questionnaire) in the Indian environment. For this purpose it was administered to 15 students of University of Delhi who were either well-versed with intricacies of YouTube advertising or were having some qualification pertaining to social media advertising. Reliability coefficient of 0.884 was obtained using Cronbach's Alpha.

The researcher went to colleges of University of Delhi, talked to the students and took their emails and contact numbers. Thereafter online questionnaire was administered to around 500 under-graduate students of University of Delhi out of which 300 students submitted their responses.

V. RESULTS AND DISCUSSIONS
To find out whether there was a significant difference in the populations from which samples were taken, One-Way ANOVA was applied using SPSS version 16. One-Way ANOVA depicts degrees of freedom (df), F-values and p-values (Sig.) of different constructs of cognitive attitudes. One-Way ANOVA helped in analyzing, within groups and between groups estimate of population variance. It was used to determine whether there are any significant differences among three groups' means across 12 constructs of cognitive attitudes for each independent variable.

A. Effect of habitude variable log-on-frequency on cognitive attitude

Table 1

variable	conditions	n	%
Log-on-frequency	daily	175	58.30%
	two-four times a week	105	35%
	weekly	20	6.70%

Table 1 shows that out of 300 respondents, the log on frequency of 175 respondents was daily, the log on frequency of 105 respondents was two-four times a week and log on frequency of 20 respondents was weekly.

Table 2

ANOVA						
variable 1		Sum of Squares	df	Mean Square	F	Sig.
YouTube is effective in creating awareness of brands	Between Groups	10.081	2	5.04	6.294	0.002
	Within Groups	237.849	297	0.801		
	Total	247.93	299			

Table 2 shows that when we apply ANOVA by SPSS version 16 we find that for variable 1, F=6.294 which is greater than the threshold value 3.09

Table 3

	Log on frequency		Variable 1
1	Daily	Mean	4.0229
		N	175
		Std. Deviation	0.85065
2	Two-Four Times a Week	Mean	3.6762
		N	105
		Std. Deviation	0.9557
3	Weekly	Mean	3.55
		N	20
		Std. Deviation	0.94451
4	Total	Mean	3.87
		N	300
		Std. Deviation	0.9106

Table 3 shows that mean value for those users whose log-on-frequency is daily (4.0229) is higher than mean value for those whose long-on-frequency is 2-4 times a week (3.6762) or weekly (3.55)

Table 4

Dependent Variable	Mean Difference (I-J)	Std. Error	Sig.
YouTube is effective in creating awareness of brands	.34667*	0.11047	0.006
	0.47286	0.21123	0.078
	-.34667*	0.11047	0.006
	0.12619	0.21833	1
	-0.47286	0.21123	0.078
	-0.12619	0.21833	1

Table 4 shows that when we further apply post-hoc multiple comparison test Bonferroni, we find that p-value (sig) = 0.006 which is less than the threshold value 0.05 when log-on-frequency is daily because evidence is sample data in strong enough to reject Null hypothesis for entire population and thus we can say that a statistically significant difference exists when log-on frequency is daily.
Hence we can conclude that when log-on-frequency is daily YouTube is effective in creating awareness of brands.

Explanation:
Ho: $\mu1 = \mu2 = \mu3$ (population means of all groups are same)
Ha: $\mu i \neq = \mu j$ for some $i \neq = j$ (population means of atleast 2 groups are different)
where $\mu1$ is population mean of respondents whose log-on-frequency is daily, N = 175
$\mu2$ is population mean of respondents whose log-on-frequency is two-four times a week, N = 105
$\mu3$ is population mean of respondents whose log-on-frequency is weekly, N = 20
The null hypothesis is that the several groups of populations being compared, all have same mean.
If $p < 0.05$ we reject Null hypothesis (Ho)
If $p > 0.05$ we reject the Alternate hypothesis (Ha)

Table 5

ANOVA						
variable 4		Sum of Squares	df	Mean Square	F	Sig.
I am able to recall advertisements on YouTube	Between Groups	14.793	2	7.397	5.613	0.004
	Within Groups	391.403	297	1.318		
	Total	406.197	299			

Table 5 shows that when we apply ANOVA by SPSS version 16 we find that for variable 4, F=5.613 which is greater than the threshold value 3.09.

Table 6

	Log on frequency		Variable 4
1	Daily	Mean	3.5600
		N	175
		Std. Deviation	1.06975
2	Two-Four Times a Week	Mean	3.2667
		N	105
		Std. Deviation	1.24241
3	Weekly	Mean	2.7500
		N	20
		Std. Deviation	1.29269
4	Total	Mean	3.4033
		N	300
		Std. Deviation	1.16555

Table 6 shows that mean value for those users whose log-on-frequency is daily (3.56) is higher than mean value for those whose long-on-frequency is 2-4 times a week or weekly.

Table 7

Dependent Variable	Mean Difference (I-J)	Std. Error	Sig.
I am able to recall advertisements on YouTube	0.29333	0.14171	0.118
	.81000[*]	0.27097	0.009
	-0.29333	0.14171	0.118
	0.51667	0.28008	0.198
	-.81000[*]	0.27097	0.009
	-0.51667	0.28008	0.198

Table 7 shows that when we apply post-hoc multiple comparison test Bonferroni, and we find that p-value (sig) = 0.009 which is less than the threshold value 0.05 when log-on-frequency is daily. We can now safely reject Null hypothesis because evidence in sample data in strong enough to reject Null hypothesis for entire population and thus we can say that a statistically significant difference exists when log-on frequency is daily. Hence we can conclude that when log-on-frequency is daily users are able to recall advertisements on YouTube.

Table 8

ANOVA						
variable 6		Sum of Squares	df	Mean Square	F	Sig.
I can remember several advertisements that I see on YouTube	Between Groups	13.159	2	6.58	4.326	0.014
	Within Groups	451.678	297	1.521		
	Total	464.837	299			

Table 8 shows that when we apply ANOVA by SPSS version 16 we find that for variable 6, F=4.326 which is greater than the threshold value 3.09.

Table 9

	Log on frequency		Variable 6
1	Daily	Mean	3.3200
		N	175
		Std. Deviation	1.18438
2	Two-Four Times a Week	Mean	2.9048
		N	105
		Std. Deviation	1.30475
3	Weekly	Mean	2.8500
		N	20
		Std. Deviation	1.26803
4	Total	Mean	3.1433
		N	300
		Std. Deviation	1.24685

Table 9 shows that mean value for those users whose log-on-frequency is daily (3.32) is higher than mean value for those whose long-on-frequency is 2-4 times a week or weekly.

Table 10

Dependent Variable	Mean Difference (I-J)	Std. Error	Sig.
I can remember several advertisements that I see on YouTube	.41524[*]	0.15223	0.02
	0.47	0.29108	0.322
	-.41524[*]	0.15223	0.02
	0.05476	0.30087	1
	-0.47	0.29108	0.322
	-0.05476	0.30087	1

Table 10 shows that when we apply post-hoc multiple comparison test Bonferroni and we find that p-value (sig) = 0.02 which is less than the threshold value 0.05 when log-on-frequency is daily. We can now safely reject null hypothesis because evidence is sample data in strong enough to reject null hypothesis for entire population and thus we can say that a statistically significant difference exists when log-on frequency is daily. Hence we can conclude that when log-on-frequency is daily users are able to remember advertisements they see on YouTube.

B. Effect of habitude variable log-on-duration on cognitive attitude

Table 11

variable	conditions	n	%
Log-on-duration	one hour or less	161	53.66%
	two hours	76	25.33%
	three hours or more	63	21.00%

Table 11 shows that out of 300 respondents, the log on duration of 161 respondents was one hour or less, the log on duration of 76 respondents was two hours, and log on duration of 63 respondents was three hours or more.

Table 12

ANOVA						
variable 1		Sum of Squares	df	Mean Square	F	Sig.
YouTube is effective in creating awareness of brands	Between Groups	7.57	2	3.785	4.677	0.01
	Within Groups	240.36	297	0.809		
	Total	247.93	299			

Table 12 shows that when we apply ANOVA by SPSS version 16 we find that for variable 1, F = 4.677, which is greater than the threshold value 3.09.

Table 13

	Log on duration		Variable 1
1	One hour or less	Mean	3.8075
		N	161
		Std. Deviation	0.93217
2	Two hours	Mean	3.75
		N	76
		Std. Deviation	0.83467

3	Three hours or more	Mean	4.1746
		N	63
		Std. Deviation	0.88972
4	Total	Mean	3.87
		N	300
		Std. Deviation	0.9106

Table 13 shows that mean value for those whose log-on-duration is 3 hours or more (4.1746) is higher than mean value for those whose duration to log-on is two hours or one hour or less.

Table 14

Dependent Variable	Mean Difference (I-J)	Std. Error	Sig.
YouTube is effective in creating awareness of brands	0.05745	0.1252	1
	-.36715*	0.13369	0.019
	-0.05745	0.1252	1
	-.42460*	0.15328	0.018
	.36715*	0.13369	0.019
	.42460*	0.15328	0.018

Table 14 shows that when we apply post-hoc multiple comparison test-Bonferroni, we find that p value (sig.) = 0.01 which is less than the threshold value 0.05 when log-on duration is 3 hours or more. We can reject the null hypothesis because evidence in sample data is strong enough to reject null hypothesis for the entire population and so a statistically significant difference exists when log-on-duration is 3 hours or more. Hence we can conclude that when log-on-duration is 3 hours or more YouTube is effective in creating awareness of brands.

Explanation:
Ho: $\mu 1 = \mu 2 = \mu 3$ (population means of all groups are same)
Ha: $\mu i \neq = \mu j$ for some $i \neq = j$ (population means of atleast 2 groups are different) where $\mu 1$ is population mean of respondents whose log-on-duration is one hour or less, N = 161
$\mu 2$ is population mean of respondents whose log-on-duration is two hours, N = 76
$\mu 3$ is population mean of respondents whose log-on-duration is three hours or more, N = 63
The null hypothesis is that the several groups of populations being compared, all have same mean.
If $p < 0.05$ we reject Null hypothesis (Ho)
If $p > 0.05$ we reject the Alternate hypothesis (Ha)

C. Effect of habitude variable access on cognitive attitude

Table 15

variable	conditions	n	%
Access	PC	3	1%
	mobile	177	59%
	both PC & mobile	120	40%

Table 15 shows that out of 300 respondents, the access of YouTube by 3 respondents is via PC, access of YouTube by 177 respondents is via mobile phone and access of YouTube by 120 respondents is via both PC and mobile phone.

Table 16

ANOVA						
variable 1		Sum of Squares	df	Mean Square	F	Sig.
YouTube is effective in creating awareness of brands	Between Groups	5.51	2	2.755	3.375	0.036
	Within Groups	242.42	297	0.816		
	Total	247.93	299			

Table 16 shows that when we apply ANOVA by SPSS version 16 we find that for variable 1, F = 3.375 which is greater than the threshold value 3.09.

Table 17

	Access		variable 1
1	PC	Mean	4
		N	3
		Std. Deviation	1.73205
2	Mobile	Mean	3.7571
		N	177
		Std. Deviation	0.88084
3	PC & Mobile	Mean	4.0333
		N	120
		Std. Deviation	0.91609
4	Total	Mean	3.87
		N	300
		Std. Deviation	0.9106

Table 17 shows that mean value for those users who access YouTube through mobile and PC both is more than mean value of those who access YouTube through mobile only or PC only.

Table 18

Dependent Variable	Mean Difference (I-J)	Std. Error	Sig.
YouTube is effective in creating awareness of brands	0.24294	0.52601	1
	-0.03333	0.52809	1
	-0.24294	0.52601	1
	-.27627*	0.10683	0.031
	0.03333	0.52809	1
	.27627*	0.10683	0.031

Table 18 shows that when we apply post-hoc multiple comparison test-Bonferroni, we find that p-value (sig) = 0.031 which is less than the threshold value 0.05 when access is through mobile and PC both. We can now safely reject null hypothesis because evidence in sample data is strong enough to reject null hypothesis for entire population and thus we can say that a statistically significant difference exists when access in through mobile and PC both.

Hence we can conclude that when access is through mobile & PC both, YouTube is effective in creating awareness of brands. Out of 300 respondents 177 used only mobile to access YouTube and 120 used both mobile and PC. This brings out the fact that the youngsters are using the mobile phones more and more and the trend is rising. But when access is through mobile and PC both, YouTube advertising is effective in creating awareness of brands.

Explanation:

Ho: $\mu 1 = \mu 2 = \mu 3$ (population means of all groups are same)

Ha: $\mu i \neq = \mu j$ for some $i \neq = j$ (population means of atleast 2 groups are different)

where $\mu 1$ is population mean of respondents who access YouTube through PC only, N = 3

$\mu 2$ is population mean of respondents who access YouTube through mobile phone only, N = 177

$\mu 3$ is population mean of respondents who access YouTube through both PC and mobile phone, N = 120

The null hypothesis is that the several groups of populations being compared, all have same mean.

If p <0.05 we reject Null hypothesis (Ho)

If p > 0.05 we reject the Alternate hypothesis (Ha)

D. Effect of habitude variable Length of usage on cognitive attitude

Table 19

variable	conditions	n	%
Length of usage	two years or less	24	8.00%
	three to four years	97	32.33%
	five years or more	179	60%

Table 19 shows that out of 300 respondents, the length of usage of YouTube by 24 respondents is two years or less, the length of usage of YouTube by 97 respondents is three to four years, the length of usage of YouTube by 179 respondents is five years or more.

Table 20

ANOVA						
variable 1		Sum of Squares	df	Mean Square	F	Sig.
YouTube is effective in creating awareness of brands.	Between Groups	0.308	2	0.154	0.185	0.831
	Within Groups	247.622	297	0.834		
	Total	247.93	299			

Table 20 shows that when we apply ANOVA we find that for variable 1, F value = 0.185 which is less than the threshold value 3.09.

Table 21

	Length of usage		Variable 1
1	Two years or less	Mean	3.7917
		N	24
		Std. Deviation	1.02062
2	Three to four years	Mean	3.8454
		N	97
		Std. Deviation	0.85805
3	Five years or more	Mean	3.8939
		N	179
		Std. Deviation	0.92707
4	Total	Mean	3.8700
		N	300
		Std. Deviation	0.91060

Table 21 shows that mean value for those users whose length of usage is five years or more (3.8939) is more than mean value of those whose length of usage is three to four years or two years or less.

Table 22

Dependent Variable	Mean Difference (I-J)	Std. Error	Sig.
YouTube is effective in creating awareness of brands.	-0.05369	0.20817	1
	-0.10219	0.19849	1
	0.05369	0.20817	1
	-0.04849	0.11512	1
	0.10219	0.19849	1
	0.04849	0.11512	1

Table 22 shows that when we apply post-hoc multiple comparison test –Bonferroni, we find that p-value (sig) = 1.000 which is greater than the threshold value 0.05. Thus we accept the null hypothesis of no difference. Hence we conclude that length of usage does not have a statistically significant impact on creating awareness of brands.

Explanation:
Ho: $\mu 1 = \mu 2 = \mu 3$ (population means of all groups are same)
Ha: $\mu i \neq = \mu j$ for some $i \neq = j$ (population means of atleast 2 groups are different)
where $\mu 1$ is population mean of respondents whose length of usage of YouTube is two years or less, N = 24
$\mu 2$ is population mean of respondents whose length of usage of YouTube is three to four years, N = 97
$\mu 3$ is population mean of respondents whose length of usage of YouTube is five years or more, N = 179
The null hypothesis is that the several groups of populations being compared, all have same mean.
If p <0.05 we reject Null hypothesis (Ho)
If p > 0.05 we reject the Alternate hypothesis (Ha)

VI. CONCLUSION
This research established that when log-on-frequency is daily and log-on-duration is three hours or more, YouTube advertising is effective. On the other hand impact of length of usage is not statistically significant. When access is through mobile & PC both, YouTube is effective in creating awareness of brands/products.
This in-depth analysis will help the stakeholders to acquire and utilize YouTube advertising to reach a greater number of young customers and satisfy them for their success in business.

VII. LIMITATIONS AND FURTHER RESEARCH

Although a representative sample of University of Delhi students was taken, this research has its own limitations which gives opportunities for future studies. There are a number of different social media types/platforms that are used by students, but only YouTube was analyzed in this research. The study was limited by sample size and geographic location.

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