

USING VIRAL MARKETING THROUGH SOCIAL NETWORKS: A STATISTICAL STUDY

*¹Waleed A. Hassen, ²Methaq A. Shyaa, ³Hassan M. Ibrahim

ABSTRACT --Viral marketing is a type of marketing that spreads message of communication from one person to another like a virus. The objectives of this paper are: 1) achieve a research study on the impact of viral marketing on the desire of consumers in a number of social networking sites such as Facebook, YouTube, and Instagram; 2) perform a statistical analysis on these social networking sites to determine the most commonly used web site by our research sample; 3) determine the most important topics that the research sample cares about when using social media. To achieve the goals of this paper, the employed sample included 200 users from academic community in different specialties and faculties, those usually use social networks sites such as Facebook, YouTube, and Instagram. A survey paper was distributed to the research sample which contains a set of questions in order to achieve the goals presented above. The results showed that Facebook comes primarily as an important tool of viral marketing followed by YouTube and then Instagram. Furthermore, we found that the media materials supported by videos and images are more affect the wishes of consumers compared to other advertisements. Finally, there was a significant impact of viral marketing on the wishes of the consumers when they use social media.

Key words--Viral marketing , Social networks ,Online marketing , Facebook , YouTube .

I. INTRODUCTION

The utilization of traditional one direction communication to promote consumer observation has been drastically losing its attractive impact due to the use of web-based social networks as a robust tool of communication for peers[1]. Nowadays, social networks are used widely for communication between marketers and consumers. In fact, social networking has made a model degree for any brand to advertise its product through presentation, attention and discernment; to create assessments; and to make esteems[2].

Promotion products or services through web-based social networks called online marketing. Online marketing can be divided into several general areas such as search engine optimization, email marketing, and social media marketing (including viral marketing). Viral marketing is a type of marketing that spreads the message of communication from one person to another like a virus but under the name of viral marketing. It gives many options to the consumer and enables him to complete the process of purchasing very quickly within a few minutes and from anywhere around world. Viral marketing is used by companies to promote product attention through social

¹* Computer science department, College of education for pure science, University of Diyala, Diyala-Iraq, uby.waleed2006@gmail.com

² Iraqi Ministry of Interior, Baghdad, Iraq

³ University of Information Technology and Communications, Baghdad, Iraq .

networks to gain a favorable perception. Advertisers of these companies have recognized that social networks are considered as the essential center point to present an item and draw inspiration to use it [3]. For example, social network such Facebook has more than 2 billion users. It has been reported that almost 60% of Facebook users utilize this social network to view product advertisements [4]. Another study published that 70% of web-based social network users visit social media sites to obtain information before buying a product [5]. Therefore, social network sites have provided an excellent area for marketers to increase their product promotion through viral marketing that is viewed by a lot of millions connected consumers around the world. For this reason, marketers are currently very propelling to advance the utilization of viral marketing by using the application of social networks for various groups.

Human societies have evolved greatly as technology has entered into all aspects of life. So shopping through the social network may save time and effort. Nowadays, there are several social network sites such as Facebook, YouTube and Instagram. Such social network sites are increasingly used by the marketers to advertise their products through the use of viral marketing. The objectives of this paper are: 1) achieve a research study to determine the impact of viral marketing on the desire of consumers in a number of social networking sites such as Facebook, YouTube, and Instagram; 2) perform a statistical analysis on these social networking sites to determine the most commonly used web site by our research sample; 3) determine the most important topics that the research sample cares about when they use social media. In what follows, we first introduce the methodology that used to achieve the goals of this study. Then, results and discussion are presented in section 3. Finally, conclusions are given in section 4.

II. RESEARCH METHODOLOGY

This study was performed at academic community including 200 individuals from university of Diyala (Iraq) in different specialties and faculties. In order to achieve the goals of this study, a survey paper was distributed to the research sample. The survey paper includes a set of questions to identify which site are used by the consumer more than others (Facebook, Instagram, and YouTube sites where there are many sources of advertising). Furthermore, the survey paper also contains questions to identify the number of academic individuals who were stuck from these sites. The study also responds to the impact of these advertisements on the wishes of consumers and whether they meet their desires and marketing tendencies in these web sites. Finally, several topics those the academic community cares about were included in our survey paper to determine which most important topics that arouse user curiosity while browsing social media sites

To analyze our data, we used **Statgraphics x46 program** and some statistical indicators, including ratios and some parameters of centralism and dispersion. Furthermore, using a t-test, we performed the null hypothesis to see if there is a significant effect of viral marketing on the consumer desire. In contrast, triple Likert scale (agree, Neutral and Disagree) with weights (1,2,3) was used to evaluate sample responses.

In this paper we assumed that H_0 refers to a significant effect of viral marketing on the consumer desire. In contrast, H_1 indicates a non-significant effect of viral marketing on the consumer desire.

For all statistical analyses, p value < 0.05 was considered significant.

III. RESULTS AND DISCUSSION

After t-test and as shown in table (1) we can observe that the calculated value of test is less than the scale value. Therefore, we accept the null hypothesis: there is a significant effect of viral marketing on the consumer desire.

Table 1: t-test table

t-test		Sig. (2-tailed)
Calculated value	1.20	0.05
Scale value	1.65	

From table 2, it is obvious the effect of viral marketing on the consumer through providing a lot of effort, time and money (see point 5). In addition, the consumers were agreed that advertisements that are supported by video and songs can help attract consumers (see, topic no. 3). This finding is in accordance with the study of Kim et al.[6]. They showed that there is an interaction between advertisements supported by images and video and the consumer desire. in addition, topic 8 has mean of 6.88, which is greater than the hypothetical mean. This is what could be expected because the high demand for the products through viral marketing shopping pushes producers to improve their products

In contrast, topic no. 11 occupies the lowest mean value. This indicates the lack of consumer confidence in viral marketing to provide suitable job opportunities for them.

Table 2: Results of survey paper: triple Likert scale (agree, Neutral and Disagree) with weights (1,2,3) was used to evaluate sample responses

No		Mean	Standard deviation
1	Viral marketing promotes shopping through social networking sites	4.23	2.66
2	Viral marketing focus on advertisements that are supported by price reduction offers	4.59	6.39
3	Advertisements that are supported by video and songs can help attract consumers	7.41	3.95
4	Advertisements that are published on social media sites are considered to be a source of consumer trust	3.2	2.02
5	Viral marketing provides a lot of effort, time and money	8.52	5.28

6	Freedom of expression and discussion by defining specifications and characteristics that must be met by the consumer	4.28	2.99
7	A friend's opinion of viral marketing affects consumer opinions	7.26	5.08
8	To ensure the continuation of the product and the improvement and development of the product to suit the consumer in case it spread quickly	6.88	4.11
9	Satisfying consumer needs	5.48	3.48
10	Viral marketing has an ability to provide job opportunities for the unemployed	3.11	1.96

Table 3 represents the most commonly used social networks by consumers which contribute to receiving advertisements in viral marketing. From this table we can observe that Facebook is the most commonly used social network by our research sample. The same result was presented in the literature (see Ref. [7]).

Table 3: Clustered column chart presents the most commonly used web site by our research sample.

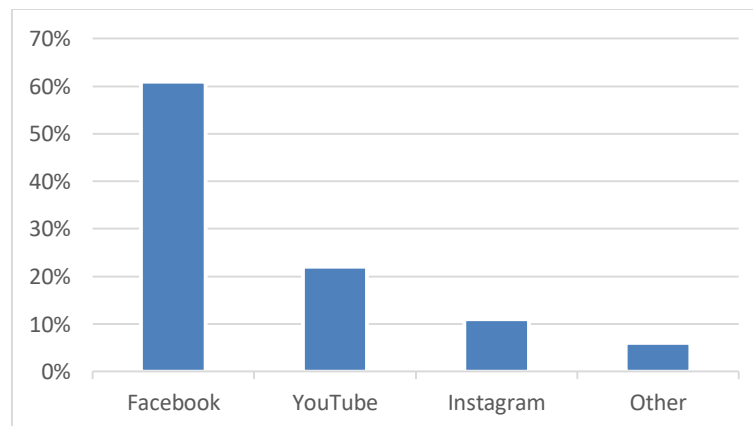
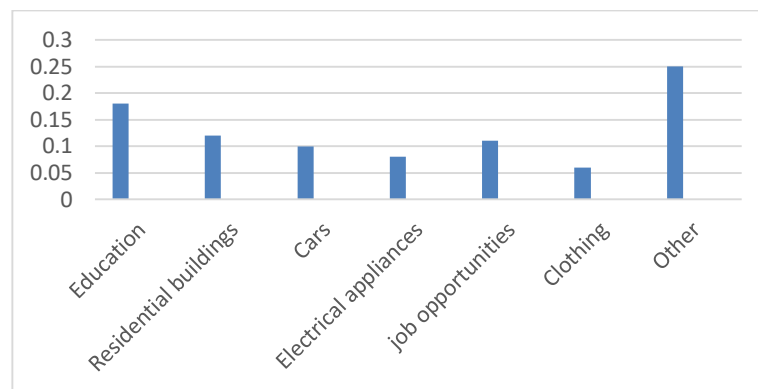


Table (4) shows the most important headlines that the academic community cares about .

Table 4: Clustered column chart shows the most important headlines that the academic community cares about.



IV. CONCLUSION

Through the use of statistical analysis, it was concluded that Facebook comes primarily as an important tool of viral marketing followed by YouTube and then Instagram. This means that companies pay more attention to viral marketing to attract consumer attention through the use of social media. Furthermore, we found that the media materials supported by videos and images are more affect the wishes of consumers compared to other advertisements. Finally, there was a significant impact of viral marketing on the wishes of the consumer when they use social media.

REFERENCES

1. E. a. B. T. Akar, "An examination of the factors influencing consumers' attitudes toward social media marketing," *Journal of Internet Commerce*, pp. 35-67, 2011.
2. A. J. a. E. K. Kim, "Impacts of luxury fashion brand's social media marketing on customer relationship and purchase intention," *Journal of Global Fashion Marketing I*, pp. 164-171, 2010.
3. K. D. Y. a. P. N. Kapoor, "Pay-per-click advertising: A literature review.," *The Marketing Review*, pp. 183-202., 2016.
4. K. G. L. R. L. a. P. K. Hampton, "Social networking sites and our lives," *Pew Internet & American Life Project*, vol. 16, pp. 1-85, 2011.
5. A. a. K. E. Kim, "Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. *Journal of Business research*," vol. 65, no. 10, pp. 1480-1486, 2012.
6. K. H. N. a. H. T. Huynh, "Factors Affecting the Success of Viral Marketing An Affective—Cognitive—Behavioral Process," *Bus. Manag. Res*, vol. 5, pp. 40-45, 2016.
7. M. A. B. M. Y. K. D. N. P. R. a. R. I. Shareef, "Social media marketing: Comparative effect of advertisement sources," *Journal of Retailing and Consumer Services*, vol. 46, pp. 58-69., 2016.