

Maximizing Advertising SMS Efficiency for Mobile Phone Users

Leila Farjou,

Faculty of management, Islamic Azad University, Central Tehran Branch, Tehran, Iran

Mohammad Taghi Mohaghegh

Faculty of management, Islamic Azad University, Central Tehran Branch, Tehran, Iran

Abstract

Nowadays one of the most important tools for advertising is SMS which have been utilized by lots of companies all around the world. In the current paper the procedures of maximize advertising SMS efficiency was surveyed. The study is applicable from goal view and descriptive from data collection. Also data gathering method is questionnaire for which library and fieldwork methods were used. Statistical sample involves 384 users of "Hamrahe Avval" company in Tehran/ Iran. A questionnaire includes 28 questions was designed and after proving its validity and reliability distributed among statistical sample. The results of applying T-student and Regression tests illustrated that advertising efficiency, remembering advertising, attitude about advertising, attitude about brand and mobile engagement affect significantly on its repeating. Meanwhile repeating advertising affects purchase intention significantly too. Also time pressure affect significantly and positively on advertising efficiency.

Keywords: advertising efficiency, remembering advertising, attitude about advertising, attitude about brand, mobile engagement, purchase intention

Introduction

Mobile phones once regarded as expensive gadgets beyond the reach of the average income earner (Nyamnjoh, 2004) have become common and ubiquitous (Berger, 2009). Reuter 2008 reported that '3.3 billion people use mobile phones, a number even more than those that watched television. Kiukkonen et al. (2010) further stated that in recent years, the penetration of mobile phones has risen to the highest level. The African continent is not left out in this influx of mobile phones. According to Otieno (2009), the penetration rate of mobile phones in Africa is alarming, and as at 2007 'the continent saw more than 65 million new users, hence there is no African country that does not have mobile phone networks'. Mobile phones have undoubtedly become part of the society (see Palen et al., 2000). This increase in the penetration rate and growth of mobile phone usage is attributed to the teenagers in the continent (Otieno, 2009). (Aker and Mbiti, 2010), argue that in Africa, mobile phones 'are evolving from simple communication tools into service delivery platforms', due to the numerous potentials in enhancing economic development which can be beneficial to the consumers and business organizations. Therefore, there is a new market for businesses to explore (Zhou, 2011; Otieno, 2009), for providing value added services to consumers through mobile advertising in the form of Short Message Service (SMS). Mobile advertisers must be very carefully not to risk privacy issues and customer trust. Privacy and security concern is one key obstacle to the success of mobile advertising (Gohring, 2002; Kotch, 2001; Mobile Marketing Association, 2012) and could threaten the entire m-advertising market, at least in the short term (Saunders, 2003). For example, 80% of consumers worry about privacy invasion in SMS campaigns (Forrester, 2001). One common solution is to ask for the permission before SMS campaigns (Barwise and Strong, 2002; Godin, 1999; Saunders, 2003; Leppaniemi and Karjaluto, 2005). However, asking for consumers' permission is the very first step. The next important question is how to properly deliver advertisements. Customers perceive the right ways, time, and place as important factors (Leppaniemi and Karjaluto, 2005). This is supported by Fuller (2003), five factors could help marketers to distance themselves from spam: frequency, relevance, control, confidentiality and unsolicited. Both studies stress the importance of advertising timing. Advertising timing is studied in traditional media rather than mobile devices. In the past, many human factor specialists, psychologists and engineers have devoted their efforts towards how to improve advertising scheduling, which comprise advertising repetition and advertising week time. However, most of these studies focus on traditional advertising media, for example, newspaper, television and so on. As the use of mobile devices becomes widespread throughout the world, it is important for the researchers to think about the timing in

mobile advertising area. The context is another important characteristic of mobile advertising. If mobile advertisements are delivered in proper context, it will lead to high possibility of impact (Gao, 2006). Previous studies mainly consider the context in terms of locations, and few considered time pressure. This study will fill the gap.

Literature review

In order to effectively conceptualize mobile advertisement, there is the need to understand what marketing is about and how mobile advertising acts as an instrument in the realization of marketing goals and objectives. The American Marketing Association (AMA) conceptualize marketing as comprising 'activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large' (AMA, 2007). This definition recognizes that marketing seeks to promote and increase sales or exchange between businesses and individuals, hence, it functions to facilitate such exchange, which include 'product design, advertising, pricing and distribution' (Kotler and Levy, 197). The key to marketing function is advertising, as advertising plays a central role in facilitating the exchange of goods and services between businesses and clients. Thus advertising is an integral element of any business activity. Advertising has changed over the years-it has gone from the rudimentary forms of television, radio, newspapers and billboards to the emergence of mobile advertising witnessed in the last decade (see Kavassalis et al., 2003). The concept of mobile advertising is very broad as it includes advertising through new mobile applications such as Short Message Service (SMS), Multi-Media Messaging Service (MMS), digital photography etc. (Merisavo et al., 2007). However for this study, the focus shall be on Short Message Service, as it is the dominant form of marketing in today's marketing world, and especially in South Africa. We shall therefore, define mobile advertising as the communication of advertising messages through mobile devices using short messaging service (DeReyck and Degraeve, 2003). Mobile advertising has distinct characteristics that separate it from other forms of advertisements. One major characteristic of mobile advertising is the personalization of its messages which is different from the traditional or rudimentary forms of advertising such as television, radio, billboards etc. According to Neal and Morgan (2000), mobile advertising offers business organizations the opportunity to contextualize their adverts for a specific individual, thereby allowing businesses to 'address the consumers individually' (Haghirian et al., 2005). These personalized messages help foster the relationship between business organizations and consumers (ibid), by creating a platform for interaction between businesses and consumers, and consumers and businesses. (Merisavo et al., 2007) added that not only does the use of mobile advertising help foster good relationships between businesses and consumers, but that it may make consumers 'less receptive to other advertisements' from competitive businesses in the long run. In addition, the unique characteristics of mobile advertising to bridge time and location barriers (Zhou, 2011) makes mobile advertising a vital strategy in today's marketing world (Haghirian et al., 2005). Consumers always carry their mobile phones with them, consequently, business organizations have the opportunity of reaching potential clients and consumers 'when and where it is most appropriate' thus making it an effective marketing tool (Kavassalis et al., 2003). Although studies have not been conducted to ascertain the effectiveness of mobile advertising in facilitating sales, it is believed that its application in Western societies have helped to boost sales. For instance, (Kavassalis et al., 2003), in their research alleged that 'the McDonald's restaurant chain increased store traffic and built a customer database of mobile numbers with an effective 10-week mobile marketing campaign that motivated 220,000 customers to become subscribers to a MCSMS service'. Similarly, in the 2002 report of the Forrester research group (Forrester Research, 2002) it was stated that marketers generally believe that mobile advertising leads to high consumer reach with a response rate that is five times higher than direct mail. As consumers are constantly being exposed to mobile advertising, the issue of consumers' information privacy (N.P., 2013) becomes germane. According to Kavassalis et al. (2003), the continued relevance and effectiveness of mobile advertising underscores the need to protect the information privacy of consumers. Since mobile phones are considered as private personal devices (Patel, 2005), consumers are sensitive to the kind of Short Message Service they receive and may feel the need to control/manage the type of messages they receive (Merisavo et al., 2007). Haghirian et al. (2005) posited that despite the potentials of mobile advertising in the business world, consumers do not have the opportunity to express their satisfaction and dissatisfaction towards the mobile advertising received. This is not beneficial to both the business organizations and consumers, because for

businesses to grow they need to know the perception of the consumers towards mobile adverts and take the necessary steps to address consumer concerns (Culnan, 1993). Against this backdrop therefore, this study examined the attitudes and perceptions of Generation Y students in two universities towards information privacy with respect to mobile advertisements. In this research, advertising repetition means the times an individual is exposed to a mobile advertisement in a day. Repetition not only provided more opportunities for an individual to process message arguments but repetition also aroused feelings of tedium or psychological reactance that ultimately proved detrimental to persuasion (Alwitt and Mitchell, 1985). Advertising repetition also influenced perception about the manufacturer's effort and credibility (Kirmani, 1997). An inverted U-shaped relationship between repetition and attitudes was reported for traditional media (Cacioppo and Petty, 1979; Calder and Brian, 1980). When the number of message repetitions increased, persuasion and advertisements recall first increased but then wore out because high exposure frequencies induce expressions of displeasure and annoyance (Alwitt and Mitchell, 1985; Appel, 1971; Cacioppo and Petty, 1979, 1980; Gorn and Goldberg, 1980; Grass and Wallace, 1969; Miller, 1976). Therefore, Miller (1976) found that moderate exposure led to significantly more positive attitude toward the posters than low exposure and high exposure. This inverted U-shaped relationship was also seen among advertisements through TV and Internet. The effectiveness of advertisement increased with advertisement repetition at first, however, the effect of the advertisement was saturated and decreases if advertisement repetition exceeded a certain point (Park et al., 2008). The optimal repetition for traditional media was three exposures (Berger, 1992; Berger and Mitchell, 1989; Gorn and Goldberg, 1980; Petty and Cacioppo, 1979). Specifically, Petty and Cacioppo (1979) found an increase in agreement with an attitudinal position in the one and three exposure conditions, but by five exposures a decreasing trend became apparent. Also, Gorn and Goldberg (1980) reported that children voiced a greater preference for the product after receiving three advertisement exposure compared to children receiving either one or five exposure. Few lab controlled study considered the optimal repetition for mobile advertising, and there are only two qualitative studies. Barwise and Strong's research (2002) indicated that receiving three text messages a day was remarked "about right." If people received more frequent advertisements, it may trigger a "delete on receipt" reaction. Haghirian et al. (2005) interviewed 815 mobile phone users and found that a high frequency of exposure decreased the perceived advertising value.

Hypotheses

1. The users who receive 3 SMS advertising per day have higher SMS effectiveness (remembering advertisement, attitude about advertisement, attitude about brand, mobile engagement and purchase intent) rather than who receives 4 ones per day.
2. The users who receive 3 SMS advertising per day have higher SMS effectiveness (remembering advertisement, attitude about advertisement, attitude about brand, mobile engagement and purchase intent) rather than who receives 5 ones per day.
3. The users who receive 2 SMS advertising per day have higher SMS effectiveness (remembering advertisement, attitude about advertisement, attitude about brand, mobile engagement and purchase intent) rather than who receives 4 ones per day.
4. The users who receive 2 SMS advertising per day have higher SMS effectiveness (remembering advertisement, attitude about advertisement, attitude about brand, mobile engagement and purchase intent) rather than who receives 5 ones per day.
5. The users who receive SMS advertising in low time pressure have higher SMS effectiveness (remembering advertisement, attitude about advertisement, attitude about brand, mobile engagement and purchase intent) rather than some ones in higher time pressure.

Research methodology

The study was done in a society involving all users of "Hamrahe Avval" in Tehran/ Iran which decreased into 384 ones applying sampling formula.

The current research can be considered as a descriptive survey if to view from data collection aspect and as an applied research if to investigate the goals of the research. To collect the data library method (to refer to books, articles, libraries, etc...) and fieldworks (questionnaire) was being utilized.

For gathering data, a questionnaire in three separated parts was designed.

The questionnaire includes 28 questions with 5 point likert scale. Distribution of each variable is presented in table 1:

Table 1: distribution of each personality style dimension questions

Variables	The number of questions
Time pressure	3
Remembering advertising	4
Attitude about mobile advertising	7
Attitude about brand	5
Engaging with mobile advertising	4
Intent to purchase	5

To analyze the data SPSS 19 and Kolmogorov-Smirnov, T-student and Regression tests were utilized.

The management experts were being asked to evaluate the validity of questionnaires. For this mean, the questionnaires were given to some professors and experts in management, and after their modifications were being utilized and they confirmed it, the questionnaires were given to the participants.

To determine the questionnaires' reliability, the 'Cronbach Alpha technique' was utilized. For this purpose, 30 people were selected by random (from the statistical samples) and the questionnaires were given to them. The 'Cronbach Alpha' values for all variables were calculated:

Table 2: the results of reliability

Variables	Cronbach Alpha
Time pressure	0.79
Remembering advertising	0.87
Attitude about mobile advertising	0.81
Attitude about brand	0.74
Engaging with mobile advertising	0.84
Intent to purchase	0.82

These values support the reliability of questionnaires, because the calculated results for Cronbach's alpha are more than (0.7).

Data Analysis

Kolmogorov Smirnov test

To survey normality of statistical society, the test was applied.

Table 3: the results of using Spearman test

Variables	Sig
Repeating advertisement	0.219
Time pressure	0.387
Advertising efficiency	0.127

As table 3 shows, the normality of statistical society was accepted. Therefore some parametric tests were utilized to test hypotheses.

T-student test

To survey the relationship between research variables, T-student test was utilized.

Table 4: the results of using T-student test

Impact	F Statistics	Sig	Result
Advertising efficiency on its repeating	3.57	0.014	Significant impact
Remembering advertising on its repeating	4.04	0.008	Significant impact
Attitude about advertising on its repeating	8.21	0.000	Significant impact
Attitude about brand on its repeating	5.058	0.002	Significant impact
Mobile engagement on its repeating	5.68	0.001	Significant impact
Repeating advertising on purchase intention	2.18	0.089	Significant impact

Table 4 illustrates that advertising efficiency, remembering advertising, attitude about advertising, attitude about brand and mobile engagement affect significantly on its repeating. Meanwhile repeating advertising affects purchase intention significantly too.

Also to survey the influence of time pressure on advertising efficiency, Regression test was applied.

Table 5: the results of using Regression test

Impact	Statistics	Sig	Result
Concentric diversification on competitive advantage	0.888	0.000	Positive influence

Table 5 illustrates time pressure affect significantly and positively on advertising efficiency.

Conclusions and suggestions

In the current paper it tried to survey how to maximize efficiency of advertising SMS for mobile phone users. The results indicated that all hypotheses were proved.

Attending to the results some suggestions can be represented:

- Decreasing the amount of sent SMS per day
- Utilizing some software for users to prevent undesirable SMS
- Sending SMS with at least characters along with attractive context which cause users read it quickly
- Using some attractive phrases like “gift”, “special discount” and . . .
- No utilization of ambiguous and questionable words
- Sending SMS in terms of users’ group vacation to not to disturb them

References

1. Aker, J., Mbiti, I., 2010. Mobile phones and economic development in Africa. *J. Econ. Perspect.* 24 (3), 207–232.
2. Alwitt, L.F., Mitchell, A.A., 1985. *Psychological Processes and Advertising Effect: Theory, Research, and Applications.* Lawrence Erlbaum Associates, London.
3. AMA, 2007. America Marketing Association Board Approves Definition. Available at www.marketingpower.com/AboutAMA/Pages/DefinitionofMarketing.aspx. [accessed 01 February 2013]
4. Appel, V., 1971. On advertising wearout. *Journal of Advertising Research* 11 (1), 11–13.
5. Barwise, P., Strong, C., 2002. Permisson-based mobile advertising. *Journal of Interactive Marketing* 16 (1), 14–24.
6. Barwise, P., Strong, C., 2002. Permisson-based mobile advertising. *Journal of Interactive Marketing* 16 (1), 14–24.
7. Berger, G., 2009. The Changing Media Ecosystem: What Africa needs to Know. In: Mdlongwa, F. (Ed.), *Doing Digital Media in Africa Prospects, Promises and Problems.* Konrad-Adenauer-Stiftung, Johannesburg, pp. 6–13.

8. Cacioppo, J.T., Petty, R.E., 1979. The effects of message repetition and position on cognitive response, recall and persuasion. *Journal of Personality and Social Psychology* 37, 97–109.
9. Calder, B.J., Brian, S., 1980. Television commercial wear out: an information processing view. *Journal of Marketing Research* 17 (2), 173–186.
10. Culnan, M., 1993. 'How did they get my name': An exploratory Investigation of Consumer Attitudes toward secondary information use. *MIS Q.* 17 (3), 341–363.
11. DeReyck, B., Degraeve, Z., 2003. Broadcast scheduling for mobile advertising. *Oper. Res.* 51 (4), 509–518.
12. Forrester Research, 2002. Plan, Don't Spam, Forrester Warns Europe's SMS Marketers. Available at www.forrester.com/ER/Press/Release/0.1769.680.00.html. [accessed on 30 January 2002].
13. Forrester, 2001. The marketer's guide to use SMS. Forrester Research Report, European Research Center, Amsterdam.
14. Fuller, P., 2003. Why spam does not have to happen on mobile devices. Retrieved from <<http://www.mmaglobal.com/articles/why-spamdoesnt-have-happen-mobile-devices>> (accessed 5.03.13.).
15. Gao, Q., 2006. Mobile Advertising on Handheld Devices: Interactivity and Context Awareness. Unpublished PhD thesis, Tsinghua University, Beijing, China.
16. Godin, S., 1999. Permission Marketing. Simon and Schuster, New York.
17. Gohring, N., 2002. And now a word from our sponsors. *America's Network* 106 (3), 17.
18. Gorn, G.J., Goldberg, M.E., 1980. Children's response to repetitive TV commercials. *Journal of Consumer Psychology* 6, 421–425.
19. Grass, R., Wallace, W.H., 1969. Satiation effects of TV commercials. *Journal of Advertising Research* 9 (3), 3–8.
20. Haghirian, P., Dickinger, A., 2004. Identifying Success Factors of Mobile Marketing, ACR Asia-Pacific 2004, Association of Consumer Research.
21. Haghirian, P., Madlberger, M., Tanuskovw, A., 2005. Increasing Advertising Value of Mobile Marketing—An Empirical Study of Antecedents. Proceedings of the 38TH Hawaii International Conference on System Science: 1–10.
22. Kavassalis, P., Spyropoulou, N., Drossos, D., Mitrokostas, E., Gikas, G., Hatzistamatiou, A., 2003. Mobile permission marketing: framing the market inquiry. *Int. J. Electron. Commerce* 8 (1), 55–79.
23. Kirmani, A., 1997. Advertising repetition as a signal of quality: if it's advertised so much, something must be wrong. *Journal of Advertising* 26 (3), 77–86.
24. Kiukkonen, N., Blom, J., Dousse, O., Gatica-Perez, D., Laurila, J., 2010. Towards Rich Mobile Phone Datasets: Lausanne Data Collection Campaign. *ICPS*: 1–7.
25. Kotch, M., 2001. It ain't all about the money: the mobile marketing opportunity, Part III. Insight, WirelessAdWatch. Retrieved from: <<http://www.wirelessadwatch.com/insight/2001/insight20010924.shtml>> (accessed 25.05.12.).
26. Kotler, P., Levy, S., 1973. Buying is marketing too. *J. Mark.* 37 (1), 54–59.
27. Leppaniemi, M., Karjaluoto, H., 2005. Factors influencing consumers' willingness to accept mobile advertising: a conceptual model. *International Journal of Mobile Communications* 3 (3), 197–213.
28. Merisavo, M., Kajalo, S., Karjaluoto, H., Virtanen, V., 2007. An empirical study of the divers of consumer acceptance of mobile advertising. *J. Interact. Advert.* 7 (2), 41–50.
29. Merisavo, M., Kajalo, S., Karjaluoto, H., Virtanen, V., 2007. An empirical study of the divers of consumer acceptance of mobile advertising. *J. Interact. Advert.* 7 (2), 41–50.
30. Mobile Marketing Association, Wireless Definitions. Retrieved from: <<http://mmaglobal.com/main>> (accessed 25.05.12.).
31. Neal, D., Morgan, N., 2000. Our Data, Our selves. *Wilson Quarterly* 24 (4), 51–57.
32. Nyamnjoh, F., 2004. Africa's media, democracy and the politics of belonging. Zed Books, London.
33. Otieno, C., 2009. Mobile Money in Africa. In: Mdlongwa, F. (Ed.), *Doing Digital Media In Africa Prospects, Promises and Problems*. Konrad-Adenauer-Stiftung, Johannesburg, pp. 14–21.
34. Palen, L., Salzman, M., Young, E., 2000. Going Wireless: Behaviour and Practice of New Mobile Phone Users. *ACM*: 201–210.
35. Park, T., Shenoy, R., Salvendy, G., 2008. Effective advertising on mobile phones: a literature review and presentation of results from 53 case studies. *Behavior and Information Technology* 27 (5), 355–373.
36. Patel, N., 2005. Mobile commerce market update, Strategic Analysis, Boston, MA.
37. Saunders, C., 2003. Studies: mobile ad market to grow, amid risks. Retrieved from: <<http://www.clickz.com/915121>> (accessed 25.05.12.).
38. Zhou, T., 2011. The Impact of privacy concern on user adoption of location-based services. *Ind. Manage. Data Syst.* 111 (2), 212–226.