A Comparative Study Of Traditional Mass Media, The Internet And Mobile Phones For Integrated Marketing Communications
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ABSTRACT

Integrated marketing communications is now experiencing one of the most interesting developments as most media for communicating with the target audience are gradually evolving. The revenues of the traditional mass media with wide coverage such as over-the-air broadcast television and newspaper are dropping as advertising revenues for these mass media do not provide promising results as expected by the marketers. The target audience of these mass media is drifting away to more segmented media such as cable and satellite television, special magazines and the Internet. New communication technologies have broadened opportunities for the Internet and mobile phones to grow significantly during the past decades and have been utilized for marketing communication purposes. This study intends to explore the characteristics of the traditional mass media, the Internet and mobile phones to better understand the strengths and weaknesses of their channel characteristics. Then, using the Schramm’s Communication process model, we will analyze and compare the significant elements of communication process of the three types of media. The comparison will provide a better picture of the related factors in communication which can help us design the integrated marketing communication programs more effectively. Finally, the implications for brand building and customer relations will be provided. It is expected the study will provide an insight for marketers to understand what is evolving in the media world and to prepare them to respond to those changes.

Keywords: mass media, the Internet, mobile phones, channel characteristics, mass communication, personal communication, brand equity, customer relations, integrated marketing communications.

INTRODUCTION

Marketing communication has evolved in recent years as communications between the companies and their customers turn from one-way to interactive. New communications technologies have widened opportunities for companies to contact their prospects or customers more conveniently, creating a close relationship between the company and its customers. More interactivity and frequency of contacts are expected to dominate the ways we reach our target audience in the near future.

In this study, we will explore all major types of channels which marketers communicate with the customers including mass media, the Internet and mobile phones. We will analyze and compare the channel characteristics of each medium. In addition, we will compare mass media, the Internet and mobile phones by analyzing the significant elements in the communication process model by Schramm (1955). Moreover, implications for new opportunities in building brand equity using these media will be provided.

Characteristics Of Traditional Mass Media, The Internet And Mobile Phones

Traditional mass media have been popular communication channels for building brands, since they are capable of reaching a large number of audiences at one time. Therefore, the relative cost of using these media is
very low when we consider the number of target audience reached. Mass media provide one-way, non-personal communication, where the audience is unable to interact with the sender of the message and there is no real person to communicate with them.

Traditional mass media can be broadly divided into three categories: print, broadcast and support media (Belch & Belch 2009). Print media include newspapers and magazines. Broadcast media include television and radio, the signals of which can be transmitted via wired or wireless communication. Support media include the rest which are not broadcast or print such as out of home media, promotional products, point of purchase materials, captive location medium and entertainment program communication (Hongcharu, 2008).

We have witnessed the rapid penetration of the Internet since the late 1990’s. The Internet has been utilized for marketing communications from its beginning. It is a more convenient and cost efficient means for marketing communication. Besides, it provides a two-way interaction with target customers. Websites are created to help customers understand more about the products or services, to persuade and change their attitudes and to elicit purchase and repurchase. The Internet can process all formats of information from number, text, still picture, voice and motion picture, filling in defects of the traditional mass media, since all the mass media can only process certain formats of information. For instance, print media cannot process voice and motion picture, while radio cannot process both still and motion pictures, etc. Therefore, every mass medium company must have a website to complement the content of its channel. However, the Internet technologies are not prevalent as most people do not possess a computer or it is still inconvenient for the audiences to turn on the Internet anywhere they want.

Mobile phones become the only interactive medium that is possible to reach the target audience personally at all time. Evolved from the fixed line phone, the most familiar interactive medium, mobile phone gains popularity very rapidly because it is a personal communication device. Mobile phones have given an opportunity for marketers to communicate with their target market interactively as mobile phones are gradually transferred all the features of computers and the Internet such as the information processing capabilities. With its capability of reaching the target customers individually and ubiquitously, mobile phones possess great marketing potential which marketers need to explore. However, the display monitors and keyboards for mobile phones are often too small for the users to see and type conveniently.

In many previous studies, the interactive media was the term generally used to include new media that depend on the World Wide Web or cyberspace, and the term “interactive media” was typically applied to the Internet which may or may not include mobile phones (Hanssen, Jankowski & Etienne, 1996; Smethers, 1998; Huhtamo, 1999; McMillan & Hwang, 2005; Hongcharu & Eiamkanchanalai, 2006). However, in this study, we treat mobile phones separately from the Internet, as mobile phones constitute many different features which cannot be found in the Internet. The main one is its ubiquity since mobile phones can be with the users at all time and at anywhere they want to take them to, while the Internet does not fully possess this capability at the moment, as this difference distinctively affects the level of interactivity and frequency of communications between the sender and the receiver. Thus, the Internet in this study will be confined to any communication channel, except mobile phones, which can provide the Internet services to customers e.g. desktop and laptop computers.

A Comparison Of Channel Characteristics Of Mass Media, The Internet And Mobile Phones

We will first investigate and compare the channel characteristics of the mass media, the Internet and mobile phones. These channel characteristics mark the different nature of the media. Some of these characteristics are the strong points, and some may be the weak ones. However, they can help us thoroughly understand the media.
Synchronicity. According to Lui and Shirum (2005), synchronicity is the degree that the sender sends the message to the receiver and the receiver can respond to the message simultaneously. The highest synchronicity can be found in mobile phones. Mobile phones offer the most instantaneous responses among all of the interactive media. E-mails and other communications through the Internet always take some time for us to wait for the responses from the communication partners. However, synchronicity cannot be found in the traditional mass media as they do not have the interactive capabilities. For mass media, the sender may not expect any response from the receiver or it may take a very long time to depend on other interactive media such as mail, e-mail or telephone to help them connect with their receivers.

Anonymity and Privacy. Anonymity is the ability for the participants in the media to conceal their identity. For mass media, the senders must reveal themselves to the receiver. However, this is not possible vice versa, making it very difficult for the sender to get the responses from the receiver. Since the Internet is two-way, non-personal communication, the level of anonymity is high. Currently, it is possible for people who are interacting in the Internet to conceal their identity. They feel more comfortable to provide sincere opinions about the products or services, generating words of mouth to other prospects. (Hongcharu & Eiamkanchanalai, 2007). With the high level of privacy, the Internet is increasing utilized to sell products or services that cannot be sold in the traditional outlets, such as private financial consulting, pornography, erectile dysfunction medicines, etc. For mobile phones, the senders and receivers are expected to know each other to a certain level, as the numbers of the receiver is shown and the sender can decide not to pick up the call. Thus, the level of privacy in mobile phones is low. Even the SMS also reveals the number or the identity of the callers which is different from e-mails which are more difficult for the receivers to interact or trace the identity of the senders instantly.

Information Processing. We can classify traditional mass media based on the ways their audience process the information: self-paced and externally paced (Belch & Belch, 2009).

Self-paced media allow their audience to take time to process the information. Generally, they are print media such as newspapers or magazines. On the other hand, the information processing of externally-paced media cannot be controlled by the audience. It is rather controlled by the senders of the media. Externally paced media are electronic ones such as television and radio where it is impossible for the audience to slow down or fasten the incoming messages.

Nevertheless, the traditional means to classify mass media by the ways the audience process the information cannot be applied for interactive media. This is because most interactive media can process all formats of information from number, text, still picture, voice and motion picture. Therefore, all of the interactive media including mobile phones are both self-paced and externally paced at the same time.

Audience’s Control. Generally, the users of the Internet-based technologies have a full control of what they want to receive (Hoffman & Novak, 1996). The users can decide whether to click on a banner to view the ads, while the users of the traditional mass media do not have such an alternative. They are forced to watch or hear the message they sometimes do not want, especially for the broadcast media. With the power to receive the information shifted to the receivers, marketers must design the message to capture the needs of their audience. This requires them to pay
attention more to the customer data and to find out what their customers’ preferences are. The high level of audience’s control is also found in the mobile phones where the audience may choose to ignore the message or not to accept the calls. Thus, the marketers must design the message to attract the customers. This can be done through sales promotion programs that the customers need to follow. The marketers must analyze the prior sales promotion programs that worked in the past and try to offer the ones that they have shown interest or interact with the company based on the target market’s past behaviors. Moreover, marketers can offer their audience rebates, discounts or premiums if they permit the company to send them news or promotional offers, etc.

Self-delivery. The Internet enables the delivery of informational products or services to customers directly. This makes it possible for marketers to deliver to their customers if their products can be downloaded or sent to the customers directly. Products or services in picture, voice, numbers, text can be delivered to customers. With this capability, some services can also be provided through the Internet such as translation, accounting services, information search, etc. Mobile phones are gradually mimicking this feature of the Internet and will finally be the device that is closest to the customers. Traditional mass media cannot deliver products or services directly to customers.

Purpose-based Searching. The users of the Internet must know what they want to search since the Internet is a place that is full of information (Rodgers & Thorson, 2000). Mobile phones also allow their users to search for information in the same way as the Internet does, or the users can receive calls or SMS’s without any intention to receive the information. However, if the display technology of the mobile phones improves, it will function like the Internet, and receivers can search for information. This will benefit the users even more because they can be with the users at anywhere and any time. On the other hand, the users of the mass media do not necessarily form an objective to search for information.

Contextual Availability. Contextual availability refers to the availability of the environment by which the marketing communication messages are surrounded. It can be noted that different types of media possess different amount of context surrounding their messages. For instance, there are more opportunities for marketers to choose the environment in the mass media appropriate for their messages to the target audience. Broadcast media depend on programs to sell the airtime for advertising, while print media rely on different columns to attract readers for advertising messages. The contextual availability is important because it allows marketers to choose the right environment for their messages to create rational and emotional appeals. This environment affects the way audience process the information of an ad. Aylesworth and MacKenzie (1998) found that television ads that followed a negative mood program were processed in a less systematic way than those that followed a positive one. In the Internet, even though there are plenty of contexts available for marketers to insert their marketing communication messages, the contexts are scattered and, most of the times, they are too specific for certain types of audiences. Mobile phones still do not have enough space and time like the mass media to create an environment for marketers to insert the marketing communication messages.

Analysis Of Communication Process Elements Of Traditional Mass Media, The Internet And Mobile Phones

To help us understand the characteristics of different types of media, we need to analyze the communication process elements associated with them. Schramm (1955) outlined the elements of communication process comprising sender, channel, message, receiver, responses, feedback and noises. However, we will investigate only the significant elements of Schramm’s communication process applicable to today’s mass media, the Internet and mobile phones, which are sender, channel, message, receiver and responses. However, the channel characteristics have already been analyzed. The rest are investigated as follows:
Senders. Senders are the persons or organizations that the communication originates. We can categorize senders into two types: primary and secondary. Primary senders are generally the ones who are the sponsor of the message, while secondary senders are the ones who communicate directly with the target audience. In mass media, the primary senders are normally organizations that we can identify since they are the ones who pay for the advertising message. As the traditional mass media are one-way and non-personal communication, the target audience does not care to know who the senders are, as there is no need to interact with them. The secondary senders who present the messages can be an announcer, experts, trustworthy, powerful persons, celebrities, or the persons who actually have experienced with the products. As the receiver realizes that the secondary senders are hired and the message is one-sided, the credibility of the mass media advertising is often low. For the Internet, the receivers often need to know whom they are contacting with since they are the persons who initiate the need to know the information. To be able to contact the senders, the receivers must know their primary senders’ information such as the sender’s Unified Resource Locator (URL) or web addresses, e-mail addresses, etc. The need for interaction requires most of the websites to disclose themselves to the target audience. The “Contact Us” and “About Us” sections provide detailed information about the senders so clearly and are prevalent in almost all websites. The secondary senders in the Internet can be the ones who are sponsored by the primary senders. However, with the anonymous feature of the Internet, it is possible for anonymous senders to give out unbiased information about the products or services in blogs, social network websites, web-boards, etc. For mobile phones, it is a requirement for the receivers to know who calls them or sends a short message to them. The requirement becomes more stringent as the level of interaction increases.

Messages. In general, the message in traditional mass media advertising is a concise one with a theme that signifies brand positioning. The traditional mass media also have capability to depict an emotional appeal which is crucial for persuasion. The messages are normally one-sided, presenting the aspects that the primary senders want their target audience to know. Therefore, the messages in traditional mass media are effective in building brand knowledge and forming positive brand attitude. In the Internet, the senders can decide to elaborate their products or service more. Unlike their mass media counterpart, the Internet is not limited by time and space and can include more information in various formats such as print, motion picture and voice, etc. This makes the Internet a proper channel for products or services with high involvement buying behaviors such as financial products, real estate, medical services, cosmetics, jewelry, etc, as the detailed information that customer’s needs can be available in the Internet. Some real estate firms display detailed information about their houses in the Internet with a 360 degree angle camera. Moreover, the company can also collect the customer data since the customers may decide to interact with the company. In addition, information from other customers can also be available for review. The anonymity of the Internet allows customers who have experienced the products or services to write reviews which can help facilitate purchase decisions of new customers. Mobile phones are still limited with their small screens. However, the messages in mobile phones can serve as brand reminder. The company can design the messages in the mobile phones to stimulate brand awareness of new products or offer special promotional from various brands. SMS can serve such purpose, and this is some of the reasons that the revenues from SMS is estimated to increase to constitute 20% of mobile phone operators’ revenues (Andersson, Freeman, James, Johnston & Ljung, 2006). However, telemarketing messages can be very irritated for mobile phone users. Marketers should search for new ways to encourage mobile phone users to subscribe to their messages in exchange for monthly discounts of their phone bills. The alliance of brands from the company’s network can provide a variety of messages for the target audience. However, mobile phones can provide a great opportunity to correspond interactively with customers, enhancing brand relationships with them.
**Receivers.** The target audience is the most significant factor in differentiating the use of these three types of media. The receivers of mass media are mass audience. One of the most important reasons for marketers to use the mass media is the low relative cost, as we consider their large number of audiences, especially for mass media with large coverage such as television and newspaper. However, the mass marketing era has come to an end since most products we sell nowadays are not targeting at mass customers. Even mass media that target smaller segmented group of audience seem to be more popular e.g. magazines, radio, cable television. However, the Internet’s audience is more interesting, since it is smaller and more segmented. Several websites open opportunities for their receivers to interact among themselves and with the company, providing much deeper understanding of their behaviors than before. Mobile phones offer marketers a new way for marketers to communicate with an individual prospect or customer. However, marketers have not exploited this opportunity as much as they should, since today’s messages to the target audience of mobile phones are still mass messages. The insufficient use of customer databases and the unfamiliarity of marketers to communicate with individual customers are the reasons behind this problem. Marketers can segment the customers and provide different offers for their mobile phone customers, as the costs for reaching an individual may be very high and inappropriate for certain types of products. However, marketers can communicate with a very small segment of customers or a niche market using mobile phones.

**Responses.** A response is a very significant element in the communication process as it signifies communication objectives. Traditional mass media can affect the target audience’s cognitive and affective responses. They help carry the messages that enable the audience to know and understand the brand. However, it may be difficult for the mass media advertising to lead to any immediate behavioral responses. On the other hand, the Internet allows the target audiences to purchase the products on the websites. It can lead to a behavioral response in addition to the cognitive and affective ones. Therefore, brand knowledge and brand loyalty can be achieved through the use of the Internet. Marketers can depend on mobile phones to create brand awareness or remind customers to purchase the brand. However, mobile phones can be used to elicit buying behaviors since the functions of mobile phones are increasingly similar to those of the Internet and will eventually become a ubiquitous instrument for customers to purchase the products. Details about the responses which create different level of brand equity will be provided in the next section.

**Implications For New Opportunities In Building Brands And Creating Customer Relations**

The understanding of mass media, the Internet and mobile phones can help marketers plan their marketing activities accordingly, the results of which are affected in the overall brand equity and the relationships with customers. We will analyze the possible effects of different media on brand equity and relationships with customers in stages outlined by Keller (2008).

**Brand Knowledge.** As it is widely accepted that advertising is capable of communicating brand knowledge to customers, the messages from advertising through mass media is often one-way and is very hard to assess its effectiveness. We do not know whether the target audience has received, known or understood them. The level of brand knowledge building is dependent on the amount of information processed by different media. For instance, with its capability to transmit motion picture and voice, television should be able to increase brand knowledge much better than radio, since it can communicate more information to the target audience than radio. The other aspect of brand knowledge is brand image in which the Internet can transfer from manufacturers to customers easily. Brand image is a very broad concept which requires consistent cultivation in the mind of the consumers. The traditional mass media especially the ones that can portray pictures are able to capture the attention and create brand image. The examples are television and magazine ads. However, ads in the Internet still do not result in what the traditional mass media have done, as the target audience of the Internet is comparatively small to measure. Mobile phones have limitations. With the small screen and limited memory capacity, the ability to display pictures is also restricted. If the mobile phones had such capability, it would be one of the most appropriate tools to build brand image especially for products that require emotional appeals. However, mobile phones possess the ability to increase brand awareness especially through SMS’s (Michael & Salter, 2006).

**Brand Associations.** According to Keller (2008), brand associations can be categorized into aspects: strength, favorability, uniqueness. The strength of brand associations is related to consistency and personal relevance of the brand. Brand attributes and benefits can be associated to the target audience. In this case, the traditional mass
media link the brand to its target audience through several means such as the use of source credibility which shows the expertise of the source to the target audience, source attractiveness where the target audience identifies his or her similarity with the source and source power which the source has power to force the target audience to comply with what the source says (Belch & Belch, 2009). The consistency and personal relevance are stronger in the interactive media than in the mass media as a result of the capability of the interactive media to personalize the messages. In each website, the target audience willingly enters and participates in what he or she believes is most relevant to his or her needs. The possibility to strengthen brand associations is much higher as long as the company can present its brand attributes and benefits which are fitted to what its target audience wants. For mobile phones, the consistency and personal relevance can be designed to reach a maximum limit. The consistency of the messages can create a unified voice which the target audience can remember. However, many messages through mobile phones are now repeated without any added value for customers, and are treated as junk mails or calls. With the help of database, marketers can choose what their target audience feels is most relevant to their needs. For instance, a cosmetic manufacturer can reach their mobile audience with only the messages of their moisturizer products, if it finds that the target audience never pays attention to make-up products at all. From the customers’ perspectives, manufacturers should be able to offer the customers to receive what they like to limit wasteful messages and to increase their effectiveness. Manufacturers may decide to offer some promotions for their target audience who receives the messages through mobile phones.

Marketers can create favorability of brand associations through desirability and deliverability (Keller, 2008). Desirability is the level that customers feel that the brands is relevant, reliable and effective, while deliverability is the ability for the products can deliver what it promises to customers. All media can be used to reinforce the favorability of the brands after the messages have been communicated. Some of the traditional mass media can emphasize all the desirability through emotion appeals that remind the target audience of the important attributes or benefits of the brand, while the Internet and mobile phones should be used to strengthen the rational appeal of the brand since it can elaborate the significant aspects of the brand. In this case, all the media can be used to support each other to strengthen the brand desirability and reinforce what it can deliver to the target audience from time to time.

Uniqueness of brand associations is normally related to brand positioning. Traditional mass media are able to demonstrate the points of parity and points of difference. For instance, some mass media can demonstrate the attributes and benefits and express the emotion appeal of the products clearly such as television. In the Internet, where marketers can elaborate more about the products or services, customers can search even more details about the uniqueness of the brands and obtain more information about the products or services. For mobile phones, the emphasis on uniqueness of brand associations is still in an infant stage. With the small screen and restricted display environments, marketers can select the very unique brand associations to inform the customers. Nevertheless, the messages in mobile phones can be sent or called repeatedly which can enhance customers’ retention. This can display points of difference the marketers want to communicate with their target audience effectively.

**Brand Attitudes.** From brand knowledge and associations, customers form their favorable or unfavorable attitudes toward the brands. In this stage, the customers’ past experience, communications with peers or word of mouth and judgments help shape their attitude toward the brand. It is also related to the brand image and feelings they had with the brand. The traditional mass media have successfully brought experiences of other users, experts and celebrities to the mass audience, enabling them to change their attitude toward the brand. In certain cases, the traditional mass media can help shape the judgment of the brand through comparative advertising. Mass media are also very successful in changing the target audience’s attitude by using emotional appeals such as fear, humor, sex, etc. For the Internet, some websites are have used comparative ads to change the customer’s attitude by comparing prices and other benefits. For ads in the Internet, the marketers can explicitly mention the competitor’s brands, as it is not subject to the same rules and regulations applied to the mass media. We can witness the use of database to understand customer’s preferences which can enable marketers to compare the attributes and benefits of the products customers pay attention most. This is witnessed in websites such as amazon.com where the databases are analyzed to understand previous preferences of customers. Travel websites, such as travelocity, orbitz, expedia, etc. are able to guide and shape judgments of customers by comparing prices and collecting opinions of other travelers who have experiences the services of airlines, hotels, cruises, to current customers. Therefore, most of the advantages from the Internet come from the ability to make use of the databases that the marketers collect. For mobile phones, even
though it is more private, and it seems possible to persuade the target audience, it is more vulnerable to rejection by the customers, as the limited space of the screen is difficult for the marketers to elaborate the details about the brand. Moreover, unsolicited calls and telemarketing have created damages for any brands that attempt to resort to mobile phone alone. Therefore, to change the customers’ attitudes toward the brand through mobile phones is a rather difficult task even if the marketers have the database of the customers, as some still view the marketer’s actions as intrusion of privacy.

**Brand Loyalty.** Brand loyalty is the level of commitment of customers to the brand over a period of time, resulting in repurchase. Brand loyalty is the ultimate desire of marketers as it can reduce their marketing expenses especially for communication. Traditional mass media do not directly help increase brand loyalty. They can remind the audience to recognize or recall the brand but do not influence them on going out and repurchasing the products. For the Internet, the database the marketers collect is an important means to stimulate repurchase behaviors. Besides, marketers that invest in continuity programs such as frequent buyer or flyer programs can track the behaviors of their customers, and can communicate frequently with those who provide e-mail address to them. Marketers can then send targeted messages to elicit repurchase from the customers. For mobile phones, marketers can also follow what they have done with the Internet and can send messages directly to customers to stimulate their repurchase.

**Customer Relations.** The relationships between the brand and customers depend mostly on how the company knows what the customers wants and knows how those needs might be satisfied. Traditional mass media can build relationships between customers and the brand by creating brand awareness and brand knowledge, enabling the customers to understand the brand, and having the capability to generate positive brand attitudes through both rational and emotional appeals. Moreover, mass media is generally used to remind customers who have some knowledge or experience so that they would take further action on the brand. Furthermore, mass media possess contextual availability which can be used to enhance the effectiveness of ad messages. In general, mass media do not allow customers to react upon the brand as a result of its one-way nature which limits the feedback from the receivers.

The Internet and mobile phones are different since both media can elicit customer’s responses. To enhance the capability of both types of media to create customer relations and stimulate purchase, marketers make use of customer databases to customize the messages for their customers. Through customer databases, many companies successfully satisfy the needs of their small but loyal customers which are segmented carefully by using their purchasing behavior’s data. This development is likely to flourish in mobile phones since marketers can decide to target their customers using mobile media usage, mobile purchase behavior or their connections, etc. Moreover, they can also use mobile geo-targeting, in which the marketers can send messages to customers in a more specific geographical area (Sharma, Herzog & Melfi, 2008).

Through these new types of communications, the company can prepare to communicate with their customers in stages from the Internet to SMS’s or phone calls. First, customers can be contacted regularly via e-mails with special promotion offers which are more discreet and anonymous and do not provoke any reactions from competitors. In addition, this can gradually build the relationship with customers as they also look forward to the future promotional offers by the brands. Second, the company can be more interactive with the target customers by calling them on their mobile phones, sending them SMS and offering even better promotional offers that they cannot resist. These are some instances that the company can initiate and retain their relationships with customers.

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REFERENCES


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