

EFFECT OF INSTANT MESSAGING ADVERTISING ON THE HIERARCHY-OF-EFFECTS MODEL AMID TEENAGERS IN SOUTH AFRICA

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ABSTRACT

The rapid growth of social media has resulted in digital information and communications technology (ICT) channels for individuals, especially the youth, to connect with each other and the rest of their world. Consequently, instant messaging (IM), social network sites (SNS) and other mobile applications have become an integral part of life, as well as a daily destination for billions of young individuals, offering them a novel and instant means of communication in this interactive ICT space. The increase of social media adoption has captured the attention of marketers and consumers alike on a global scale, and with the fast changing communication environments, marketers now confront new challenges in terms of understanding consumer behavior, attitudinal responses and consumption patterns in the new millennium. However, there is a lack of research into young consumers' attitudes towards advertising on IM platforms in emerging nations. Mxit is the largest locally founded IM channel in South Africa (SA) and, hence, this inquiry examines the effect of IM (Mxit) advertising on the hierarchy-of-effect model attitude stages among teenagers in SA. The results of the investigations found favorable attitudes towards IM advertising among teenagers, which makes an important contribution to the deficiency of IM inquiry in developing economies. This study should also aid organizations and their brands to comprehend what makes teenagers develop positive attitudes as a result of IM advertising, thereby assisting with the improvement of promotion strategies on this expansive and predominantly mobile IM platform landscape in SA.

Keywords: South Africa, Instant Messaging, Mxit, Advertising, Teenagers, Hierarchy-of-effects model

1. INTRODUCTION

Social media usage has proliferated over the last ten years, and within a brief time period, these interactive sites have become a channel for users to exhibit their views. Social media conventionally comprises of online and/or mobile groups and individuals that share mutual interests, opinions and activities, and afford a range of ways for users to engage with each other via instant messaging (IM), social network sites (SNS), photographs, voice chat, discussion groups, file-sharing and videos (Zarrella, 2010; Matthee, 2011). Consumers spend growing quantities of time conveying their sentiments via social media, and it is expected that these information and communications technology (ICT) platforms will have a considerable effect on consumer behavior (including buying decisions). Additionally, the vast number of social media users makes these interactive sites profitable channels to advertise products, services and brands. Hence, social media has become an important advertising tool across the globe, and is dominating a greater proportion of marketing communications budgets, particularly to reach and influence the youth. Developing countries are categorized by large young populations, and South Africa (SA) is no different with nearly 40% under the age of 20 years old (Statistics SA, 2012). The youth, especially teenagers, have enormous spending power (R112 billion per annum) and influence up to 60% of household income (via pester power); this coupled with the rapid acceptance and implementation of SNS and IM platforms into young consumers' daily activities, makes them a potentially profitable target market for

organizations to include in their marketing communication strategies (James, 2015; Levin, 2015). Therefore, as a result of the huge value of social media advertising and youth spending power, further research is warranted.

Much research has been dedicated to social media advertising on digital platforms such as Facebook, Twitter and YouTube (Smith et al., 2012; Hudson and Hudson, 2013; Logan, 2014; Kananukul et al., 2015; Leung et al., 2015; Schivinski and Dabrowski, 2015), but there is a dearth of research on IM advertising. WhatsApp is the second most popular social media channel in SA, and is also one of the largest global IM platforms. However, WhatsApp does not carry any form of advertising; therefore, it is of little interest in terms of academic discourse from a marketing communication investigation perspective, as well as to organizations and their brands (Vermeulen, 2015; Ralph, 2015; Thomas, 2015). Mxit is the largest locally established social medium (fifth overall) in SA, and the second largest IM platform (World Wide Worx and Fuseware, 2014). Hence, Mxit was selected as the focus of this study, since a majority of this IM conduit's users are teenagers, while it also provides advertising opportunities for organizations and their brands (Du Toit, 2011; Mxit, 2015a).

There is still extensive debate regarding how to measure social media advertising effectiveness. Several researchers have concentrated on click-through rates (CTR) or other interactive metric assessment instruments (De Vries et al., 2012; Kapp et al., 2013; Peters et al., 2013). However, the effectiveness of IM platforms should also be considered from a more holistic perspective, since social media advertising has a significant effect on attitudes that cannot be determined solely by CTR (Williamson, 2012). Several studies have focused on the examination of online consumers' attitudes and usage (Kuisma et al., 2010; Punj, 2011; Mina, 2012; De Haan et al., 2013); and, more recently, social media (Malthouse et al., 2013; Maxwell, 2013; Weinberg et al., 2013; Hardwick et al., 2014; Hollebeek et al., 2014; Liu et al., 2015). A majority of these inquiries agree that the primary objective of online and/or social media advertising is to establish favorable attitudes towards organizations and their brands. However, most of these investigations concentrated on first-world nations' users whose online usage characteristics and attitudes may diverge considerably in comparison to developing nations, which are generally characterized by lower Internet access and speeds, inferior infrastructure and information technology networks, and various cultural influences. Okazaki and Taylor (2013) concur with the abovementioned sentiments and argue that there is a paucity of investigations that survey consumers' attitudes towards social media advertising in emerging nations. Hence, this study aims to offer a South African viewpoint on the effect of IM advertising on teenagers' attitudes.

2. LITERATURE REVIEW

2.1 Instant Messaging Context in SA

IM is a type of electronic communication that allow two or more to hold real-time conversations online (via computers) and/or through mobile devices. Instant messaging enables individuals to send text messages to each other in real time and is much cheaper than a text message or short message service (SMS), since the messages are sent via the Internet instead of the cellular network operator (Stokes, 2013). A majority of the youth in SA confessed to be at least a little addicted to SNS, and this percentage marginally increased in terms of IM, but one in five admitted to be "very addicted" (Student Brands, 2015).

WhatsApp is one of the largest instant messaging platforms in the world with 800 million active monthly and over 10.6 million South African users (only Facebook has more active users in SA). WhatsApp allows users to send text, video, image and audio messages via the Internet virtually free; only minimal data costs are applicable, but these have been waived by the cellular network operator, Cell C, in SA (Vermeulen, 2015; Ralph, 2015; Thomas, 2015). James and Levin (2015) report that 93% of the Generation Y cohort has

access to WhatsApp and 38% use IM platforms every 5 minutes. However, in spite of the high usage of this mobile social conduit, WhatsApp only permits a personal or private messenger system that enables users to communicate with acquaintances and does not have an advertising component (Ralph, 2015; Thomas, 2015).

WeChat is another instant messaging mobile communication channel in SA that enables users to send text, voice, image and video messages, and facilitates group chats and finds new acquaintances in nearby locations to exchange dialogue (Vermeulen, 2015; WeChat, 2015). WeChat had 1 million users at the end of 2013 in SA, but this mobile IM conduit purportedly experienced tremendous growth to 3.78 million users in 2014 (Global Web Index, 2015; Student Brands, 2015; Vermeulen, 2015). Hence, WeChat can also be considered as a prospect for future research, since this ICT platform also allows for commercial marketing communications.

As mentioned in prior text, Mxit (or “Message xchange it”) is the main locally founded social medium in SA, with 4.9 million users, which offers users a low cost, text-based communication application (app), which allows users to exchange greeting cards, pictures and audio clips. The app is downloaded to the user's cell phone at no charge and text messages (up to 1 000 characters) can be sent and received by using both mobile devices and computers (Mxit, 2015a). This IM platform's users are among the most engaged when compared to other SNS in SA; they log-on five times a day; and spend an average of 105 minutes a day on this predominantly mobile interactive IM conduit (World Wide Worx and Fuseware, 2014). WhatsApp, which is solely a private messenger that facilitates chat only amongst people known to each other (no advertising), and other IM platforms (WeChat) and SNS with IM components (Facebook Messenger), have taken market share away from Mxit, but Mxit permits organizations to engage with online communities in real-time (Thomas, 2015).

2.2 Mxit Advertising and Research Overview

IM platforms such as Mxit have marketing communications potential for organizations and their brands, since it is multimedia enabled that permits multi-group communication, and have a strong word-of-mouth (WOM) component. Mxit permits users' profiles to have their own e-commerce, consequently the Mxit service, which is known as “tradepest”, informs users about competitions, gadgets, downloads (for example, music, news, movie information, gossip), chat rooms and other organization promotions. Downloads, chat rooms and other services are paid for by using Moola - Mxit's currency (Mashego, 2011; Mxit, 2015a). Moola is Mxit's currency that is purchased by means of prepaid airtime and allows users to spend it on images, games, music downloads, apps and so forth via Mxit's tradepest system (Stokes, 2013). Mxit advertising facilitates the achievement of a number of brand objectives such as building community engagement, educating consumers, creating brand awareness and driving behavioral actions (Mxit, 2015b). This predominantly mobile communications conduit also allows organizations to communicate with consumers and to position advertising according to their budgets by providing marketers with a number of marketing communication options, which include: Broadcast messages; brand apps; splash screen advertisements (interstitials); banner advertisements; and sponsorships. Mxit also constructs a monthly brand index that ranks the number of users who have subscribed to an organization's/brand's app or page with some of the larger brand participants (Wronski and Goldstruck, 2013). Mxit also provides organizations with an opportunity to promote and sell multi-media downloads, as well as establish branded chat rooms for promotions. However, this inquiry did not differentiate between the types of Mxit advertising in establishing teenagers' attitudes towards IM advertising; therefore, future investigation might consider if there is a noteworthy difference in attitudes as a result of the different Mxit advertising types. Mxit advertising is highly

segmented and makes social profiling available for organizations so that advertising can be used to target specific demographic groups, such as gender and age, but prospective markets can also be targeted according to mobile device, cellular network operator, operating system and/or location (Stokes, 2009; Mxit, 2015b). Other major benefits for organizations and their brands is that Mxit reaches the lower Living Standard Measures (LSM) groups (since it costs little to use) in SA, is simple to use and is compatible with most mobile devices (over 8 000). This is an advantage in emerging markets, since a majority of users in developing countries still do not own smartphones, thereby, making Mxit the first Internet experience for a number of users (Britten, 2010, Mxit, 2015a).

Research has predominantly focused on Mxit as an education tool or sought to describe a range of usage characteristics and/or themes of this social medium, but a few studies have also considered various advertising elements. Nicholson (2011) outlined the advantages of mobile platforms such as Mxit in terms of disseminating information and education in SA. Butgereit (2009) reflected on how learners could improve their mathematics learning by playing games and competitions on Mxit via the Dr Math program. Roberts and Vänskä (2011) examined how Mxit was utilized to support mathematics at South African schools. Kaufman (2011) examined peer support by using Mxit as a platform, which influenced the learning experiences of Grade 12 learners. Makoe (2010) considered the educational appropriateness of using mobile devices to augment distance education collaborative learning. Van Rooyen (2010) investigated Mxit as a platform for distance education among students and found positive perceptions regarding Mxit usage. Kahn (2013) discussed the development of Mxit from a basic instant messaging system into a multimedia conduit that is now an education tool, community support platform, and financial service entity. Francke and Weideman (2008) assessed the usage characteristics and impact of Mxit on South African adolescents and determined that there were no major differences in usage between genders. Chigona et al. (2008), in a study, which focused on gratification and uses of mobile Internet among South African university students, found that chatting was the main incentive for utilizing mobile Internet channels such as Mxit. Chigona et al. (2009) considered the perceptions and usage of mobile among teenagers in SA and found that Mxit played an important role as a social network channel. Du Plessis (2010) described how marketing communication transpired on mobile IM platforms such as Mxit by examining two companies. Griffiths (2012) considered brand interaction and communication among teenagers and found that this social media channel served as a communication platform among one another and their favorite brands, especially owing to narrative-based interactive competitions.

Hence, only two studies have previously considered any advertising-related aspects of this IM channel in SA. However, no empirical investigations have evaluated the impact that Mxit advertising has on teenager attitudes in spite of the widespread usage of this interactive IM platform as a marketing communication tool among adolescents and young adults in SA. Therefore, this academic inquiry aims to assess teenagers' attitudinal responses towards advertising.

2.3 Attitude Theory

Organizations have posited many ways to quantifiably assess the effectiveness of advertising. Little (1979) argues that advertising is effective only when it yields purchases, whereas others argue that there is a hierarchy of stages, which comprise of awareness, knowledge, interest, preference, conviction, purchase intention and ultimately result in a purchase. This investigation is in consensus with the second perspective, since buyers do not always react immediately, but they receive pertinent information, favorable attitudes towards the organizations and their brands are fashioned prior to purchase (Belch and Belch, 2015).

Attitudes towards advertising (A_{ad}) have been extensively researched for over one hundred years, since it was first hypothesized that consumers pass through consecutive hierarchical attitude phases in response to advertising. However, it was only in the modern development era, when one of the most popular attitude models (namely, the hierarchy-of-effects model) was developed by Lavidge and Steiner (1961), in order to measure advertising effectiveness, that the three main components of attitudes were used in reference to the response model stages (Barry, 1987). The three main components of attitudes are: cognitive – the beliefs about an object or brand where potential consumers become aware and gain knowledge, for example, an advertised brand; affective – the positive or negative feelings about a particular object or brand, for example, liking and preference as a result of a promoted brand; and behavioral (conative) – the behavioral response towards the object or brand, for example, where consumers take action, which could be by purchasing a brand (Cant et al., 2002; Du Plessis and Rousseau, 2003; Hawkins et al., 2004). The hierarchy-of-effects model stages have also been likened to the communications effects pyramid model, which is also referred to as a purchase or sales funnel model, because it becomes increasingly more challenging to realize the top objectives. However, this theoretical attitudinal model was developed via research on traditional advertising, and has not been empirically verified in terms of IM advertising (Safko, 2010; Belch and Belch, 2015). Traditional advertising is mainly one-way communication, but with the advent of social media still applying, the traditional approach may be incomplete owing to the interactive context and two-way communication (Ma and Liu, 2010). Therefore, this study attempts to bridge the research gap by developing a new paradigm by assessing the attitudes towards IM advertising using the aforementioned model.

3. RESEARCH QUESTIONS

As mentioned above, the hierarchy-of-effect model was established via traditional advertising media, whereas this inquiry considers advertising on a relatively new ICT channel, namely an IM platform (using Mxit as the interactive channel) to determine consumers' attitudes as they progress through the hierarchical attitude stages. Hence, the first research question (RQ) is as follows:

RQ1: To establish the effect of IM advertising on hierarchy-of-effect model attitude stages amid teenagers in South Africa.

Teenagers spend a majority of their day utilizing mobile devices (especially smartphones, feature phones, cell phones and tablets) (Breitenbach, 2015). Therefore, it is important to ascertain if there are notable differences between teenagers' attitudes towards Mxit advertising as a result of how they access this IM platform. Other usage characteristics that were analyzed to determine if they have an effect on teenagers attitudes towards IM advertising include: length of usage; log-on frequency; log-on duration; and profile update frequency. Therefore, the next RQ is as follows:

RQ2: To examine if usage characteristics have an influence on teenagers' attitudes as a result of IM advertising.

SA exudes immense cultural diversity and has seen a steady rise of the Black middle class in SA, and who has witnessed rapid growth regarding access to mobile and digital ICT platforms (Petzer and Meyer, 2013). Hence, this inquiry is also important for academics and organizations owing to the limited inquiry on ethnic orientation regarding IM advertising. Age and gender differences are other demographic characteristics that display a lack of

attitudinal research within a specific cohort (Bolton et al., 2013). Hence, the final RQ is as follows:

RQ3: To ascertain if demographic characteristics have an impact on teenagers' attitudes as a result of IM advertising.

4. RESEARCH METHODOLOGY

4.1 Research Design

This research is based on the positivist paradigm that aimed to evaluate the social world objectively, and to understand observable human behavior (Welman and Kruger, 1991). The study was empirical, since it focused on testing theoretical notions and associations to establish if they replicated the interpretations of the research population, and thereby resulted in the construction of improved theories (Bhattacharjee, 2012). The quantitative approach was adopted in this inquiry to suitably address research questions and objectives through empirical assessments, which involved the collection, analysis and interpretation of data that entailed a numerical calculation of results in order to test the association or relationship between variables (Parasuraman et al., 2007; Zickmund and Babin, 2007). Descriptive research was used to describe the research problem, data and characteristics of the objects, groups, people or situations that are being researched, as well as variables such as the attitudes of individuals towards an object (teenager's attitudes towards IM advertising in this investigation) and their demographics by taking a cross sectional segment of the research population to provide a more detailed understanding of the marketing environment (Zickmund and Babin, 2007; Cant et al., 2008). Survey methods are usually associated with descriptive research and comprise large samples (Hair et al., 2009), and are the most common means of data collection from carefully selected respondents, through written or verbal communication (Wiid and Diggins, 2009). Therefore, self-administered questionnaires were disseminated on a face-to-face basis to gather data for this inquiry.

4.2 Sampling

The research population refers to any complete group of individuals that shares a common set of characteristics and serves as the total collection of elements from which the information is gathered in order to solve the research problem (Zickmund and Babin, 2007; Cant et al., 2008). For this inquiry, the research population includes teenagers that are 13 - 18 years old, and who use and have been exposed to advertising on the IM platform known as Mxit. Probability sampling is synonymous with simple random sampling, in which each member of the population has an equal probability of being selected (Zickmund and Babin, 2007). Permission and ethics clearance were also secured from the Western Cape Education Department (WCED) to conduct research at schools, including Technical Vocational Education and Training (TVET) colleges. Hence, the list of high schools and TVET colleges located in the Western Cape, which was obtained from the WCED, was used to randomly select 36 high schools and/or TVET colleges. A total of 200 learners (across grades 8 – 12) from the high schools and/or TVET colleges were selected by using a systematical sampling technique, with every third respondent being requested to voluntarily participate in the study (Wiid and Diggins, 2009). Therefore, a representative sample regarding the demographics of the Western Cape in SA was attained in terms of ethnic groups, gender and age groups.

4.3 Data Collection and Questionnaire Design

As mentioned in prior text, structured self-administered questionnaires were utilized to gather the required data for this investigation. The questions were standardized (structured) and, therefore, respondents could complete the self-administered questionnaires without the aid of

the fieldworker once it was established that the respondent used Mxit (Kent, 1993). Respondents were not required to identify the organizations or brands that were featured in the IM advertising, nor was any differentiation made between the various types of Mxit advertising, as the primary aim of the investigation was to ascertain the effect of IM advertising on teenagers' attitudes. Nine-item five-point constructs were developed to measure each of the six hierarchy-of-effects model attitude stages in three separate questionnaires (one for each attitude level) by adapting construct items from: Ducoffe (1996) and Duncan and Nelson (1985) – cognitive attitude responses; Duncan and Nelson (1985), Ducoffe (1996), Lin et al. (2008), Martin et al. (2002) and Wang and Sun (2010) – affective attitude responses; and Hamidizadeh et al. (2012), Martinez-Lopez et al. (2005), Patwardhan and Ramaprasad (2005), Putrevu and Lord (1994); Taylor and Hunter (2002) and Wu et al. (2008) – behavioral attitudinal responses. Pre-tests and pilot studies were conducted to detect and correct potential problems with the questionnaires and research process, as well to ensure reliability and validity (Blumberg et al., 2011). The research employed 18 Marketing students (in the final year of their Bachelor degree) as fieldworkers from the Cape Peninsula University of Technology. Each fieldworker was allotted two schools to conduct the investigation on a face-to-face basis, which resulted in a high response rate (even though participation was voluntary), and also owing to the fact that the questionnaires were quick to complete (10 minutes). Hence, a total of 7 189 questionnaires were collected, and once the data was coded and captured, it was analyzed via the statistical package referred to as SPSS.

5. RESULTS AND DISCUSSION

As mentioned above, a total of 7,189 teenage Mxit users were surveyed in SA. As predicted, the IM platform was predominantly accessed via mobile devices, representing 75.6% of responses. This prolific use of mobile device trend (especially to access social media) among adolescents is confirmed by both South African (GeoPoll and World Wide Worx, 2015; Jovago, 2015; Nhlapo, 2015; Swanepoel, 2015) and global research (Pescher et al., 2014; Annalect, 2015; eMarketer, 2015; IAB, 2015). Mxit's length of usage was reasonably evenly distributed between less than one year to greater than five years on this IM channel. This finding makes logical sense owing to fact that the 13 year olds would have been using this IM platform for a shorter time period than the 18 year olds. Furthermore, a noteworthy number of South African teenagers are labeled as previously disadvantaged individuals (PDIs) (Colored and Black), primarily as a consequence of Apartheid. Hence, a large number of teenagers may only have the financial means to purchase a mobile device later in their school career in contrast to their international compatriots (De Lanerolle, 2012; Petzer and Meyer, 2013).

A majority of teenagers logged on to Mxit on a daily basis or multiple times a week (85.2%), which is also comparable to other South African (Breitenbach, 2015; Wronski, 2015) and international studies (Logan, 2014; Murphy, 2014) in terms of other social media platforms. South African adolescents generally spent an evenly distributed number of hours per log-on period (one to five or more hours) using this IM platform. However, a number of adolescents and young adults log-on numerous times a day, particularly via mobile devices (Dlodlo and Dhurup, 2013; Hardwick et al., 2014; Fluent, 2015), thus increasing the usage duration. The profile update incidence frequency was uniformly spread over the different time periods, but teenagers displayed the greatest incidence in the "daily" (28.2%) category. This usage characteristic has not been previously examined in other investigations and, accordingly, yielded original results in the cross-analysis with the different attitude stages that are deliberated upon in subsequent text.

The teenagers' gender displayed a small bias regarding female respondents (56.4%), which is comparable to the demographic characteristics of the population in SA (Statistics

SA, 2012). The 15 – 16 and 17 – 18 year olds collectively represented a majority (76.9%) of the sample owing to the fact that fewer of the 13 – 14 year olds had utilized Mxit, since they did not have mobile or computer access yet. There is a lack of research that investigates whether there are noteworthy differences in terms of attitudes as a result of IM and social media advertising between different age groups within a cohort (Bolton et al., 2013). Hence, this study has yielded some original findings in this genre, which will be discussed in later text. The different ethnic groups accurately replicated the cultural diversity of adolescents who live in the Western Cape in SA; hence Colored (52.78%) and Black (36.2%) respondents represented the bulk of the sample (Statistics SA, 2012). Table 1 provides a full summary of the usage and demographic characteristics of teenager respondents who use the IM platform (Mxit) in SA.

Table 1: Mxit Usage and Demographics Characteristics

	Overall		Cognitive		Affective		Behavioral	
Usage Characteristics	n	%	n	%	n	%	n	%
Access								
Mobile Device	5 433	75.6	2 116	76.0	1 484	74.2	1 833	76.2
PC	327	4.5	168	6.0	104	5.2	55	2.3
Mobile Device & PC	1 429	19.9	501	18.0	412	20.6	516	21.5
Length of usage								
≤ 1 year	1 074	14.9	506	18.2	310	15.5	258	10.7
2 years	1 421	19.8	535	19.2	411	20.6	475	19.8
3 years	1 682	23.4	547	19.6	480	24.0	655	27.2
4 years	1 345	18.7	491	17.6	360	18.0	494	20.5
≥ 5 years	1 667	23.2	706	25.4	439	22.0	522	21.7
Log-on frequency								
Daily	4 811	66.9	1 871	67.2	1 360	68.0	1 580	65.7
2 - 4 a week	1 317	18.3	477	17.1	365	18.3	475	19.8
Once a week	582	8.1	211	7.6	171	8.6	200	8.3
2 - 4 a month	269	3.7	144	5.2	54	2.7	71	3.0
Once a month	210	2.9	82	2.9	50	2.5	78	3.2
Log-on duration								
≤ 1 hour	1 665	23.2	553	19.9	506	25.3	606	25.2
2 hours	1 894	26.3	704	25.3	504	25.2	686	28.5
3 hours	1 604	22.3	674	24.2	410	20.5	520	21.6
4 hours	862	12.0	416	14.9	221	11.1	225	9.4
≥ 5 hours	1 164	16.2	438	15.7	359	18.0	367	15.3
Profile update incidence								
Daily	2 027	28.2	753	27.0	626	31.3	648	27.0
2 - 4 a week	1 429	19.9	483	17.3	423	21.2	523	21.8
Once a week	1 440	20.0	561	20.1	391	19.6	488	20.3
2 - 4 a month	850	11.8	425	15.3	188	9.4	237	9.9
Once a month	1 443	20.1	563	20.2	372	18.6	508	21.1
Demographics Characteristics								
Gender								
Male	3 137	43.6	1 176	42.2	864	43.2	1 097	45.6
Female	4 052	56.4	1 609	57.8	1 136	56.8	1 307	54.4
Age								

13 – 14	1 658	23.1	441	15.8	583	29.2	634	26.4
15 – 16	2 886	40.1	1 016	36.5	808	40.4	1 062	44.2
17 – 18	2 645	36.8	1 328	47.7	609	30.5	708	29.5
Ethnic group								
White	540	7.5	138	5.0	105	5.3	297	12.4
Black	2 602	36.2	1 314	47.2	750	37.5	538	22.4
Colored	3 788	52.7	1 246	44.7	1 093	54.7	1 449	60.3
Indian/Asian	259	3.6	87	3.1	52	2.6	120	5.0

5.1 IM Advertising Effect on Teenager Attitudes

Reliability refers to the degree to which the scale or construct measure is internally consistent. This reveals the extent to which different items, which measure the same variable, provide similar outcomes (Du Plooy, 2009; Bhattacharjee, 2012). The most frequently used reliability measure is known as Cronbach's Alpha coefficient. Cronbach's Alpha should preferably yield scores of 0.7, which indicate acceptable levels of internal consistency, but any score above 0.8 is considered as being good (Field, 2009). A reliability measure for each of the nine Likert construct statements for the six hierarchy-of-effects model levels was conducted by using Cronbach's Alpha for Mxit. The scores ranged from 0.741 – 0.877 (refer to Table 2), which reflected acceptable and good levels of internal consistency.

Validity is another important element in the assessment of a research instrument. A measurement is said to possess validity if there is evidence that the questionnaire and scales, which are used to measure the concept, provide a true reflection of the intended concept (Kent, 1993; Tavakol and Dennick, 2011). A principle component factor analysis was performed to ascertain the validity of each of the hierarchy-of-effects model stages for Mxit. The first principle component constructs ranged between 36.1% – 52.1% of the variance (eigenvalues); the second principle components of the constructs ranged between 20.8% – 28.4%; and the third principle components of the constructs ranged between 7.2% – 15.1% for this IM conduit. Hence, 73.6% – 83.3% of the data variance was explained for the Mxit advertising attitude constructs, which revealed that there was a reasonably low divergence between the construct items. A majority of the constructs' items made large contributions in terms of the first principle components, with coefficients ranging from 0.780 – 0.847, but the three negatively phrased constructs' items made lower contributions, with coefficients ranging from 0.030 – 0.503. Though, the measured variables still displayed an overall convergence of responses, which is indicative of validity for all six of the hierarchy-of-effects model constructs in terms of IM advertising.

Table 2 reflects that the lower hierarchy attitude stages have greater construct means than the lower levels, which also progressively decrease for each consecutive hierarchy attitude stage, until purchase. This trend conclusively resembles the communications effects pyramid or purchase funnel model, which was elaborated upon in prior text, as teenagers' attitude responses decrease as they progress up the pyramid. Therefore, this suggests that IM advertising (two-way communication) produces analogous predispositions in comparison to traditional advertising (usually one-way communication), which was used to postulate the initial communications effects pyramid model (Safko, 2010; Belch and Belch, 2015). Hence, this research empirically confirms that IM platforms, which are highly interactive in nature, still follow the basic principles of the purchase funnel model among teenagers in SA.

Table 2: IM Advertising Attitude Constructs

	Mean	SD	Cronbach α	p
Awareness	3.42	0.735	0.860	0.000*
Knowledge	3.35	0.704	0.825	0.000*
Liking	3.24	0.634	0.738	0.000*
Preference	3.12	0.589	0.756	0.000*
Intention-to-purchase	2.93	0.735	0.877	0.000*
Purchase	2.84	0.581	0.741	0.000*

* Wald's Chi-square test showed a significant difference at $p < 0.001$

Analysis of variance (ANOVA) was utilized to compare the means via Wald's Chi-square statistic to ascertain if there were significant differences for each of the hierarchy-of-effects model stages (Bhattacharjee, 2012). Table 2 reveals that there was a significant difference for each of the hierarchy-of-effects model stages regarding IM advertising among South African teenagers at $p < 0.001$.

Several other studies have also examined one or more hierarchy attitude stages SNA. Maxwell (2013) reported that online shoppers displayed positive cognitive responses towards brand SNS, but had unfavorable conative attitudes. Hadija et al. (2012) determined little cognition (cognitive response) and indifferent affective attitudes towards social media advertising among 20 college students in the US. Kumar et al. (2013) ascertained that WOM on SNS resulted in the rise of cognitive and behavioral responses towards brands when consumers with a large influence disseminate the marketing content among their social network of friends. Rohm et al. (2013) considered brand-consumer interaction among 58 US young adults and discovered that product information (cognitive response) entertainment (affective response); and incentives and promotions to encourage purchase (behavioral response) were important to Generation Y. Van Noort (2012) revealed that greater online interactivity levels of resulted in positive cognitive, affective and behavioral attitude responses among 169 students in the Netherlands.

Though, the above findings may vary between emerging and developed nations owing to the diverse environments in which the inquiries were conducted, while many utilized relatively small convenience samples that exclusively consisted of students and did not consider high school learners (teenagers). Furthermore, no local or international studies have previously considered hierarchy attitude stages towards IM (Mxit) advertising. This investigation confirms that teenagers in SA have positive attitudes regarding each of the hierarchy-of-effects model attitude stages owing to advertising on an IM platform. However, as discussed above, the respondents' sentiments declined as they advanced to higher level attitudinal responses, which correspond to the purchase funnel model.

Table 3: Effect of Usage and Demographics Characteristics on Hierarchy-of-effect Model Attitude Stages as a result IM Advertising

	Awareness			Knowledge			Liking			Preference			Intention-to-purchase			Purchase		
	M	SE	p	M	SE	p	M	SE	p	M	SE	p	M	SE	p	M	SE	p
Access																		
Mobile Device (1)	3.33	0.034	0.002** (3) - (1 & 2) ^B	3.25	0.033	0.000* (3) - (1 & 2) ^A	3.19	0.038	0.002** (3) - (1 & 2) ^B	3.07	0.035	0.258	2.77	0.033	0.185	2.75	0.027	0.467
PC (2)	3.20	0.062		3.149	0.060		3.08	0.069		3.07	0.064		2.95	0.096		2.80	0.078	
Mobile Device & PC (3)	3.42	0.040		3.385	0.038		3.27	0.044		3.02	0.041		2.78	0.042		2.779	0.034	
Length of usage																		
≤ 1 year (1)	3.16	0.044	0.000* (4) - (1, 2, 3) ^A	3.059	0.043	0.000* (2, 3, 4, 5) - (1) ^A	3.13	0.052	0.072	2.95	0.048	0.025** (2 & 4) - (1) ^B	2.94	0.058	0.001* (1, 2, 3, 4) - (5) ^A	2.842	0.047	0.000* (1, 2, 3) - (5) ^A
2 years (2)	3.27	0.044		3.323	0.043		3.13	0.049		3.08	0.045		2.86	0.051		2.827	0.041	
3 years (3)	3.32	0.044		3.27	0.042		3.24	0.047		3.06	0.044		2.84	0.049		2.784	0.039	
4 years (4)	3.45	0.046	(5) - (1 & 2) ^A	3.336	0.045		3.19	0.050		3.08	0.047		2.84	0.051		2.762	0.041	
≥ 5 years (5)	3.39	0.045		3.32	0.043		3.19	0.050		3.08	0.047		2.71	0.050		2.673	0.041	
Log-on frequency																		
Daily (1)	3.41	0.033	0.044** (1) - (5) ^B	3.325	0.031	0.008** (1, 3, 4) - (5) ^B	3.22	0.037	0.365	3.10	0.034	0.036** (2) - (4) ^B	2.95	0.041	0.005** (1) - (5) ^B	2.834	0.033	0.152
2 - 4 a week (2)	3.35	0.043		3.30	0.041		3.20	0.044		3.13	0.041		2.93	0.047		2.816	0.038	
Once a week (3)	3.30	0.055		3.25	0.053		3.17	0.057		3.01	0.053		2.82	0.059		2.81	0.048	
2 - 4 a month (4)	3.37	0.065		3.363	0.063		3.25	0.090		2.91	0.083		2.75	0.088		2.763	0.071	
Once a month (5)	3.15	0.081		3.064	0.078		3.06	0.094		3.11	0.087		2.74	0.089		2.662	0.072	
Log-on duration																		
≤ 1 hour (1)	3.29	0.043	0.000* (2) - (4) ^A (3) - (1 & 4) ^A	3.20	0.041	0.015** (3) - (1) ^B	3.13	0.047	0.017** (5) - (1 & 2) ^B	3.04	0.043	0.068	2.65	0.047	0.000* (2, 3, 4, 5) - (1) ^A	2.676	0.038	0.000* (5) - (1, 2, 3) ^A
2 hours (2)	3.38	0.042		3.242	0.041		3.12	0.047		3.00	0.044		2.81	0.048		2.757	0.039	
3 hours (3)	3.42	0.042		3.331	0.041		3.19	0.048		3.06	0.045		2.86	0.050		2.767	0.041	
4 hours (4)	3.21	0.047		3.28	0.046		3.19	0.055		3.05	0.051		2.93	0.060		2.806	0.049	
≥ 5 hours (5)	3.28	0.048		3.256	0.046		3.26	0.052		3.12	0.048		2.94	0.056		2.882	0.045	
Profile update incidence																		
Daily (1)	3.38	0.043	0.000* (1, 2, 3) - (4) ^A	3.232	0.042	0.000* (2 & 3) - (4) ^A	3.15	0.048	0.123	3.03	0.045	0.011** (2) - (5) ^B	2.88	0.050	0.002** (1, 2, 3) - (5) ^B	2.848	0.040	0.000* (1 & 2) - (5) ^A
2 - 4 a week (2)	3.36	0.045		3.306	0.044		3.24	0.048		3.13	0.045		2.88	0.052		2.838	0.042	
Once a week (3)	3.37	0.044		3.343	0.043		3.20	0.049		3.02	0.045		2.86	0.051		2.743	0.041	
2 - 4 a month (4)	3.14	0.046		3.151	0.044		3.13	0.057		3.07	0.053		2.85	0.059		2.737	0.048	
Once a month (5)	3.33	0.044		3.275	0.042		3.17	0.049		3.00	0.046		2.72	0.049		2.723	0.039	
Gender																		
Male (1)	3.28	0.037	0.014** (2) - (1) ^B	3.242	0.036	0.142	3.15	0.042	0.033** (2) - (1) ^B	3.07	0.039	0.279	2.82	0.045	0.366	2.785	0.036	0.551
Female (2)	3.35	0.037		3.281	0.036		3.21	0.042		3.04	0.039		2.85	0.044		2.771	0.036	
Age																		
13 - 14 (1)	3.26	0.045	0.036** (3) - (1) ^B	3.245	0.044	0.103	3.12	0.048	0.014** (2) - (1) ^B	3.03	0.044	0.378	2.85	0.049	0.021** (2) - (3) ^B	2.781	0.040	0.899
15 - 16 (2)	3.32	0.039		3.241	0.038		3.23	0.044		3.04	0.040		2.79	0.045		2.771	0.036	
17 - 18 (3)	3.36	0.038		3.30	0.036		3.19	0.044		3.08	0.041		2.87	0.047		2.782	0.038	
Population group																		
White (1)	3.27	0.066	0.000* (3) - (2) ^A	3.19	0.063	0.001* (3) - (2) ^A	3.16	0.066	0.520	3.00	0.062	0.111	2.62	0.055	0.000* (2 & 3) - (1) ^A	2.658	0.044	0.000* (2 & 3) - (1) ^A
Black (2)	3.24	0.032		3.227	0.031		3.21	0.039		3.12	0.036		3.03	0.047		2.80	0.038	
Coloured (3)	3.37	0.035		3.34	0.034		3.23	0.036		3.06	0.033		3.00	0.042		2.887	0.034	
Indian/Asian (4)	3.39	0.078		3.285	0.076		3.12	0.092		3.02	0.086		2.70	0.072		2.77	0.059	

* Wald's Chi-square test showed a significant difference at p<0.001

** Wald's Chi-square test showed a significant difference at p<0.05

^A Bonferroni correction pairwise comparisons mean difference is significant at the 0.001 level^B Bonferroni correction pairwise comparisons mean difference is significant at the 0.05 level

5.2 Usage and Demographic Characteristics' Influence on Attitudes Owing to IM Advertising

A Generalized Linear Model (GLM) ANOVA Wald's Chi-square test (as discussed in prior text) enabled the researcher to determine if the projected frequencies differ significantly from the observed frequencies (Urdan, 2010). Post hoc tests in the form of Bonferroni correction pair-wise comparisons were implemented on the estimated marginal means, which enabled the researcher to compare the dependent variables (hierarchy-of-effects model stages) and independent variables (usage and demographic characteristics), thus determining if and where there were significant differences among the variables (Field, 2009). The GLM ANOVA was utilized because of the varying amount of observations for the independent variables, and automatically "standardizes" the results. Table 3 displays the influence of the ANOVA Wald Chi-Square tests, which is founded on the post hoc test (Bonferroni correction pairwise comparisons) among the estimated marginal means, in terms of the influence of usage and demographics characteristics on hierarchy-of-effect model attitude stages owing to IM advertising.

5.2.1 Access

IM advertising exhibited the greatest positive predispositions when accessed by mobile devices and/or mobiles devices and PC for the lower hierarchy-of-effects model levels, namely cognitive (awareness, knowledge) and affective (liking) responses. Mxit is mainly a mobile IM channel, therefore, it is a reasonable supposition that IM advertising on mobile devices would result in more favorable cognitive responses than computers alone. Jovago (2015) and Swanepoel (2015) revealed that mobile conduits had become the leading mass media and the main advertising platform in Africa where nine in ten having mobile network access. Furthermore, as mentioned in prior text, since many users in emerging nations do not own smartphones, Mxit is the first Internet experience for these users (Britten, 2010, Mxit, 2015a). Andrews (2014) indicated that nearly 75% of SA mobile users search for information online while at a retailer to find product information and to compare prices before they consider purchasing a product or brand, which is in congruence with the results of this study. Furthermore, the bulk of teenagers' mobile devices never leave their side and are always switched on, which means that this cohort can always be reached, and are connected online for extended periods of time (Breitenbach, 2015), which enables astute marketers to continually target them with personalized IM advertising.

5.2.2 Length of Usage

Teenagers who had utilized Mxit for a greater number of years generally showed the most favorable sentiments for the lower hierarchy-of-effects model stages, namely cognitive (awareness, knowledge) and affective (preference) responses. However, the most experienced IM users (5 years or more years) displayed the least favorable intention-to-purchase and purchase levels versus those who had used this mobile IM platform for 1 to 4 more years. It is an acceptable notion that South African teenagers who have used Mxit for a prolonged period of time would have become familiar with the functionality of this mobile ICT channel; consequently, they should also have more favorable cognitive and affective responses owing to IM advertising. On the contrary, the most experienced users would have become accustomed to IM advertising and, hence, less easily influenced when it came to behavioral responses. Previte and Forrester (1998) and Cox (2010) also posited that inexperienced Internet users were more easily persuaded by online advertising. Additionally, several other inquiries have also determined that the online experience levels of consumers, using an array of interactive ICT conduits, was an important factor in attitude responses and

online buying decisions (Hoffman et al., 1999; Helander and Khalid, 2000; Liao and Cheung, 2001; Martinez-Lopez et al., 2005).

5.2.3 Log-on Frequency

IM advertising yielded higher awareness, knowledge, preference and intention-to-purchase levels for teenagers who logged on more frequently (daily and 2 - 4 times a week) versus those who logged on less frequently (2 - 4 times a month and monthly). This finding is also an acceptable principle, since the more times users logged on to Mxit, the greater the chance they will interact with commercial content, thereby increasing their attitudinal responses across all of the hierarchy-of-effects model levels. Wronski and Goldstruck (2014) disclosed that IM users logged on to Mxit an average of five times daily, and had the greatest levels of engagement compared to all other social mediums in SA. Sago (2013) affirmed that Internet users who spend more time online resulted in increased exposure to marketing-related content and awareness of interactive advertising.

5.2.4 Log-on Duration

Teenager IM platform users who spent longer period of time logged on Mxit displayed greater positive attitudes across all hierarchy-of-effects model stages (with the exception of awareness for one variable and preference where no significant difference was found) compared to those who had utilized this IM platform for a lesser number of hours. This result is a reasonable notion, since the greater length of time teenagers spent on Mxit, the increased likelihood of them observing and interacting with advertising on this mobile ICT conduit. Bridges et al. (2009) found that the longer an advertisement was displayed on an interactive ICT platform, the more probability that it would influence purchase decisions. Wronski and Goldstruck (2014) established that users on this IM platform spent nearly two hours on this mobile ICT conduit every day, and, as mentioned in prior text, also displayed the highest interactive levels in comparison to all of the other SNS conduits in SA.

5.2.5 Profile Update Incidence

Teenagers in SA who updated their profiles with greater frequency generated the most favorable predispositions to Mxit advertising across all hierarchy attitude stages in comparison to those who updated their profiles less frequently. This is a rational notion, as greater engagement on IM platforms would result increase the possibility of activity with other factors (such as the advertising). Chandra et al. (2012) affirmed that regular SNS users displayed positive attitudinal responses towards social media. IM platforms regularly create new products and apps that compel young users to continually engage and update their profiles more frequently, which also increase the likelihood of engagement with marketing and brand-related content.

5.2.6 Gender

This demographic characteristic displayed an influence on two hierarchy-of-effects model stages, namely awareness and liking, where female teenagers were found to exhibit elevated positive attitudes to advertising on Mxit. Taylor et al. (2011), Bannister et al. (2013) and Walter (2014) also postulated that females had greater positive predispositions towards advertising on various social media platforms in comparison to males regarding different hierarchy attitudes stages.

5.2.7 Age

Older teenagers (15 – 16 or 17 – 18 years old) showed the most favorable predispositions for the lower hierarchy-of-effects model levels, namely cognitive (awareness) and affective

(liking) responses in comparison to younger teenagers (13 – 14 years old). However, the older teenagers (17 – 18 years old) showed less favorable behavioral responses (intention-to-purchase) in comparison to younger teenagers (15 – 16 years old). This is an acceptable supposition, since it is likely that older South African teenagers would have utilized Mxit for a longer time period and, subsequently, would have become acquainted with the operations of this interactive ICT channel leading to more favorable cognitive and affective responses (as a result of IM advertising). In contrast, the older teenagers also would have become familiar with IM advertising and, therefore, not as easily influenced when it came to intention-to-purchase. No other investigations have previously considered differences of age within a single cohort in terms of hierarchy-of-effect model stages towards IM advertising (as mandated by Bolton et al. 2013); hence this research has made an exploratory contribution to this theoretical exposition.

5.2.8 Population Group

Colored teenagers displayed greater positive attitudes versus their Black counterparts in terms of cognitive responses. However, previously disadvantaged individuals (PDIs) (Colored and Black) teenagers displayed more favorable behavioral predispositions in comparison to White teenagers (this trend was also evident in terms of affective response mean values, although not at a significant level). This is not an unanticipated result, since the Black middle class has more than doubled over the last twenty years (since the end of Apartheid), and whose buying power now surpasses the White middle class in SA (Du Toit, 2015). Access to the online ICT channels has grown prolifically amid PDIs (Statistics SA, 2012). Shevel (2013) disclosed that over three-quarters of the Black middle class teenagers do not attend government schools, but instead are enrolled at former “model C” or private schools, which have accelerated the number of Black teenagers that use IM and SNS platforms, especially via mobile devices. Many PDI teenagers were introduced to their first online ICT platform through Mxit. Yet, White teenagers would most likely have been utilizing these online IM and SNS channels for their entire lives, and have, hence, become more habituated to IM advertising; therefore they have learned to disregard much of it owing to increased experience levels.

6. CONCLUSION AND IMPLICATIONS

First-world countries have been online for many years and, therefore, have become a commodity item that most consumers take for granted. Whereas the fast online growth in emerging nations, especially in Africa, has changed how consumers develop, interact and live. The conception of social media has not only changed peoples’ lives, but has also altered the way that businesses interact with consumers. Organizations and their brands have been propelled to investigate the fractured media landscape, stretching beyond traditional media as a result of the prolific increase in social media usage. IM and SNS platforms have improved conventional advertising by enhancing the human need to communicate by allowing brands to both listen and interact with consumers directly. Furthermore, SNS enables two-way communication among teenager consumers, but users may perceive and utilize the information differently, depending on their usage characteristics and demographic factors. Additionally, young consumers are more likely to enjoy and participate in social media brand communities that their peers have evaluated favorably and, therefore, exert significant influence on other users’ responses to IM advertising. Hence, organizations and their brands are compelled to leverage IM channels in order to maintain a strategic online market presence in order to establish, maintain and strengthen relationships, especially with consumers who predominantly use these interactive ICT channels, as well as encourage purchases and build a generally favorable predisposition towards marketing communications.

This study was a unique academic inquiry, which demonstrated the effect of IM advertising on South African teenagers' *vis-à-vis* the six hierarchy-of-effects model levels. The research found that IM advertising had a significant effect on each of the hierarchy attitude stages, but on a diminishing scale, which is consistent with the purchase funnel model. Moreover, several usage and demographic characteristics, a number of which have not been considered in prior research both in SA and internationally, were also found to have divergent effects on teenager attitudes owing to IM advertising. This inquiry has made a noteworthy addition towards comprehending the influence of IM advertising regarding A_{ad} theory development in developing countries on an international basis. Furthermore, as alluded to in prior text, this study will also enable organizations that utilize IM advertising to gain a more thorough understanding of what marketing communications on mobile interactive ICT platforms can do, not only in terms of their brands, but also in terms of teenager users and their attitudinal responses as current and prospective consumers.

7. LIMITATIONS AND FUTURE INQUIRY

This inquiry has some limitations and, hence, will provide the prospect to conduct further research. Teenagers are amongst the most dominant IM users, but may not have analogous attitudes in comparison to the rest of the Mxit population in relation to IM advertising. Therefore, future inquiries could examine attitudes towards IM advertising among other cohorts. No differentiation was made between the different types of Facebook advertising; hence, its impact was analyzed collectively. Therefore, a potential research avenue could be to determine the effect of the various kinds of Facebook marketing communications. Only one IM platform was considered, whereas other IM and SNS platforms, such as Facebook, Twitter, WeChat, Instagram, YouTube, Google+ and LinkedIn, could also be investigated. Cross-sectional research was employed (by means of a survey), but longitudinal research studies will not only result in greater depth of information, but will also provide a more complete perspective of attitudes towards IM advertising. SA is an emerging country, so the results of this study may not be comparable to developed countries (European countries and United States), hence equivalent investigations with such countries and other emerging countries may produce a more holistic perspective of attitudes towards IM advertising.

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