

Antecedents Of South African High School Pupils' Acceptance Of Universities' SMS Advertising

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ABSTRACT

Based on its versatility as a personal and direct medium of communication, short message service (SMS) provides a potentially useful avenue to higher educational institutions for marketing their programs to prospective students. However, the success of mobile marketing depends largely on its acceptance by the target population. This study explores antecedents to pre-final year high school pupils' acceptance of South African universities' SMS advertising. Results show that social influence is a better predictor of the target market's intentions to adopt SMS advertising than attitudes are. Behavioral intentions are a function of attitudes, social influences, innovation levels, and perceived study utility. No significant relationship exists between perceived risk and SMS advertising acceptance. South African universities could consider using SMS advertising in conjunction with traditional media, but should ensure that SMS content is based on the needs of their target market.

Keywords: acceptance, high school pupils, higher educational institutions, mobile marketing, SMS advertising, South Africa

1. INTRODUCTION

The information technology revolution provided marketers with many new opportunities for reaching consumers. The Internet played a vital role in communicating with potential consumers until the introduction of mobile marketing enabled marketers to more effectively communicate with specific consumer groups (Carter, 2008). Business's growing utilization of mobile marketing essentially resulted from the rapid market penetration of mobile devices. Ownership of mobile phones exploded worldwide and is still growing (Bauer, Barnes, Reichardt and Neumann, 2005). For example, Africa, with the highest growth rate of mobile phone users in the world, expects to have 378 million subscribers by 2011 (African continent fastest mobile growth market, 2006), compared with 281 million at the end of 2007 (African mobile phone statistics, 2008). South Africa is currently the largest African mobile market, with a more than 70% penetration level (Global telecoms business, 2007).

Almost all mobile phones can handle short-message-service (SMS), a technology that allows for sending and receiving short text messages of up to 160 characters (du Turban, King, Lee and Viehland, 2004). Given the ease and low cost of sending SMS messages, it is not surprising that 78% of mobile phone users with SMS-capable handsets regularly use the service (Antoine, 2004). It is expected that 3.7 trillion SMS messages will be sent by global consumers by 2012, generating revenues of up to US\$ 67 billion for mobile operators (Rosy future for SMS, 2007).

SMS offers marketers a versatile, personal, direct and interactive two-way medium (Trappey III and Woodside, 2005) for effectively communicating with target markets. A mobile phone is rarely used by anyone but its owner, and thus allows for highly personalized marketing messages (Bauer et al., 2005). Mobile advertising saves users' time and money compared with browsing content (Quah and Lim, 2002). Incentives offered by marketers further enhance the effectiveness of the communication message (Newell and Meier, 2007).

South African universities still largely use traditional communication channels such as brochures, newspaper advertisements and open-day events, to market their products and services to pre-final year school pupils (the traditional target market for these efforts). However, faced with the digital age and the popularity of the mobile phone as a communication tool among the target population, universities could now also consider SMS marketing. Mobile phone use among South African youths reached almost 100% (Business wire, 2006); with 97% regularly using SMS (Antoine, 2004). Nevertheless, before embarking on a SMS campaign, universities should first determine whether their target audience is ready to accept such SMS advertising. Our research aimed at identifying the antecedents to high school pupils’ acceptance of such marketing communication by tertiary institutions.

Table 1: Overview of Recent Studies on Mobile Phone Usage and Advertising Acceptance Among College Students

Author	Study country	Method	Major finding
Chowdhury, Parvin, Weitenberner and Becker (2006)	Bangladesh	Paper-based survey (n=309)	College students’ attitudes toward mobile advertising were influenced mainly by the credibility of messages. Entertaining and informative messages were not attractive.
Hanley, Becker and Martinsen (2006)	USA	Online survey (n=669)	College students were willing to accept mobile advertising if they were given incentives. Free ringtones and airtime were the most popular incentives.
Lee and Murphy (2006)	Australia	In-depth interviews (n=2) Focus group (n=8)	College students used mobile phones for both utilitarian and hedonic reasons, but more so hedonically.
Muk and Babin (2006)	USA	Paper-based survey (n=171)	College students’ attitudes and beliefs influenced their acceptance of SMS advertising, with attitudes having the strongest effect.
Peng (2006)	China	Paper-based survey (n=297)	College students’ acceptance of mobile advertising was affected by content credibility, product profiles, personalization, previous experience, privacy, and permission. Content credibility was the most important element.
Rohm and Sultan (2006)	USA & Pakistan	Paper-based surveys (n=169 in the USA) (n=215 in Pakistan)	College students’ behavioral intentions to engage in mobile advertising were affected by usage characteristics, privacy vulnerability, privacy concern, personal attachment, social influence, attitudes, consumer innovativeness, and permission. Students from emerging counties were more likely to accept mobile advertising.
Jun and Lee (2007)	USA	Paper-based survey (n=200)	College students’ attitudes toward mobile advertising were influenced by mobility, convenience, and multimedia service. These students’ attitudes were in turn directly linked to their behavioral intentions for mobile advertising.
Newell and Meier (2007)	USA	Experiment (n=206) Paper-base survey (n=182)	College students’ justifications for accepting mobile advertising consisted of novelty, and information and entertainment value. Their justifications for rejecting mobile advertising consisted of concerns about excess messaging, and technical and pricing limitations.
Hanley and Becker (2008)	USA	Online surveys (n=669 in Nov 2005) (n=682 in Oct 2006) (n=270 in Feb 2007) (n=784 in Sep 2007) (n=467 in Feb 2008)	Text messaging remained the most pervasive mobile content application. The perceived risks of receiving mobile advertisements were not a barrier to advertising acceptance.
Wais and Clemons (2008)	USA	Online survey (n=531)	College students preferred to receive promotional mobile messaging from a relevant person such as a friend rather than a company. They were more likely to perceive promotional messaging positively if it came from a relevant person instead of a company.

2. LITERATURE REVIEW, OPERATIONALIZATION OF THE VARIABLES AND HYPOTHESES

Literature on high school pupils' use of mobile phones and factors that influence their acceptance of mobile advertising is sparse. Table 1, however, shows a summary of 10 recent research studies on mobile phone use and advertising acceptance among college students across the world. We assumed that college students and high school pupils would have fairly similar behavioral patterns due to their similar age brackets. We therefore also expected the findings of these studies to provide appropriate input into the development of our theoretical model.

It follows from Table 1 that a positive relationship exists between acceptance and use of mobile advertising and incentives, personalization and novelty. Conflicting findings were evident in the case of entertainment, hedonic utility and risk. Table 1 also highlights aspects of beliefs, attitudes and behavioral intentions, innovativeness, attitudes and information seeking behavior.

The reported research, however, did not provide conclusive evidence with respect to the antecedents of teenagers' likely acceptance of SMS marketing by tertiary institutions. Furthermore no research focusing on young adults from Africa could be found. Bauer et al. (2005) propose that in cases where it is not viable to directly measure adoption of a new product, *overall acceptance* need to be forecasted by measuring the consumer's attitude towards acceptance of the innovation. This hypothesis follows the Theory of Reasoned Action, which argues that behavioral intention determines behavior. The former, in turn, is influenced by attitude toward the behavior and social norms (Ajzen and Fishbein, 1980). Our theoretical model thus comprises antecedents related to overall acceptance, consumers as individuals and SMS advertising as an innovation.

2.1 Antecedents to Overall Acceptance

Overall acceptance of an innovation is driven by attitude, social norms and behavioural intention. An attitude (ATA) is an enduring combination of cognitive, emotional, and behavioral processes (Neal, Quester and Hawkins, 2004) or mental states by which consumers structure the way they perceive and respond to market environmental elements (Aaker, Kumar and Day, 1998) such as a retail store, a television program, a product (e.g. a mobile phone), or a concept (e.g. advertising). The behavioral component of an attitude (BI) is "the tendency of the attitude holder to respond in a certain manner toward an object or activity" (Neal et al, 2004). Research (e.g. Scharl, Dickinger and Murphy, 2005; Tsang, Ho and Liang, 2004) drawing on the Theory of Reasoned Action (Ajzen and Fishbein, 1980), found positive relationships between attitudes, intention, and behavior associated with mobile advertising.

The Theory of Reasoned Action furthermore emphasises the role of subjective norms. Subjective norms (SN), also known as social norms, acknowledge that consumer behaviour is sometimes not under the attitudinal control of the individual, but is influenced by the desires and attitudes of reference groups (Evans, Jamal and Foxall, 2006) and by what they believe others expect them to do (Solomon, 2004). This is particularly important in the decision-making of children and teenagers. Teenagers tend to buy a look, an identity and an attitude to conform to the style and behavior of their group.

The following is thus hypothesised with respect to the overall acceptance of universities' SMS marketing to South African pre-final year high school pupils:

- H₁:** There is a positive relationship between the attitude toward SMS advertising and the behavioral intention to adopt SMS advertising.
- H₂:** There is a positive relationship between the subjective norms concerning the adoption of SMS advertising and the behavioral intention to adopt SMS advertising.
- H₃:** There is a positive relationship between the subjective norms concerning the adoption of SMS advertising and the attitude toward SMS advertising.

2.2 Consumer-related Acceptance Antecedents

Factors such as innovativeness, existing knowledge, information-seeking behavior and general attitude, are regarded as consumer-related antecedents. Innovativeness (IN) is indicative of the degree to which a person likes to try new things. More innovative consumers buy a new product or service earlier than less innovative ones and tend

to be more interested in information about the innovation. Consumers' existing knowledge (EK) furthermore determines their ability to understand the features and usage of an innovation and to realise its value (Bennett, 1998). They learn about an innovation by transferring information from a familiar domain to a new one (Saaksjarvi, 2003).

Information is an important attitude determinant factor, as consumers often search the marketplace for specific information once they have recognised a need (Solomon, 2004). According to Ducoffe (1995), consumers' perceptions of the informativeness of the advertising information positively affect their attitudes toward advertising in general. An individual's attitude toward advertising (ATA) in general, influences the success of any particular advertising (Bauer et al., 2005). High school pupils' attitudes toward advertising in general can therefore influence their attitudes toward SMS advertising. Thus the following is hypothesised:

- H₄:** There is a positive relationship between innovativeness and the individual's knowledge about mobile communications.
- H₅:** There is a positive relationship between existing knowledge about mobile communications and attitude toward SMS advertising.
- H₆:** There is a positive relationship between the information seeker's behavior and attitude toward advertising in general.
- H₇:** There is a positive relationship between attitude toward advertising in general and attitude toward SMS advertising.

2.3 Innovation-related Acceptance Antecedents

Perceived utility (PU) and perceived risk (PR) are regarded as acceptance variables related to the innovation per se. Different perceptions of the utility of an object account for different attitudes and behaviors toward the object (Foxall, Goldsmith and Brown, 2005). Bauer et al. (2005) indicate that consumers will only accept mobile advertising if they perceive some benefit to result. Table 1 indicates that young adults might perceive mobile marketing to provide them with information, entertainment, and social utility. In a tertiary education context, SMS messages might also provide high school pupils with study utility. Thus:

- H₈:** There is a positive relationship between the perceived utility of SMS advertising and the attitude toward SMS advertising.
- H_{8a}:** There is a positive relationship between the perceived information utility of SMS advertising and the overall utility perception of SMS advertising.
- H_{8b}:** There is a positive relationship between the perceived entertainment utility of SMS advertising and the overall utility perception of SMS advertising.
- H_{8c}:** There is a positive relationship between the perceived social utility of SMS advertising and the overall utility perception of SMS advertising.
- H_{8d}:** There is a positive relationship between the perceived study utility of SMS advertising and the overall utility perception of SMS advertising.

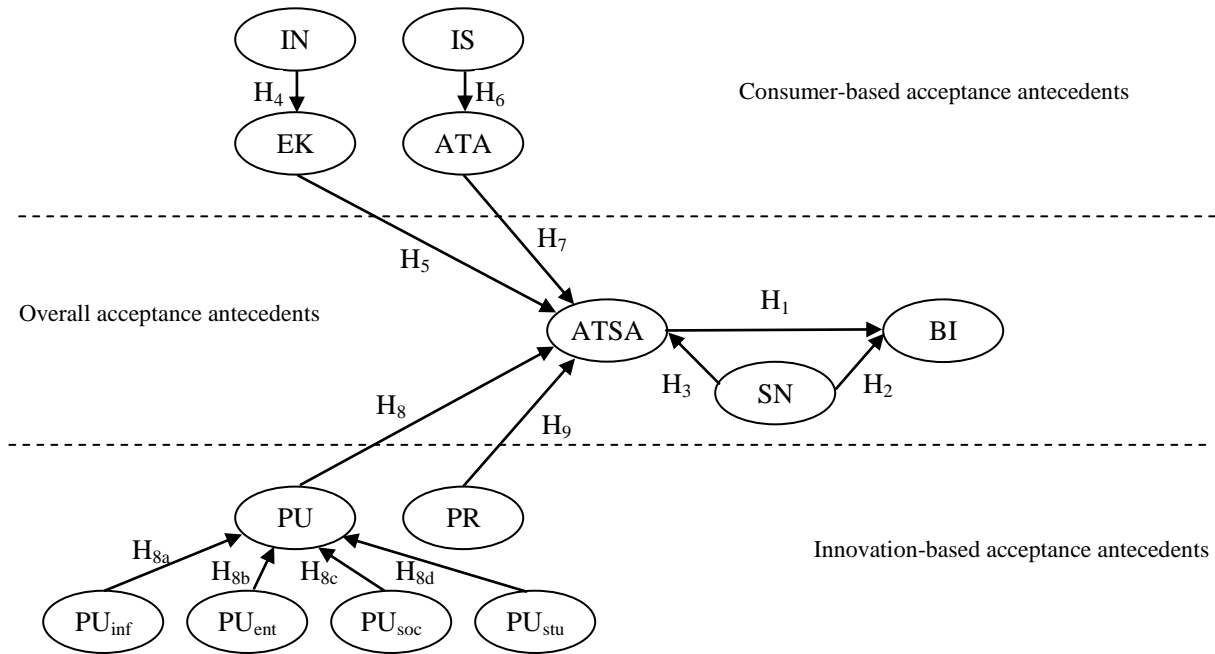
Consumers try to maximize utility and minimize risk (Bauer et al., 2005). Perceived risk is commonly thought of as an uncertainty regarding possible negative consequences of using a product or service (Featherman and Pavlou, 2002). If the perceived risk of the object is low, it is more likely to be adopted, whereas a high level of perceived risk will generally result in a lower adoption rate (Evans et al., 2006). The perceived risk associated with an innovation is often fairly high when consumers lack information and prior experience, or when the product is technologically complex (Neal et al., 2004).

The risk associated with mobile advertising relates mainly to data security (Bauer et al., 2005), resulting in a negative relationship between risk perception and attitude toward mobile advertising among mobile phone users. The dread of unwanted messages and privacy fears may prevent consumers from registering for mobile advertising (Vatanparast and Asil, 2007). Thus:

- H₉:** There is a negative relationship between the perceived risk of SMS advertising and the attitude toward SMS advertising.

Figure 1 depicts our anticipated model and shows the relationships between the variables.

Figure 1: Anticipated Model of High School Pupils’ Acceptance of SMS Advertising



Key: IN=Innovativeness; IS=Information seeking behavior; EK= ; ATA=Attitude towards advertising; PU_{inf}=Perceived information utility; PU_{ent}=Perceived entertainment utility; PU_{soc}=Perceived social utility; PU_{stu}=Perceived study utility; ATSA=Attitude towards SMS advertising; BI=Behavioral intention, SN=Social norms

3. METHODOLOGY

3.1 Research Instrument

The self-administered questionnaire used as the survey instrument comprised three sections. Section A contained nine questions (AQ1-9) requesting the respondents’ biographic detail such as gender, age and mobile phone usage. These questions were asked first in an attempt to put the respondent at ease and to build confidence. Section B comprised 32 statements (BQ1-32) aimed at addressing our hypotheses. Respondents had to indicate their agreement with the statements using a five-point interval Likert-scale with end points of 1=strongly disagree and 5=strongly agree. Section B aimed at measuring the relationship between the identified variables and high school pupils’ acceptance of SMS advertising by universities. Items per expected factor were purposefully limited to prevent respondent fatigue (Ryan, 1995). Eleven high school pupils representative of the population participated in the pre-testing of the questionnaire. Based on their feedback, a few minor changes were made to the formulation of the statements.

3.2 Sample Selection

The survey was conducted at the Nelson Mandela Metropolitan University (NMMU), the largest higher educational institution in the Eastern Cape Province, South Africa, boasting approximately 25 000 students. All Grade 11 pupils enrolled at the feeder high schools of the NMMU’s Port Elizabeth campuses served as the target population. These included 76 high schools and 13 252 Grade 11 pupils. It is customary for the NMMU to target this age group with their marketing messages using conventional methods such as school visits, brochures and open days. Systematic sampling, which is often used as a substitute for simple random sampling (McDaniel and Gates, 2004), was employed to select 20% of the feeder high schools. In each targeted school, the Grade 11 head or teacher was requested to select every fifth pupil on the alphabetical class list (20% of the total) who would then complete the questionnaire. Thus, a total of 480 pupils were selected as the respondents for the survey. Four hundred and

seventeen useful questionnaires were returned, giving a response of 86.9%. This high response rate most likely resulted from the questionnaire being administered during class time.

4. DATA ANALYSIS AND DISCUSSION

4.1 Respondents' Demographic Profiles

Just over half (51.1%) of the 417 respondents were boys and 204 were girls. Ages ranged from below 16 years (1.2%); 16 years (15.8%), 17 years (27.6%), 18 years (29.5) to over 18 years (25.9%).

Two hundred and sixty (62.3%) respondents owned a mobile phone, and 23% were to get one within six months. A large proportion (70.0%) of the respondents sent from one to ten SMSs and 57.3% received from one to ten SMSs each week. Although not verified in the current research, it could be argued that the number of personal SMSs sent and received was affected by the availability and use of Mxit (a free instant messaging software application developed in South Africa that allows the user to send and receive one-on-one text and multimedia messages to and from other users, as well as in general chat rooms without any charge for one-on-one messages).

Approximately 90% of the 260 respondents with mobile phones reported that text messaging was the most used form of messaging. However, no respondent reported to have been exposed to SMS advertisements, confirming the supposition that SMS marketing is an innovative product within the context of the current study.

4.2 Validating the Anticipated Model

The data gathered by Section B of the questionnaire was subjected to Confirmatory Factor Analysis (CFA) utilizing the Maximum Likelihood (ML) estimation method, with the aim of validating the anticipated model. The analysis was conducted with the SEPATH module of the STATISTICA (version 8.0) package. Six fit indices were selected that were used by three prior studies on mobile marketing acceptance, namely Bauer et al.'s (2005) Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA), Bruner II and Kumar's (2005) Non-Normed Fit Index (NNFI), and Chowdhury et al.'s (2006) Normed Fit Index (NFI). The results of model fit testing (See Table 3) suggested that the anticipated model did not adequately fit the data as the recommended highest cut-off value of 0.08 for a good fit (RMSEA) and 0.90 for the other measures (Hair, Anderson, Tatham and Black, 1998) were not obtained. We hence performed an Exploratory Factor Analysis (EFA) for the same data set in order to build a more adequate model.

4.3 Exploratory Factor Analysis

Assessing the dimensionality of the data showed that nine eigenvalues were greater than one, suggesting nine factors according to Kaiser's rule (Kaiser, 1960), while the scree plot suggested only two factors. Since these two rules indicated two very different solutions, we initially extracted the thirteen factors suggested by the theoretical constructs. The Principal Axis Factoring (PAF) technique was used for extraction, followed by a Direct Oblimin oblique rotation. This solution revealed that only eleven interpretable factors emerged, while a number of items either did not load on any factor, loaded on the wrong factor, or had loadings on more than one factor. A second exploratory analysis followed where seven items were omitted and eleven factors extracted. This solution revealed the existence of ten interpretable factors and suggested the deletion of two more items. Thereafter, exploratory analysis was rerun where ten factors were extracted as shown in Table 2.

As shown in Table 2, the most interpretable factor structure retained 23 (of 32 original) statements and 10 of 13 anticipated factors. Only three statements (PUent1, PUent2, and PUent4) loaded onto unexpected factors. Table 2 also displays the Cronbach's alpha coefficient for each resulting factor, ranging from 0.58 to 0.86. Considering the exploratory nature of this study, it could be concluded that each factor reliably measured its respective constructs (Hair et al., 1998; Sekaran, 2000). In addition, discriminant validity was also evident, as the correlation between any two factors was lower than 0.80 (Yanamandram and White, 2006), ranging from 0.07 to 0.54.

Table 2: Ten-factor Structure from the Exploratory Factor Analysis

Factor	Loading	Alpha
Innovativeness (IN)		0.58
IN1: I am usually among of the first to try out a new product.	0.54	
IN2: I often try new products before my friends do.	0.76	
Existing knowledge (EK)		0.75
EK1: I have a very good knowledge about cell-phones.	0.66	
EK2: In comparison to my circle of friends I am an expert in cell-phone usage.	0.81	
EK3: In my circle of friends I am usually the first who knows about the latest cell-phones.	0.52	
Information seeking (IS)		0.68
IS1: I enjoy reading different advertisements and then compare them.	0.69	
IS2: I tend to read a lot of different advertisements because it is interesting.	0.71	
Attitude towards advertising (ATA)		0.71
ATA1: Advertising is a good thing.	0.76	
ATA2: I like advertisements.	0.68	
Perceived information utility (PUinf)		0.86
PUinf1: Receiving advertising messages via the cell-phone keeps me up-to-date with the latest information.	0.74	
PUinf2: I like to receive unique information via my cell-phone.	0.77	
PUent1: I find receiving advertising messages via the cell-phone exciting.	0.74	
PUent2: It is fun to receive advertising messages directed to me personally.	0.63	
Perceived social utility (PUsoc)		0.60
PUent4: I find SMS messages entertaining.	0.65	
PUsoc1: I forward SMS messages I like to my friends.	0.36	
Perceived study utility (PUstu)		0.83
PUstu1: I think SMSs received from my school that will help me in my studies will be useful.	0.78	
PUstu2: SMSs can lead to better communication between my school and me.	0.87	
Subjective norms (SN)		0.64
SN1: If I use SMS advertising, most of the people who are important to me will regard me as clever.	0.50	
SN2: Most of the people who are important to me think that SMS advertising is useful.	0.79	
Attitude toward SMS advertising (ATSA)		0.74
ATSA1: Receiving SMS advertising messages via the cell-phone is a good thing.	0.36	
ATSA2: I like receiving SMS advertising messages via my cell-phone.	0.74	
Behavioral intention (BI)		0.66
BI2: I will think about using marketing information received by SMS.	0.81	
BI3: I will definitely use SMS marketing messages in the future.	0.51	

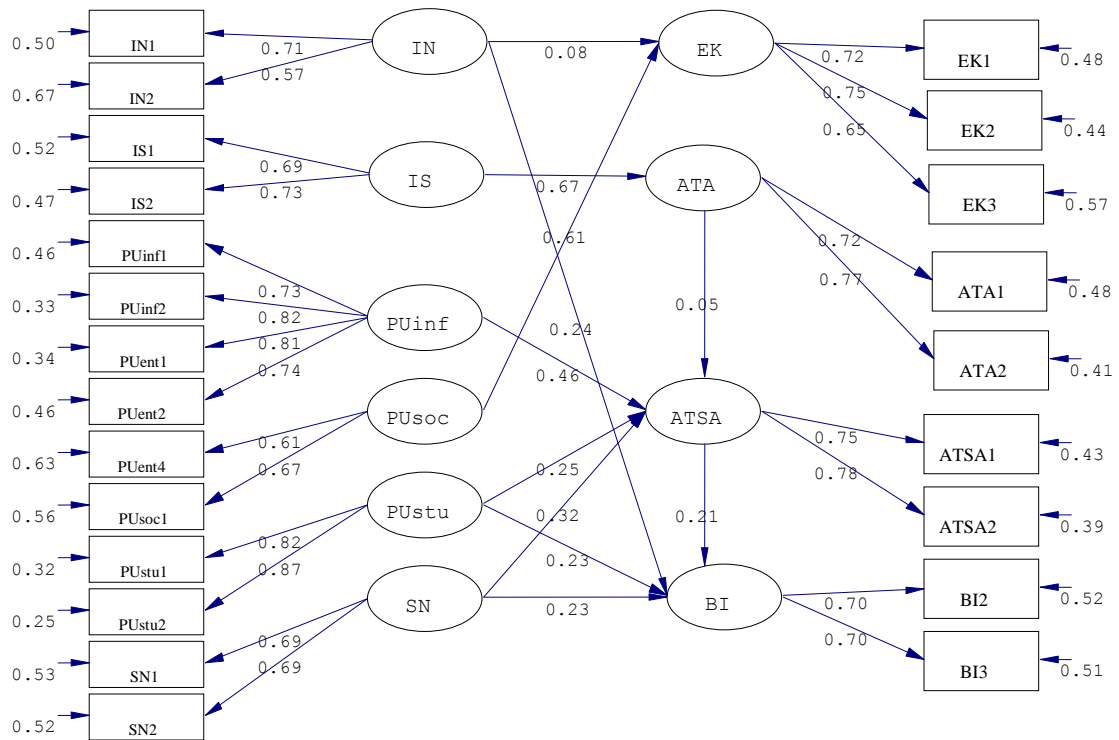
4.4 Structural Equation Modelling

The ten factors suggested by the exploratory factor analysis were used in the Structural Equation Modelling (SEM), using the SEPATH module of the STATISTICA (version 8.0) package. Fit indices were examined and structural paths (i.e. paths between the latent constructs) were added that were significant, but could also be substantiated by theoretical considerations. Some highly insignificant paths were deleted in this process. Fig. 2 illustrates the final model for this study, which showed an acceptable fit for the data (see Table 3). This model fully met the four adopted indices' (GFI, NNFI, CFI, and RMSEA) requirements for good fit and were very close to the other two indices' (AGFI and NFI) recommended values.

Table 3: Results of the Model Goodness-of-Fit Test

Fit index	Condition	Value (Anticipated model)	Value (Final model)
Goodness-of-Fit Index (GFI)	>0.90	0.71	0.92
Adjusted Goodness-of-Fit Index (AGFI)	>0.90	0.66	0.89
Normed Fit Index (NFI)	>0.90	0.58	0.88
Non-Normed Fit Index (NNFI)	>0.90	0.60	0.92
Comparative Fit Index (CFI)	>0.90	0.64	0.93
Root Mean Square Error of Approximation (RMSEA)	<0.08	0.11	0.05

Figure 2: Final Model for the Study



Key: IN=Innovativeness; IS=Information seeking behavior; EK= ; ATA=Attitude towards advertising; PUinf=Perceived information utility; PUsoc=Perceived social utility; PUstu=Perceived study utility; SN=Social norms; ATSA=Attitude towards SMS advertising; BI=Behavioral intention

4.5 Hypothesis Testing

The acceptance of the model made it possible to empirically test our hypotheses. The following relationships were found to exist:

- between attitude toward SMS advertising and the behavioural intention to adopt SMS marketing (H₁);
- between subjective norms and the behavioural intention to adopt SMS advertising (H₂);
- between subjective norms and attitudes toward SMS (H₃);
- innovativeness and knowledge about mobile communications (H₄), although the magnitude of this relationship is low (0.08);
- between information-seeker behaviour and attitude toward advertising in general (H₆);
- between attitude toward advertising in general and attitude toward SMS advertising (H₇), but the magnitude of the relationship is low (0.05).

We rejected our remaining hypotheses either due to highly insignificant relationships between factors, or because of the structural differences between the anticipated and final models. The final model also revealed five unexpected structural relationships, namely IN→BI, PU_{inf}→ATSA, PU_{soc}→EK, PU_{stu}→ATSA, and PU_{stu}→BI.

We furthermore calculated the total effects of the final model’s constructs on the behavioral intention variable (shown in Table 4). The results revealed that innovativeness, study utility, and subjective norms play an important part in the school pupils’ acceptance of SMS advertising.

Table 4: Total Effects of the Final Model's Constructs on the Behavioral Intention Variable

Construct	Sum of partial effects	Total effect
Innovativeness (IN)	0.24	0.24
Information seeking (IS)	$0.67 \times 0.05 \times 0.21$	0.01
Information utility (PU _{inf})	0.46×0.21	0.10
Study utility (PU _{stu})	$0.25 \times 0.21 + 0.23$	0.28
Subjective norms (SN)	$0.32 \times 0.21 + 0.23$	0.30
Attitude toward advertising (ATA)	0.05×0.21	0.01
Attitude toward SMS advertising (ATSA)	0.21	0.21

5. CONCLUSIONS

Given the benefits of SMS communication and the high level of mobile technology use among South African teenagers, universities could consider using SMS in marketing when targeting pre-final year high school pupils. However, because SMS marketing is still new to this target market, universities need to determine the likely acceptance of such advertising prior to embarking on a promotional campaign. This study investigates the antecedents to South African high school pupils' acceptance of SMS advertising.

Our study shows that attitudes and social norms are important antecedents to high school pupils' overall acceptance of universities' SMS advertising. A *strong* direct and a *weak* indirect relationship exists between social norms (SN) and intentions (BI). Social norms are a better predictor of pupils' intentions to adopt SMS advertising than attitudes were. Reference group influence on pupils' decision making processes should thus be taken into account when universities send marketing SMSs the target teenage group. It is also meaningful that a direct relationship exists between innovativeness (IN) and intentions (BI) and between perceived study utility (PU_{stu}) and intentions (BI). Pupils seem to treat these two attitudinal variables as immediate determinants of intentions.

In the context of the current research, behavioural intention can thus be viewed as a function of attitudes, social influences, innovation levels, and perceived study utility. Perceived risk, however, will not deter their acceptance of SMS advertising.

6. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This study focused on teenagers as prospective students without exploring the influence of socio-demographic variables such as gender, family life cycle, household income, and culture. Future research should investigate the impact of these factors. Emerging markets are more likely to accept mobile marketing (Rohm and Sultan, 2006). Acceptance of mobile advertising by prospective students from developed countries (e.g. the USA) may differ significantly from those of developing countries (e.g. South Africa). In addition, a large proportion of our sample attends school within a multi-language environment. Considering Salaberry and Upton (2007)'s suggestion that mobile marketers should communicate to consumers in their native tongue, future research is needed to investigate the language influence on the pupils' acceptance of mobile advertising, especially in multilingual countries.

Although probability sampling was employed in the empirical study, the data was collected at only one single university's feeder high schools. This could limit the generalizability of the findings.

Finally, although SMS is likely to remain a dominant mobile marketing medium for the next few years due to its lower cost than multimedia services (MMS), future investigations should also examine prospective students' likely acceptance of universities' MMS advertisements.

7. MANAGERIAL IMPLICATIONS AND CONTRIBUTION OF THE RESEARCH

This study identified the antecedents to high school pupils' acceptance of SMS advertising by tertiary institutions. Since South African high school pupils currently display some readiness to accept SMS advertising by universities, marketers should consider using this medium for marketing-communication purposes. Secondly, since reference groups and peer pressure play an important role in pupils' SMS advertising acceptance, marketers need to develop messages that reinforce group identity and the sense of belonging. However, such messages have to address

pupils both as group members and as individuals, as the SMS medium allows for the delivery of highly personalized messages. Thirdly, given that pupils display signs of innate innovativeness and perceive SMS advertising as a new medium, marketers could accelerate pupils' acceptance processes by rewarding those who find benefits in early adoption. Finally, advertisers must keep in mind that the content of any SMS message should be created based on pupils' specific needs (such as information about open-day events and fees), as SMS users only take notice of advertisements that interest and benefit them.

AUTHOR INFORMATION

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