PERCEPTIONS OF THE EFFECTIVENESS OF TWITTER AS A CROWDFUNDING COMMUNICATION TOOL FOR RAISING UNIVERSITY FEES

ABSTRACT

Twitter as a communication medium has revolutionised the way in which messages are sent and received due to its immediacy and reach. This study investigated the extent to which Twitter was utilised as an effective communication tool for raising tuition funds at a selected university in South Africa. The research was quantitative in nature, adopting the survey methodology, were willing, randomly selected participants completed a questionnaire on campus. Non-probability sampling was used in selecting these participants due to the difficulty of obtaining a sampling frame. A total of 380 surveys were returned and used for analysis and insights. Descriptive statistics and structural equation modelling were conducted to generate results using SPSS 25 and AMOS 25 respectively. A key finding established that ‘perceived ease of use Twitter’ and ‘perceived usefulness Twitter’ were the most correlated constructs regarding its effectiveness in raising funds. Based on the findings, implications emerged as well as interesting insights into how students perceive Twitter as a viable tool for raising tuition fees. The limitations of the study were highlighted. Lastly, further research suggestions were proposed.

Keywords: social media; Twitter; online communication; marketing communication; digital marketing; funding; university tuition; crowdfunding

INTRODUCTION

Crowdfunding has emerged as a valuable funding source for entrepreneurs (Belleflamme et al. 2014). This study, however, viewed crowdfunding from the context of generating funds for tuition fees at a higher education institution. It is understood that one of the biggest changes in human interaction to date has been the introduction and rise of online social networks (Tiago & Verissimo 2014). This rapid growth has shaped and moulded the human activities and interactions we know...
today. Although social media is still a growing phenomenon, it is considered one of the most effective and commonly used means of communication (Coelho et al. 2017), with approximately 25% of the world’s population making use of social media.

However, one cannot mention social media without mentioning what one would call the “mother” of it all – digital marketing. Kannan and Li (2017: 23) define digital marketing as “activities, processes and institutions facilitated by digital technologies for creating, communicating and delivering value for customers and other stakeholders”. Digital marketing is an evolving concept and, simply put, it is about people (marketers) connecting with other people (consumers) to build relationships with the purpose of increasing revenue (Ryan & Jones 2009). Twitter, a microblogging service launched in 2006, has become prevalent among university students (Johnston et al. 2013). Twitter allows users to share their thoughts, information and links in real time, as well as communicate directly, privately (through direct messages), or publicly with other Twitter users (ibid.).

In terms of digital marketing, the social relationships that existed in the real world have shifted to the virtual world; this has resulted in the formation of online communities (Tiago & Verissimo 2014). These online communities provide users with a great source of electronic word of mouth (Akar & Mardikyan 2014). Berthon et al. (2012) differentiate between Web 2.0 and social media, with Web 2.0 referring to the technical infrastructure (both hardware and software) which allows for two-way communication, allowing the user to have control over design, collaboration and community online. It allows users to share, link and collaborate (Thackeray et al. 2008). Social media is the product of applications that are internet-based that use Web 2.0 technological foundations and allow for the creation and interchange of user-generated content (Berthon et al. 2012).

The extensive adoption and popularity of social media sites like Twitter implies that these online technologies are successful among individuals because of their acceptance and usage in three spheres of human life: people’s personal, social and professional life (Rauniar et al. 2014). Based on the technology acceptance model (TAM), the reason for some social media sites failing could be indicative of their inability to gather acceptance and popularity from their intended target audience (ibid.).
The theoretical models used in this study are the theory of reasoned action (TRA) and TAM, which was adopted by Davis (1986) from the former theory. These models are widely recognised and used in academic literature (Akar & Mardikyan 2014). In short, TRA is said to explain a person’s behaviour through their intentions (Rauniar et al. 2014). It describes how the attitudes and beliefs that people hold about a particular system lead to behaviour (Karahanna & Straub 1999). TRA is a well-known intention model proven to be successful in predicting and explaining people’s behaviour across a wide variety of topics (Davis et al. 1989). Davis et al. (1989) state that due to the model’s general nature, one is able to use it to elucidate any human behaviour. TAM, on the other hand, is an adaptation of TRA and was specifically designed to explain one type of behaviour, namely computer usage (ibid.).

The research objectives are presented in the following section and most of these are associated with student perceptions towards the National Student Financial Aid Scheme of South Africa (NSFAS).

RESEARCH OBJECTIVES
The research objectives of this study are:

♦ To investigate the relationship between perceived ease of use, perceived information and credibility and the desire to look for funding without the assistance of bursaries, NSFAS or loans on the perceived usefulness of Twitter;
♦ To investigate the relationship between perceived usefulness and the intention to use Twitter for university funding;
♦ To investigate the relationship between the intention to use Twitter and the actual use of Twitter for university funding;
♦ To investigate the relationship between the desire to look for funding without the assistance of bursaries, NSFAS or loans and the intention to use Twitter for university funding; and
♦ To investigate the relationship between the desire to look for funding without the assistance of bursaries, NSFAS or loans and the actual use of Twitter for university funding.

PROBLEM STATEMENT
Although there are relatively few fully inclusive studies on how, for which reasons, or in what ways university students use Twitter (Weller et al. 2014), there is evidence that students rely on Twitter now more than ever to fund their university fees as many do not qualify for NSFAS or bursaries, as part of the so-called “missing middle” (Mulaudzi 2015). According to Booysen (2016), there has been a significant growth of debt amongst students, with South African students owing about R711 million in student debt.
THEORETICAL FRAMEWORK

FIGURE 1: REVISED TAM FOR SOCIAL MEDIA

FIGURE 2: CONCEPTUAL MODEL
TAM is often revised in studies to fit a specific context of technology being studied (Rauniar et al. 2014). In this study, the revised TAM for social media (Figure 1) has been adapted to represent the conceptual model for this study, shown in Figure 2. Perceived ease of use, perceived information and credibility and the desire to look for funding without assistance of bursaries, NSFAS or loans have replaced critical mass, capability and perceived playfulness. The variables perceived usefulness, intention to use and actual use remain unchanged, but with trustworthiness removed as a variable. Through adopting this model, the pivotal question regarding the relationship between the desire to look for funding without the assistance of bursaries, NSFAS or loans and the intention to use Twitter can be investigated. The relationship between the desire to look for funding without the assistance of bursaries, NSFAS or loans and the actual use of Twitter is also examined.

H1: The relationship between perceived ease of use and perceived usefulness
H2: The relationship between perceived information and credibility and perceived usefulness
H3: The relationship between the desire to look for funding without the assistance of bursaries, NSFAS or loans and perceived usefulness
H4: The relationship between perceived usefulness and intention to use
H5: The relationship between intention to use and actual use
H6: The relationship between the desire to look for funding without the assistance of bursaries, NSFAS or loans and the intention to use Twitter
H7: The relationship between the desire to look for funding without the assistance of bursaries, NSFAS or loans and the actual use of Twitter

RESEARCH DESIGN AND METHODOLOGY

The study used a quantitative research design as it focused on hypothesis testing. This section briefly discusses the sampling design, questionnaire design, data collection and data analysis approaches.

The target population for this study was university students registered at the University of the Witwatersrand, who are Twitter users. To gauge only those who are Twitter users, a filter question was included in the questionnaire, asking whether individuals are Twitter users or not. The sample size consisted of 380 students. A convenience sampling method (non-probability) was used. In order to determine the sample size number, the Raosoft sample size calculator was used with 35 000 students as the population size.

The measuring instruments used in this study were adapted from existing research to suit this specific study. The questionnaire measurement instruments on perceived ease of use were based on Heinrichs et al. (2011) as well as Lane and Coleman (2012); while, perceived usefulness was a combination of Heinrichs et al. (2011) and Rauniar et al. (2014). The perceived information credibility questions were modelled after Heinrichs et al. (2011); while, intention to use and actual use questions were
based on Rauniar et al. (2014), including Lane and Coleman (2012). Where necessary, new questions were included, for example the variable "the desire to look for funding without assistance of bursaries, NSFAS or loans".

LITERATURE REVIEW AND CONTEXT OF RESEARCH

Higher education in South Africa

South Africa boasts a vibrant higher education sector with more than a million students enrolled in the country’s 24 state-funded tertiary institutions (Matsolo et al. 2018). Since 1994, the number of students enrolled in institutions of higher education has improved significantly. However, high university fees continue to contribute to the under-representation of black students (ibid.). According to Bronkhorst and Michael (2017), trying to improve the participation rate for black students remains a central issue for the government. However, the participation rate can only be improved through funding. This is because lack of funding tends to be the reason for high under-enrolments from this population group (Bronkhorst & Michael 2017). South Africa’s higher education institutions have faced several challenges over the past few years, including high student dropout rates, the demand for free education through the #FeesMustFall protests, the unavailability of on-campus residences, the unavailability of spaces to admit recently matriculated candidates, as well as the demand to decolonise the curriculum (Moloi 2016).

Lack of funding

In Africa, there is a direct correlation between poverty and student retention (Bronkhorst & Michael 2017). Hence, many students are financially excluded and some fail to complete their degrees and diplomas after gaining access into university (ibid.). The amount of money injected into student funding schemes, such as NSFAS, is indeed a reflection of the government’s commitment and efforts to ensure a fair and equitable distribution of bursaries and loans. However, if one compares how much the South African government is spending on higher education versus other G20 countries, like Argentina, India, Saudi Arabia, Brazil, Russian Federation and Indonesia, it is the lowest at 0.75% (Bronkhorst & Michael 2017). In 2012, the government expenditure on higher education was 0.71%, (Universities South Africa 2016).

Challenges university students face

The #FeesMustFall movement brought to light a number of challenges that students confront when pursuing higher education (Domínguez-Whitehead 2017). Despite the obvious challenge of tuition fees that students face, there are several other trials faced by students. Those trials are class and race, student activism, decolonisation of the curriculum, inclusion and exclusion, as well as food and housing (ibid.). Students struggle to access basic needs, such as food and shelter, due to the rising cost of living and increasing tuition fees. Poverty and the lack of sufficient funding are cited as key factors for academic failure and the reason why students find it difficult to progress. Students continuously face the pressures of either prioritising their own financial needs
or those of their families. It is said that food and housing challenges are widespread in universities across South Africa (Dominguez-Whitehead 2017). Food and housing are often overlooked and assumed to be accessible to every student pursuing a higher education, as entry into higher education institutions has traditionally been reserved for the elite.

Student debt and university dropouts
Dropout rates are driven by a combination of academic factors and financial constraints (eNCA 2018). In 2001, South Africa had one of the lowest graduation rates in the world, at approximately 15% (Matsolo et al. 2018). Of the students entering a three-year degree in university, less than half of them complete their degrees and out of those who do complete their degrees, some 50% take six years to graduate. One in four students drop out before they reach their second year of studies. Students enter higher education in the hope that they will graduate with a qualification (eNCA, 2018); however, the challenges faced by students are often so overwhelming that many drop out in their first year of study (Moodley & Singh 2017). Matsolo et al. (2018) write that one of the most common reasons for students not pursuing tertiary education or dropping out is financial difficulties. Lack of funding is the most cited reason for students dropping out of university, which makes financial aid a critical factor in improving student retention (Moodley & Singh 2017). Loans are said to be the most used form of financial assistance among students of the United States, but the use of loans and the problem of student debt is not confined to the United States (Gassman et al. 2018). Student debt is a growing problem, which seems to affect students worldwide (Perkins et al. 2016).

Efforts to alleviate the current issue
The South African government’s efforts to alleviate the current issue of lack of funding and student challenges are discussed below, ranging from concessions, proposals for free education, NSFAS and food banks. The authors refer to the #FeesMustFall student movement often because it triggered a turnaround in higher education (Booonsen 2016), including funding concessions, as well as policy elaborations. In 2015, the government approved a zero percent fee increase for 2016. It also reprioritised higher education and approved additional funding for the higher education sector, which was previously neglected. The government eventually acknowledged that to assist a wider range of poor students, NSFAS needed to be re-organised, well managed, and better funded. Previously students were excluded due to historical debt, but in 2015, the government conceded that students should not be excluded because of this. Student debt was negotiated (some was written off) or covered by new sources, from NSFAS or in some instances the private sector (ibid.).

DISCUSSION OF VARIABLES
Perceived ease of use
Heinrichs et al. (2011) define perceived ease of use as the user finding the social networking site easy to operate, which means that the user will not have to exert
unnecessary effort in operating the site to achieve his/her desired objective. Rauniar et al. (2014) define it as the degree to which someone believes using a specific system will be free of exerting effort. According to Heinrichs et al. (2011), perceived ease of use can encourage users to participate and share on social networking sites. If social networking sites are easy to use, they will have a higher probability of being adopted and used (ibid.). Bugembe (2010) adds that individuals are more likely to accept social networking sites that are easier to use than those that are not. Additionally, if a social networking site is relatively easy to use, users will be more willing to learn about its features and will intend to use it frequently (Hamid et al. 2015). According to Bugembe (2010), previous research established that perceived ease of use is an important factor influencing user acceptance and usage of information technologies.

**Perceived information credibility**

Before using a social networking site, users want to ensure that the information provided on the site is credible and of quality (Li & Suh 2015). Information credibility is the extent to which a user perceives information to be believable. Li and Suh (2015) state that believability or credibility is one of the criteria used to filter information. Providing information that is accurate and trustworthy plays a role in ensuring that users return to the site (Heinrichs et al. 2011). Although Heinrichs et al. (ibid.) mention information quality in their research, perceived information credibility is the same thing. Perceived information credibility can be seen as information that is accurate, relevant, complete and consistent. Heinrichs et al. (2011) suggest that social networking sites, which provide high-quality information, will lead to the sites having greater perceived usefulness and that perceived information credibility should influence users ongoing participation on these social networking sites.

**Desire to look for funding without assistance**

Limited literature exists for the variable related to searching for university funding on Twitter. However, the authors noticed the trend of Twitter users using the social network platform to fund their university studies; hence, they began to question the correlation between the desire to look for funding without assistance of bursaries, NSFAS or loans, with the perceived usefulness, intention to use, and actual use of Twitter. This variable refers to how students have found alternative routes to finance their studies, rather than relying on the systems currently in place such as bursaries, NSFAS and loans.

**Perceived usefulness of Twitter**

The perceived usefulness of Twitter refers to the users’ belief that using a specific system application or social networking site will improve their overall performance (Heinrichs et al. 2011). Bugembe (2010) refers to perceived usefulness as the individual’s perception regarding the outcome of a particular experience. Venkatesh and Davis (2000) have noted that, according to TAM, perceived usefulness is influenced by perceived ease of use because all things being equal, the easier social networking sites are more useful. Perceived usefulness is an essential driver of usage...
intentions as it has continuously been a strong determinant of users' usage intentions (Venkatesh & Davis 2000). Hamid et al. (2015) echo this statement by saying that perceived usefulness is a direct predictor of the behavioural intention to use a system. Interestingly, when TAM was applied in Finland it was found that perceived usefulness is not only a direct predictor of the intention to use, but it is also a determinant of actual behaviour (Jahangir & Begum 2008).

**Intention to use and actual use**

The term “intention” refers to a decision that someone has made about whether to perform a behaviour or not, and it is formed through deliberate thinking, conflict and commitment (Rauniar et al. 2014). Rauniar et al. (2014) add that the intention to use social media is known as a voluntary and cognitive illustration of a user’s willingness to actually use the platform. This variable can be used to envision and predict the motivation and willingness of a user to perform a particular action or behaviour (Durodolu 2016). Heinrichs et al. (2011) view the intention to use as the extent to which a user would like to use or revisit a social networking site again and ultimately is the function of perceived ease of use and perceived usefulness. The perceived benefit the user receives from using social media determines his/her intention to use the social network; thus, if a user has a favourable attitude towards a social network his/her intention to use it will be higher (Rauniar et al. 2014).

**RESULTS OF THE STUDY**

This section consists of a summary of the respondents’ demographic profile/background information. It includes a discussion of the respondents’ gender, age, the faculty they belong to, whether they are a full-time or part-time student, and who is funding their university studies.

Table 1 indicates that males accounted for 61% of the sample, while females accounted for about 38%. More than 90% of the participants were in the age range 19 to 30. The Engineering and the Built Environment Faculty was the most represented faculty, with 111 students participating out of a total of 380 respondents. The majority of the students were funded by their own parents (33%), followed by private company (bursary/scholarship) funded students. The smaller groups were NSFAS-funded, “other” sources-funded and self-funded students – 24%, 11% and 7% respectively.
TABLE 1: DEMOGRAPHIC PROFILE OF RESPONDENTS

| Gender                | Frequency | Percentage |
|-----------------------|-----------|------------|
| Male                  | 231       | 60.8       |
| Female                | 143       | 37.6       |
| Prefer not to say     | 6         | 1.6        |
|                       | 380       | 100.0      |

| Age                   | Frequency | Percentage |
|-----------------------|-----------|------------|
| 18                    | 17        | 4.5        |
| 19-20                 | 127       | 33.4       |
| 21-30                 | 234       | 61.6       |
| 31 and above          | 2         | 0.5        |
|                       | 380       | 100.0      |

| Faculty               | Frequency | Percentage |
|-----------------------|-----------|------------|
| Commerce, Law and Management | 106       | 27.9       |
| Engineering and the Built Environment | 111      | 29.2       |
| Health Sciences       | 15        | 3.9        |
| Humanities            | 101       | 26.6       |
| Science               | 47        | 12.4       |
|                       | 380       | 100.0      |

| Type Enrolment        | Frequency | Percentage |
|-----------------------|-----------|------------|
| Full-time student     | 370       | 97.4       |
| Part-time student     | 10        | 2.6        |
|                       | 380       | 100.0      |

| Funding of respondent's university studies | Frequency | Percentage |
|-------------------------------------------|-----------|------------|
| Parent(s)                                 | 127       | 33.4       |
| Self                                      | 28        | 7.4        |
| Private company (bursary/scholarship)     | 94        | 24.7       |
| NSFAS                                     | 91        | 23.9       |
| Other                                     | 40        | 10.5       |
|                                           | 380       | 100.0      |

### Structural equation modelling

Structural equation modelling was conducted based on the two-step procedure, which examines model fit comprising of confirmatory factor analysis (CFA) and hypotheses testing. Confirmatory factor analysis (CFA) was primarily performed to examine the scale accuracy (including reliability and convergent validity) of the multiple-item construct measures using AMOS 25. The correlations of the constructs were adapted for the study. The inter-construct correlation matrix depicting the extent to which the conceptual model's constructs interrelatedness is presented in the following section.
TABLE 2: INTER-CONSTRUCT CORRELATION MATRIX

|       | PEU Pearson Correlation | PIC Pearson Correlation | PU Pearson Correlation | ITU Pearson Correlation | AU Pearson Correlation | DTLF Pearson Correlation |
|-------|-------------------------|-------------------------|------------------------|-------------------------|------------------------|---------------------------|
| PEU   | 1                       |                         |                        |                         |                        |                           |
| PIC   | 0.294**                 | 1                       |                        |                         |                        |                           |
| PU    | 0.371**                 | 0.372**                 | 1                      |                         |                        |                           |
| ITU   | 0.376**                 | 0.252**                 | 0.676**                | 1                      |                        |                           |
| AU    | 0.402**                 | 0.206**                 | 0.589**                | 0.721**                | 1                      |                           |
| DTLF  | 0.189**                 | 0.241**                 | 0.446**                | 0.256**                | 0.280**                | 1                         |

Key: Perceived ease of use (PEU), Perceived information credibility (PIC), Desire to look for funding without the assistance of bursaries, NSFAS or loans (DTLF), Perceived Usefulness (PU), Intention to use (ITU), Actual use (AU)

As indicated in Table 2 above, all the constructs showed uniqueness and independence from each other. This is because none of the correlations between the constructs reached “1”, which is a requirement for proving that each construct measured a completely independent aspect of the measurement instrument from the other. The mean, standard deviation and Cronbach’s alpha values were also generated from the analysis and are depicted in Table 3 below.

TABLE 3: ITEM STATISTICS

| Research construct                                           | Mean value | Standard deviation | Cronbach’s α |
|--------------------------------------------------------------|------------|--------------------|--------------|
| Perceived ease of use (PEU)                                  | 4.17       | 0.947              | 0.808        |
| Perceived information credibility (PIC)                      | 2.94       | 0.955              | 0.831        |
| Desire to look for funding without the assistance of bursaries, NSFAS or loans (DTLF) | 3.69       | 1.109              | 0.691        |
| Perceived Usefulness (PU)                                    | 3.67       | 1.073              | 0.882        |
| Intention to use (ITU)                                       | 4.16       | 1.053              | 0.856        |
| Actual use (AU)                                               | 3.79       | 1.237              | 0.823        |

In Table 3 above, the mean values ranged from 2.94 to 4.17; this proximity in value indicated that the data was fairly distributed. In addition, all standard deviation values ranged from 0.947 to 1.237, which is below the (-2 to +2) range required to confirm normal distribution of data. The Cronbach’s alpha (α) values were used for assessing the reliability of the data of the associated measurement scales. These values ranged from 0.691 to 0.882, meeting the required threshold of 0.7 recommended by Nunnally and Bernstein (1994).
TABLE 4: MODEL FIT INDICES

|              | (CMIN/DF) | (GFI) | (NFI) | (IFI) | (TLI) | (CFI) | (RMSEA) |
|--------------|-----------|-------|-------|-------|-------|-------|---------|
|              | 2.166     | 0.904 | 0.904 | 0.946 | 0.934 | 0.945 | 0.055   |

Key: CMIN/DF: Chi-square, GFI: Goodness of Fit, IFI; Incremental Fit Index, TLI; Tucker Lewis Index; CFI; Comparative Fit Index, RMSEA; Root mean square error approximation

The measurement model generated a ratio of chi-squared value over degree-of-freedom of 2.166, which is acceptable, as it is lower than the recommended 3 (Ullman 2001). Other model fit indices, which included the GFI, NFI, IFI, TFI, and CFI, were 0.904, 0.904, 0.946, 0.934, 0.918 and 0.964 respectively. All these model fit measures were above the recommended threshold of 0.9. The RMSEA was 0.055, which fell below the recommended threshold of 0.08 (Hooper et al. 2008). These values provided confirmation that the proposed conceptual model had a good fit with the data. Finally, the last test in the analysis was that of hypothesis testing. These results are depicted in Table 5 below.

TABLE 5: HYPOTHESES RESULTS

| Hypothesis         | Estimate | P-value | Results                      |
|--------------------|----------|---------|------------------------------|
| PEU → PU           | H1       | 0.798   | *** Supported and significant |
| PIC → PU           | H2       | 0.421   | *** Supported and significant |
| DTLF → PU          | H3       | 0.526   | *** Supported and significant |
| PU → ITU           | H4       | 0.780   | *** Supported and significant |
| ITU → AU           | H5       | 0.781   | *** Supported and significant |
| DTLF → ITU         | H6       | -0.111  | 0.090 Not supported and insignificant |
| DTLF → AU          | H7       | 0.191   | *** Supported and significant |

Key: Perceived ease of use (PEU), Perceived information credibility (PIC), Desire to look for funding without the assistance of bursaries, NSFAS or loans (DTLF), Perceived Usefulness (PU), Intention to use (ITU), Actual use (AU)

The hypotheses were tested at a 99% level of confidence, as three asterisks are shown. By looking at Table 5, it can be seen that six out of the seven hypotheses are supported. The first hypothesis (H1, PE to PU) produced an estimate of 0.798, in addition to being supported and positive at p<0.01 level significance, confirming that there was a relationship between the perceived ease of using Twitter with its perceived usefulness in terms of its effectiveness in generating funds for university fees. It should be noted that this was the strongest relationship of the conceptual model, suggesting that perceived ease of use had the most impact on Twitter’s perceived usefulness. The second hypothesis (H2, PIC to PU) produced an estimate of 0.421. This relationship was both supported and positive at p<0.01 level of significance; thereby,
confirming that there was a relationship between perceived information credibility and perceived ease of use as far as Twitter was concerned.

The three hypothesis (H3, DTLF to PU) produced an estimate of 0.526. This relationship was both supported and positive at p<0.01 level of significance; thereby, confirming that there was a relationship between perceived information credibility and perceived ease of use as far as Twitter was concerned. The fourth hypothesis (H4, PU to ITU) produced an estimate of 0.780.

This relationship was both supported and positive at p<0.01 level of significance, confirming that there was a relationship between the desire to look for funding without the assistance of bursaries and perceived ease of use as far as Twitter was concerned. The fifth hypothesis (H5, ITU to AU) produced an estimate of 0.781 and was both supported and significant at p<0.01 level of significance. This suggested that if intention to use Twitter is high, the actual use of Twitter increases. As for the sixth hypothesis (DTLF and ITU), the relationship had an estimate of -0.111 and a p value of 0.090, which was not significant at p<0.01 level of significance. This relationship was also not supported, due to the negative outcome when a positive result had been anticipated. This thus suggested that the desire to look for funding without the assistance of bursaries, NSFAS or loans had nothing to do with the students’ general appreciation of using Twitter. This meant that students would still use Twitter to raise funds, despite support from bursaries and NSFAS. For the last hypothesis, H7 (DTLF and AU), the relationship had an estimate of 0.191. This relationship was both significant and supported at p<0.01 level of significance. This suggested that the desire to look for funding, without the assistance of bursaries, NSFAS or loans, led the students to consider using Twitter as a viable fundraising tool. This means that a fundraising platform allowed them to have more control over communicating their needs.

SUMMARY OF FINDINGS AND CONCLUSIONS
The study was an attempt to understand the impact of Twitter as a tool for generating funds to pay for university fees, or for communicating the need for funds. The technology acceptance model, one of the most established frameworks in examining user-acceptance of technology, was adapted to achieve the objectives of this study. As revealed by the findings, it is clear that Twitter was perceived as an effective tool for generating funding to pay for university fees. The students who were the target audience re-enforced their appreciation for the use of Twitter in communicating and crowdfunding for university fees. The majority of the respondents in the study were full-time students (370), whilst ten were part-time students. This drastic difference in student enrolment could have affected the results as most of the students listed parent(s), private companies or NSFAS as the people or institutions responsible for their university fees, rather than themselves. Part-time students might have perceived the variables studied differently from full-time students, especially when it comes to the desire to look for funding without the assistance of bursaries, NSFAS or loans.
Implications and contribution of research

The contribution of this research was to add to the understanding of a common social media platform (Twitter) and an emerging fund-generating concept (crowdfunding) in determining student perceptions on its effectiveness in raising higher education funds. To achieve this, an adapted version of the technology acceptance model was utilised. The desire to look for funding without the assistance of bursaries, NSFAS or loans was found to be unrelated to the intention to use Twitter. This implied that even though students wanted to raise funds, it was not a direct antecedent of their affinity for the use of Twitter. However, Twitter was perceived to be useful for crowdfunding, but this could possibly be due to many factors. The findings of the study also provide implications for policy makers in that they present the perceptions of the actual beneficiaries of services, in this case education for students. This therefore suggests that policy makers should encourage the use of non-traditional communication platforms, such as Twitter and alternative funding sources such as crowdfunding, as was evident from the generally positive views of the students.

Limitations and future research

For the purposes of this study, only students from one university were used. This could have created both sample and respondent bias, as all the participants were exposed to the same stimuli and environment. It would therefore be encouraged to include students from different higher education institutions, as their perceptions could potentially be different. In addition, the university in question was a public institution partially funded by the government; therefore, student from privately funded institutions might have conflicting views. This would therefore add more rigour to the debate and significantly contribute to the discourse. Moreover, future research could benefit from screenshots being presented to the respondents, which depict the actual past tweets of students asking for financial assistance, or communicating their needs. Theoretically, future research could also involve analysing a direct relationship between the perceived ease of using Twitter and the actual use of Twitter when it comes to generating funding for higher education tuition fees. This would help to understand how much the mediators used in the present study (perceived usefulness and intention to use) influenced the impact that perceived ease of use had on the actual use of Twitter.

REFERENCES

Akar, E. & Mardikyan, S. 2014. Analyzing factors affecting users’ behavior intention to use social media: Twitter. International Journal of Business and Social Science 5(11): 85-95.

Belleflamme, P., Lambert, T. & Schwienbacher, A. 2014. Crowdfunding: Tapping the right crowd. Journal of Business Venturing 29(5): 585-609. https://doi.org/10.1016/j.jbusvent.2013.07.003

Berthon, P.R., Pitt, L.F., Plangger, K. & Shapiro, D. 2012. Marketing meets Web 2.0, social media, and creative consumers: Implications for international marketing strategy. Business Horizons 55(3): 261-271. https://doi.org/10.1016/j.bushor.2012.01.007
Perceptions of the effectiveness of Twitter as a crowdfunding communication

Booysen, S. 2016. Feesmustfall: Student revolt, decolonisation and governance in South Africa. Johannesburg: Wits University Press. https://doi.org/10.18772/22016109858

Bronkhorst, S. & Michael, M. 2017. Student funding model used by the National Student Financial Aid Scheme (NSFAS) at universities in South Africa. Journal of Internet Banking and Commerce 22(2): 1-21.

Bugembe, J. 2003. Perceived usefulness, perceived ease of use, attitude and actual usage of a new financial management system: A case study of Uganda national examinations board. Unpublished Master’s dissertation. Makerere University, Kampala, Uganda.

Coelho, P., Correia, P. & Medina, I. 2017. Social media: A new way of public and political communication in digital media. International Journal of Interactive Mobile Technologies 11(6): 150-157. https://doi.org/10.3991/ijim.v11i6.6876

Davis, F.D. 1986. A technology acceptance model for empirically testing new end-user information systems: Theory and results. Unpublished doctoral thesis. MIT Sloan School of Management, Cambridge, MA, USA.

Davis, F., Bagozzi, R. & Warshaw, P. 1989. User acceptance of computer technology: A comparison of two theoretical models. Institute for Operations Research and the Management Sciences. [Online]. Available at: http://www.jstor.org/stable/2632151 [Accessed on 23 May 2018].

Dominguez-Whitehead, Y. 2017. Food and housing challenges: (Re)framing exclusion in higher education. Journal of Education (68): 149-169.

Durodolu, O. 2016. Technology acceptance model as a predictor of using information system to acquire information literacy skills. Library Philosophy and Practice (e-journal). Unpublished doctoral thesis. Libraries at University of Nebraska-Lincoln.

eNCA. 2018. Pandor concerned by high drop-out rate at SA universities. [Online] Available at: https://www.enca.com/south-africa/pandor-concerned-by-high-drop-out-rate-at-sa-universities [Accessed on 25 September 2018].

Gassman, J., Norris-Tirrell, D. & Kofoot, K. 2018. Student loan debt and its impact on the non-profit sector. Journal of Non-profit Education and Leadership. [Online]. Available at: https://doi.org/10.18666/JNEL-2018-V8-I3-8778 [Accessed on 30 September 2018].

Hamid, A., Razak, F., Bakar, A. & Abdullah, W. 2015. The effects of perceived usefulness and perceived ease of use on continuance intention to use e-government. Procedia Economics and Finance 35: 644-649. https://doi.org/10.1016/S2212-5671(16)00079-4

Heinrichs, J., Lim, J. & Lim, K. 2011. Influence of social networking site and user access method on social media evaluation. Journal of Consumer Behaviour 10: 347-355. https://doi.org/10.1002/cb.377

Hooper, D., Coughlan, J. & Mullen, M. 2008. Structural equation modelling: Guidelines for determining model fit. Electronic Journal of Business Research Methods 6(1): 53-60.

Jahangir, N. & Begum, N. 2008. The role of perceived usefulness, perceived ease of use, security and privacy, and customer attitude to engender customer adaptation in the context of electronic banking. African Journal of Business Management 2(1): 32-40.
Johnston, K., Chen, M. & Hauman, M., 2013. Use, perception and attitude of university students towards Facebook and Twitter. *The Electronic Journal Information Systems Evaluation* 16(3).

Kannan, P. & Li, H. 2017. Digital marketing: A framework, review and research agenda. *International Journal of Research in Marketing* 34: 22-45. https://doi.org/10.1016/j.ijresmar.2016.11.006

Karahanna, E. & Straub, D. 1999. The psychological origins of perceived usefulness and ease-of-use. *Information & Management* 35: 237-250. https://doi.org/10.1016/S0378-7206(98)00096-2

Lane, M. & Coleman, P. 2012. Technology ease of use through social networking media. *Journal of Technology Research* 1-12.

Li, R. & Suh, A. 2015. Factors influencing information credibility on social media platforms: Evidence from Facebook pages. *Procedia Computer Science* 72: 314-328. https://doi.org/10.1016/j.procs.2015.12.146

Matsolo, M.J., Ningquanyeh, W.C. & Susuman, A.S. 2018. Factors affecting the enrolment rate of students in higher education institutions in the Gauteng province, South Africa. *Journal of Asian and African Studies* 53(1): 64-80. https://doi.org/10.1177/0021909616657369

Moloi, T. 2016. Exploring risks identified, managed and disclosed by South Africa’s Public Higher Education Institutions (HEI). *Journal of Accounting and Management* 6(2): 55-70. https://doi.org/10.21511/jmai.13(2-1).2016.09

Moodley, P. & Singh, R.J. 2015. Addressing student dropout rates at South African universities. *Alternation Special Edition* 17: 91-115

Mulaudzi, S. 2015. University students battle to get funding. *Finweek*, 37-39.

Nunnally, J.C. & Bernstein, I.H. 1994. *Psychological theory*. New York, NY: McGraw-Hill.

Perkins, D., Johnston, T. & Lytle, R. 2016. Addressing student debt in the classroom. *Journal of Education for Business* 91(3): 117-124. https://doi.org/10.1080/08832323.2016.140112

Rauniar, R., Rawski, G., Yang, J. & Johnson, B. 2014. Technology acceptance model (TAM) and social media usage: An empirical study on Facebook. *Journal of Enterprise Information Management* 27(1): 6-30. https://doi.org/10.1108/JEIM-04-2012-0011

Ryan, D. & Jones, C. 2009. *Understanding digital marketing: Marketing strategies for engaging the digital generation*. London: Replika Press.

Thackeray, R., Neiger, B., Hanson, C. & McKenzie, J. 2008. Enhancing promotional strategies within social marketing programs: Use of Web 2.0 social media. *Social Marketing and Health Communication* 9(4): 338-343. https://doi.org/10.1177/1524839908325335

Tiago, M.T.P.M.B. & Verissimo, J.M.C. 2014. Digital marketing and social media: Why bother? *Business Horizons* 57(6): 703-708. https://doi.org/10.1016/j.bushor.2014.07.002

Ullman, J.B. 2001. *Structural equation modeling*. In: Tabachnick, B.G. & Fidell, F.S. (eds). *Using multivariate statistics*. (Fourth edition). Needham Heights, MA: Allyn & Bacon.
Universities South Africa. 2016. Universities funding in South Africa: A fact sheet. [Online]. Available at: http://www.uct.ac.za/usr/news/downloads/2016/UniversitiesFundingSouthAfrica_FactSheet.pdf [Accessed on 18 February 2018].

Venkatesh, V. & Davis, F. 2000. A theoretical extension of the technology acceptance model: Four longitudinal field studies. Institute for operations research and the management sciences 46(2): 186-204. https://doi.org/10.1287/mnsc.46.2.186.11926

Weller, K., Bruns, A., Burgess, J., Mahrt, M. & Puschmann, C. 2014. Twitter and society. New York: Peter Lang. https://doi.org/10.3726/978-1-4539-1170-9