Analysis of social networking sites used by student spectators in university sport

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Abstract

Social media usage has caused a notable shift in the use of strategies and relevant tools with which to communicate with sport spectators, catapulting sports into one of the most read topics on social media. This rapid growth of social media in sport has stimulated research in this field of study, delineating the different parts of social media, including social networking sites, and creating opportunities for university sport departments to foster relationships between university sport and student spectators. The purpose of this study was to identify the social networking sites used by student spectators in university sport. Based on a cross-sectional research design, a modified survey was distributed electronically to a randomly selected sample of 540 full-time registered students at the University of the Western Cape. The findings indicated that WhatsApp, Facebook, and Instagram were the most popular social networking sites used by student spectators in university sport. This study concluded that the three social networking sites were the most preferred among student spectators. Therefore, this research provides higher education institutions the opportunity to leverage off the students' usage of social networking sites for marketing purposes. The study recommends the need for social media-based marketing strategies by university sports departments to be targeted at social networking sites visited by student spectators.

Keywords: Social networking sites, student spectators, university sport.

Introduction

Social media are regarded as platforms, tools, or applications, which enable connectivity, collaboration, and communication between users and consumers (Williams & Chinn, 2010), where user-generated content is created across various internet-based applications (Kaplan & Haenlein, 2010). Within the last two decades, sports organisations have dramatically shifted their communication strategy with consumers, through a phenomenon commonly referred to as social media (Green, 2016). Social media, therefore, has had an unmistakable impact on the media landscape (Boehmer & Lacy, 2014). Social media, as well as traditional

media in sport, have had to contend with a degree of competitiveness between them (Boehmer, 2016), which has profoundly impacted the consumption and delivery of sport (Filo *et al.*, 2015). The popularity of social media usage has shown a marked increase amongst those on the worldwide web (Filo *et al.*, 2015), with sports being one of the most read subject matters on social media platforms (Mitchell & Page, 2013). According to Pedersen (2014), social media usage, as a global phenomenon, has grown at a rapid pace over the past decade in the sports industry.

With regard to sports marketing, the growth of social media has been exponential over the last two decades (Green, 2016). Consequently, social media has made notable progress in the sports media environment (Boehmer, 2016), to the extent that social media platforms are observed to be "causing a paradigm shift in the management of sport media relations and flattening the sports media hierarchy" (Gibbs & Haynes, 2013, p. 405). At first glance, as a communications tool, social media considers how relationships and conversations are facilitated between organisations as well as people (Israel, 2009). However, a detailed analysis reveals that users are able to create, co-create, discuss, share and modify content using their web-enabled mobile devices, thereby enabling interactions that are often highly interactive (Kietzmann *et al.*, 2011).

Research indicates that social media may be classified into three distinct categories, namely: *media,* which is either physical, verbal, or electronic; a *concept,* which comprises information or art; and lastly, *social interface,* which considers community engagement (Kaplan & Haenlein, 2010). This tri-exchange allows volumes of content to be instantaneously shared with the many people (Kaplan & Haenlein, 2010). Additionally, the three components of social media may be split into six types, namely: *microblogging*, such as Twitter; *social networks,* such as LinkedIn and Facebook; *media sharing,* such as YouTube and Flickr; *social news*, such as Digg and Reddit; *bookmarking sites,* such as StumbleUpon and Delicious; as well as blog comments and forums (Grahl, 2013). The current research covers only social networks, media sharing, and microblogging; holistically referred to as social networking sites (SNSs).

Social media has shifted sports news into a bi-directional approach (Sanderson & Hambrick, 2012), resulting in the profound impact that social media technologies have had on sport (Sanderson, 2011). In less than a decade, the nature of sport-based communication has been transformed through its presence on social media, which currently has been woven into the socio-cultural fabric of society (Clavio & Frederick, 2014). As a result, the technological infrastructure known today as social media, has innovatively transformed the way sports are reported (Schultz & Sheffer, 2010; Sheffer & Schultz, 2010), and consumed (Clavio & Kian, 2010; Kassing & Sanderson, 2010). Therefore, the emergence of social media has enabled organisations to communicate better, as well as connect with consumers

(Griffiths, 2008), allowing sports organizations to expand their consumer base (Kuzma *et al.*, 2014).

Simultaneously, a need exists for athletic programmes at universities and colleges, to improve income generation which could be achieved by allocating additional funds to marketing strategies (Burden & Li, 2003). With collegiate athletic departments adopting social media platforms to connect with fans, social media holds an ever-present space in today's sporting society (Haught *et al.,* 2016). Social Networking Sites (SNSs) allow athletic departments at universities to keep their student spectators and fans informed about any recent developments, information, news and insider information which may not necessarily be reported in mainstream media (Kassing & Sanderson, 2010). Within college sports, social media holds great promise (Clavio & Walsh, 2014), as it has enabled and increased level of interaction between athletes, fans and internal stakeholders (Clavio, 2011). Consequently, the consumers of college athletics use of social media are at an all-time high, including some athletic departments; using Facebook and Twitter for digital marketing purposes, for example, ticket giveaways, fan interaction, and general feedback (Clavio & Walsh, 2014). Since Twitter is the predominant social media platform used by athletes, teams, and leagues, to engage directly with their wider public (Hambrick *et al.*, 2010), coaches have expressed interest in the platform and have started using Twitter, to connect with fans, impress recruits, and promote their programmes (Clavio, 2011).

With the growing use of SNSs in sport, the influence of this development on university students' interactions at these sites cannot be underestimated. However, the orientation of students' interaction with SNSs and university sport in terms of determining their use of SNSs to engage with university sport is not clearly understood. Therefore, this study was carried out to identify the SNSs that student spectators use, within the realm of university sport in the Western Cape of South Africa. The findings were discussed within the context of its implications for university sports marketing.

Methodology

Study population and sampling
The population for this study included approximately 24 000 full-time registered students at the University of the Western Cape, South Africa. A sample of 379 participants were extracted from the population, using Raosoft, Inc. software (Raosoft, 2004) to determine the sample size with an effect size of 0.5 and an accrual power of 0.8 (80%). The sample size was determined based on the following formula:

$$x = Z(c/100)^2 r(100-r)$$
$$n = \frac{Nx}{((N-1)E^2 + x)}$$
$$E = \text{Sqrt}\left[\frac{(N-n)x}{n(N-1)}\right]$$

With regard to the above formula, the sample size is depicted as 'n' and the margin of error as 'E' where, N is the population size and 'r' is the amount of responses for which the researchers are interested. Lastly, Z (c/100) is the critical value for the confidence level c. This calculation was performed as it was there were more than 30 respondents and it was based on a normal distribution.

From a total of 540 respondents who participated in a survey by completing the Google Form online survey in English, a sample of 379 participants was determined as appropriate for the study. There were six sections in the Google Form including demographic information, students' internet access, the SNSs used at university sports games, frequency of students' interaction with their SNSs, the average time they spent on their SNSs, and lastly the activities they performed on their SNSs.

Research instrument and procedure
A modified online survey, which consisted of only closed ended questions, was administered to determine the SNSs used by student spectators. Existing surveys, relating to SNSs and student spectator behaviour, including the Fan Attitude Network (FAN) Model and the Psychological Continuum Model, were used in the modified online survey for this current study (Funk & James, 2001; Funk & James, 2004; Mahony *et al.*, 2000). Questions identified in the existing surveys that were not relevant to the objective of this study were disregarded. Furthermore, questions were modified to suit the South African context. In addition, some of the language was changed in order to facilitate smoother reading and to ensure the students' understanding.

Validity and reliability
A pilot study was conducted to standardise the data collection procedure, as well as determine the validity and reliability of the study survey. The pilot study was also conducted to validate the instrument for the South African context. To this end, the research instrument was piloted with 20 respondents, who were not part of the actual study. The instrument was piloted to clarify whether the questions posed in the survey were appropriate and measured what it was intended to measure (face and construct validity), and to determine the time taken to complete the online survey. Furthermore, the pilot study served to obtain information needed to refine the design of the study. Lastly, the pilot study confirmed the extent to which the variables adequately measured the full domain of the main concepts of the study (content validity) (Smith & Harrison, 2009).

The survey was validated by piloting it with a sample that was representative of the true sample used in the main study, as they were also full-time registered students. The pilot survey included variables related to loyalty, trust and commitment as taken directly from the original instrument. The language was adapted for the South African context before it was administered to the students.

For instance, words such a '*college sport*' was changed to '*university sport*'. The demographics section of the instrument was adapted to include the ethnicity, level of study, university faculty and student accommodation of the South African students. Thus, the scales and subscales used were modified no more than 50% of the original version. The Cronbach alpha coefficient for the survey was 0.82, which exceeds the benchmark of 0.7 as recommended by Martin and Savage-McGlynn (2013).

Data collection and analysis
In order to collect data online, a link to the survey was included in an e-mail distributed to the research population through the database of the institution's registrar. The data collection phase continued for four weeks, with weekly reminder e-mails sent to all potential respondents. After the data collection phase was concluded, the researcher terminated the online survey, and downloaded the Microsoft Excel spreadsheet from the Google Forms application. This application provided accurate, clean data, as the data were inserted directly by the respondents. The data were subsequently coded and thereafter exported to the Statistical Package for Social Sciences (SPSS) V.25 software for analysis. Descriptive statistics were used to analyse the participants' demographic data and summarise the activities at SNSs used by student spectators.

Ethical considerations
Permission to conduct this current study was granted by the University of the Western Cape (UWC) Research Ethics Committee (Humanities and Social Sciences Research Ethics Committee) (reference number: HS17/6/19). Due to the nature of this study, permission to access the university's student e-mail address database was obtained from the UWC's Registrar (ref: UWCRP150817KKP). E-mails were sent to all full-time registered students which included a link to the online survey, as well as an information sheet and consent form.

Prospective respondents were informed that their participation was voluntary and that they had the right to withdraw from the study at any time without repercussion. The consent forms were signed by the respondents after they had perused the information sheet and decided to participate in the study. For students, who required additional assistance to complete the survey, the researcher engaged with the Centre of Student Support Services at UWC which facilitated face-to-face completion of the survey. The researchers also ensured that the respondents' identifiable information were not disclosed during the study process as their identities were kept anonymous.

Results

Students from various faculties of UWC participated in this research, including Arts, Community and Health Sciences, Dentistry, Economic and Management

Science, Education, Law, and Natural Science. The demographic information of the respondents are presented in Table 1.

Table 1: Demographic information of respondents

Demographic variable		N (540)	Percentage %
Age	18-22	346	64
	23-27	115	21.3
	28-32	28	5.2
	33-37	22	4.1
	38+	29	5.4
Gender	Male	224	41.5
	Female	316	58.5
Ethnicity	African	270	50.0
	*Coloured	228	42.3
	Indian	18	3.3
	White	24	4.4
Education	Foundation year	9	1.7
	First-year	133	24.6
	Second-year	131	24.3
	Third-year	115	21.3
	Fourth-year	44	8.2
	Honours	45	8.3
	Masters	51	9.4
	PhD	12	2.2
Faculty	Arts	103	19.1
	Community & Health	155	28.7
	Sciences	8	1.5
	Dentistry	115	21.3
	Economic & Management	45	8.3
	Sciences	34	6.3
	Education	80	14.8
	Law		
	Natural Sciences		
Accommodation	On-campus	133	24.6
	Off-campus	407	75.4

*Coloured: A South African term for mixed ancestry.

As presented in Table 1, 58.5% (n=316) of respondents were female, and 41.5% (n=224) were male. The majority (64%; n=346) of the respondents were between the ages of 18-22 years, followed by 21.3% (n=115) who were aged between 23-27 years. Half of the respondents (50%; n=270) were Black Africans, followed by 42.3% (n=228) Coloured respondents. White respondents accounted for 4.4% (n=24) of the sample, and 3.3% (n=18) were of Indian descent. A total of 24.6% (n=133) participants were first-year students, whilst 24.3% (n=131) were second-year, and 21.3% (n=115) third-year students. Students' registration by faculty were as follows: Community and Health Sciences (n=155; 28.7%), Economic and Management Sciences (n=115; 21.3%), and Arts (n=103; 19.1%). Most of the

participants (75.4%; n=407), lived off university campus, whereas only 24.6% (n=133) resided on campus.

Information about the participants' internet access are provided in Table 2. A total of 85% (n=458) of the respondents had access to the internet, while 15% (n=81) had no internet access. Of those who had access to the internet, the most common method of internet access was through the use of the free Wi-Fi (74.1%, n=400) on campus, followed by 62.2% (n=336), who browsed the internet via mobile data, and 36.7% (n=198), who enabled access through home Wi-Fi connection.

Smartphones (92% – n=496), laptops (68% – n=366), and desktop computers (28% – n=146) were the frequently used electronic devices to access social networking sites.

Table 2: Internet access of respondents

Internet access variables		n(540)	Percentage %
Internet access	Yes	458	84.8
	No	81	15
	Did not disclose	1	0.2
*Accessing the internet	ADSL		
	3G dongle	51	9.4
	Mobile data	38	7
	Home Wi-Fi	336	62.2
	University Campus Wi-Fi	198	36.7
		400	74.1
	Free Wi-Fi at public libraries	62	11.5
	Free Wi-Fi at shopping malls	82	15.2
*Electronic devices	Desktop Computer	146	27.6
	Laptop	366	67.8
	Smartphone	496	91.9
	iPad	27	5
	Android Tablet	86	15.9

*Multiple response questions.

Descriptive statistics were used to identify the SNSs used by student spectators as illustrated in Figure 1. Responses obtained indicated the distribution of SNSs as follows: WhatsApp (92.6%, n=500), Facebook (87.6%, n=473) and Instagram (65.2%, n=352). The most moderately used SNSs by student spectators were YouTube (48%,n=259) and Twitter(43%, n=232)
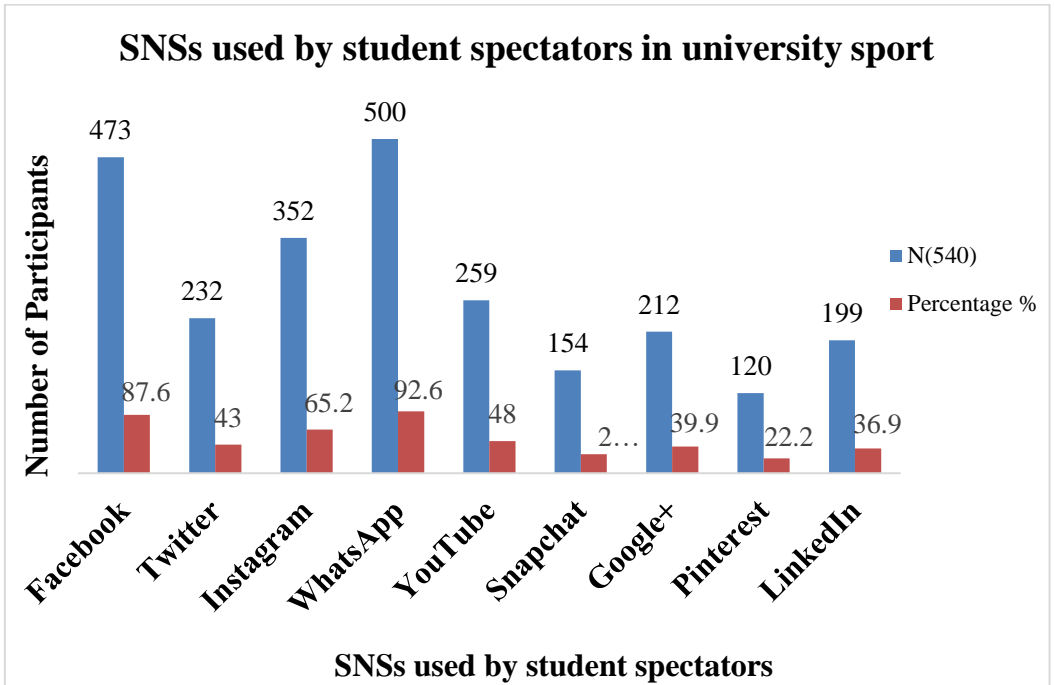
SNSs used by student spectators in university sport

Figure 1: Social networking sites used by student spectators in university sport.

Google+ was used by 39.3% (n=212) of the student spectators, while 36.9% (n=199) used LinkedIn. A few student spectators used Snapchat (28.5%, n=154), and Pinterest (22.2%, n=120). It was also of interest to this study to determine how often the respondents visited the SNSs (Figure 2). The frequency of respondents' SNSs visits were as follows: Daily (51%, n=277), hourly (39%, n=211), weekly (9%, n=46), monthly (0.9%, n=5) and no SNSs visit (0.1%, n=1).
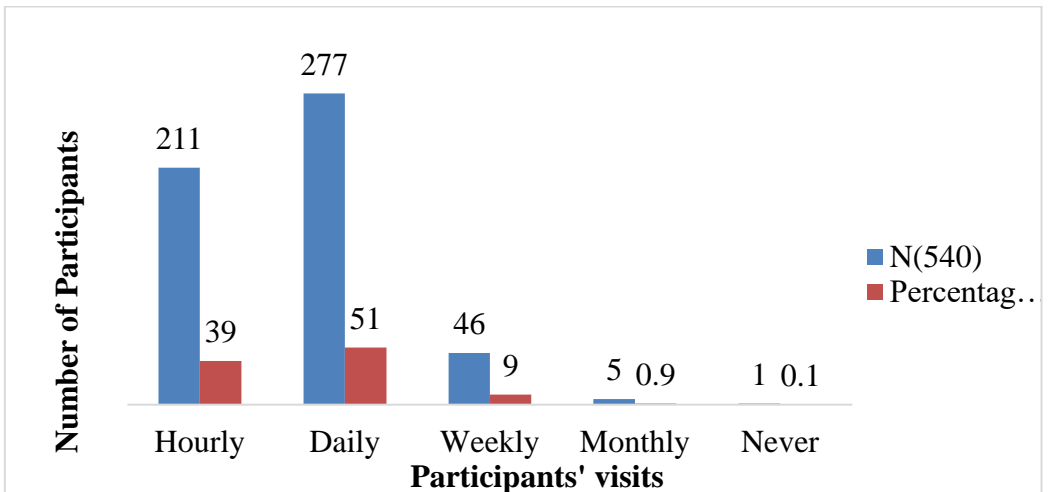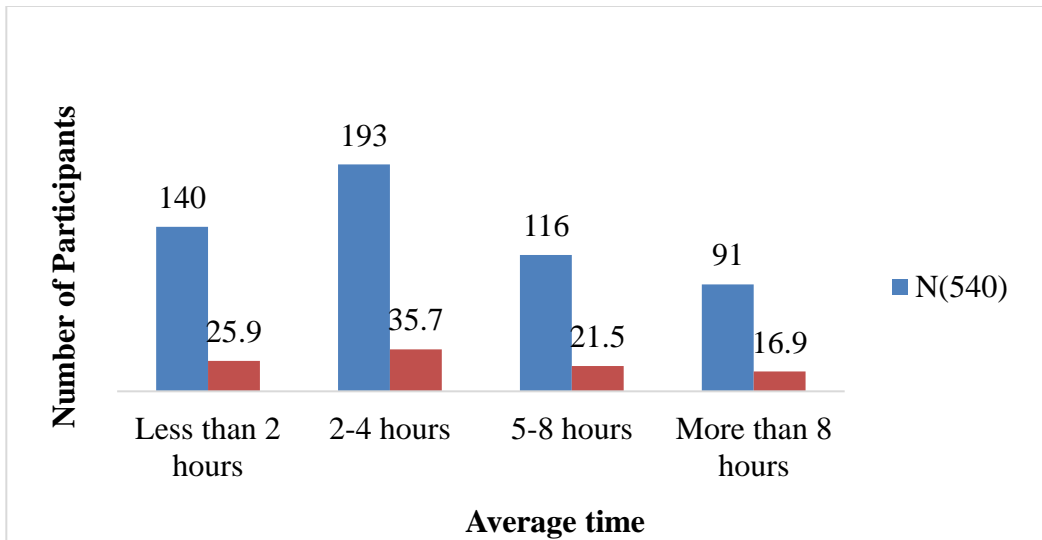

Figure 2: Respondents' daily visits on SNSs.

Figure 3 displays results on the average daily time spent by the respondents on their SNSs.

Figure 3: Average daily time spent on SNSs.

A total of 36% respondents (n=193) spent 2-4 hours daily on their SNSs, while 26% (n=140) spent less than 2 hours on their SNSs and daily 22% (n=116) visited their favourite SNSs for 5-8 hours per day. An estimated 17% (n=91) of the student spectators spent more than 8 hours on their SNSs daily. Table 3 shows descriptive data on the SNSs activities in which the respondents were involved. The top five activities on SNSs included uploading pictures (92%, n=498), posting a status update (84%, n=453), reading a comment on Facebook (79%, n=426), sharing a post (74%, n=402) and sending an inbox message on Facebook (74%, n=400).

Table 3: Activities involvement on SNSs.

	Activities involvement variables	Total n=540	Percentage %
	Upload pictures	498	92
	Upload videos	328	61
	Post a status update	453	84
	Express a feeling on Facebook	255	47
	Sent an inbox message on Facebook	400	74
	Read a comment on Facebook	426	79
*Activities	Tag friends	377	70
involvement on social	Shared a post	402	74
networking sites	Shared your location	216	40
	Posted a tweet	170	31
	Read a comment on Twitter	198	37
	Retweeted a post	160	30
	Sent a direct message on Twitter	121	22
	Sent a direct message on Instagram	244	45
	"Like" photos on Instagram	326	61

The respondents were moderately involved in following activities: tag friends (70%, n=377), upload video clips (61%, n=328), "Like" photos on Instagram (61%, n=326), express a feeling on Facebook (47%, n=255), or send a direct message on Instagram (45%, n=244). However, they seldom shared a location (40%, n=216), read a comment on Twitter (37%, n=198), posted a tweet (31%, n=170), retweeted a post (30%, n=160), or sent a direct message on Twitter (22%, n=121).

Discussion

The objective of this study was to identify the SNSs used by student spectators in university sport. A discussion below offers insight into student spectators' access to SNSs and elaborates on the most frequently used SNSs.

Student spectators' access to SNSs
The majority of the student spectators reported having immediate access to university campus' Wi-Fi network through smartphones, and visiting their SNSs daily for longer than an hour. The student spectators' access and visits to their SNSs indicate that they had instant access to information. The time student spectators spent on their SNSs suggests that they could engage freely with various contents. Therefore, HEIs (higher educational institutions) could leverage off students' use of SNSs by creating and building their interest in university sports as spectators. This interest could be promoted through the medium of competitions that include winning free tickets to attend university sports games and sharing memories of past games. In addition, student spectator participation could be incorporated into marketing strategies by encouraging them to share their favourite moments of previous university sports games. Additionally, HEIs could ensure that accurate information as well as current updates are provided across all university sport's SNSs. Training and facilitation of online marketing and social media management would improve the utility of social media platforms, as mastering these communication tools would further assist in improved spectator participation, university sport culture, and heightened student morale, centred around campus sports events.

Student spectators' most frequently used SNSs
The most frequently used SNSs by the student spectators in our study were identified through an online survey. The findings showed that WhatsApp, Facebook, and Instagram were the most frequently used SNSs, indicating their prevalence among student spectators of university sport. These findings, to a large extent, concur with findings in research, on the most frequently used SNSs in sport. A similar study by Haugh and Watkins (2016) which investigated various social media platforms used by sports fans and reported that Facebook, Snapchat, Instagram, Twitter, Pinterest, and Tumblr, identified Facebook, Snapchat, and Instagram were the most frequently used SNSs, while Twitter, Pinterest, and

Tumblr were rarely used. Another study by Agbo (2015) examined the use of social media for sports communication by uncovering the social media platforms with the highest engagement in sports communication among sports fans, players, journalists, sports administrators, sports educators, and club managers. Of the five options listed in the survey, including Facebook, Twitter, LinkedIn, WhatsApp, and 2go, the most commonly used SNSs were Facebook, Twitter, and 2go, with WhatsApp and LinkedIn lagging behind (Agbo, 2015).

It is not surprising that WhatsApp proved to be the most frequently used among the top three SNSs. This communication tool allows users to share different types of media files, including photos, videos, voice messages, and instant messages with friends and family, through an internet connection on mobile smartphone devices. As WhatsApp is an affordable means of communication, student spectators may have preferred this platform to minimise their data bundle-related expenses. Previous research by Giordano, *et al.* (2017) concedes that an internet connection is required for the WhatsApp application to send and receive multimedia messages, such as photos, videos, and voice messages. This further suggests that the use of WhatsApp is more affordable to student spectators, since they have the option to access and utilise the Wi-Fi on campus as opposed to purchasing mobile data.

The affordability of WhatsApp application may also apply to the frequent use of Facebook. Facebook is a cost-effective method of conveniently distributing various types of media files, such as photos, videos, posting updates, comments, and creating events of substantial information that could be accessed, and used over extended periods as it is easily stored on this SNS. Similarly, the results on the popularity of the use of Facebook, and the assumption that it is affordable to access, echoes the assertion of Pronschinske *et al.* (2012) that Facebook is commonly used because its costs are minimal.

Similarly, Instagram features longevity in its shelf-life for content posted on this SNS. This SNS may also prove to be popular among student spectators, regarding the features that allow the spectators to take photos, share photos, share videos, and send direct messages, without excessive texts accompanying the media file that was shared. Consequently, ensuring that the photos and videos shared on Instagram remained the main attraction of the post, with permanence that access to these posts are secure and may be accessed again at a later stage. Corroborating this discussion of Instagram is the sentiment of Lee *et al.* (2015), which indicates that Instagram allows users to transform their images, and document their stories through photos and short videos, subsequently keeping it as a memory for forever.

Conclusions

Since WhatsApp, Facebook and Instagram were the most utilised SNSs used by student spectators in university sport, this study concluded that these were identified as the most preferred as it offered prolonged access, affordability and convenience. In addition the features of these applications allowed for content sharing, storage and ease of access.

Recommendations

As various social media platforms gain traction in the world of sport, there will be an increased need for scholarly research conducted on SNSs to best understand why student spectators use these sites, the position student spectators hold in the overall landscape of social media, and how sport administration departments at HEIs may benefit from integrating a social media presence into the marketing strategies of university sports games. Additionally, it may be beneficial for sports university administrators to conduct a needs analysis before developing social media marketing strategies to determine what student spectators' SNS preferences. Future studies should be conducted across South African HEIs to determine similarities and differences regarding the use of SNSs to promote student spectator engagement in university sport.

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