Investigating usage of social media platforms in South Africa

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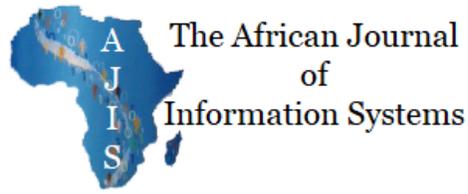
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ABSTRACT

This study investigated the differences in usage of different social media platforms within the South African context, broken down by user characteristics, specifically gender and age, in addition to investigating the correlation between usage of differing social media platforms. This was carried out to determine which social media needs do the different population groups aim to fulfill when using different social media platforms. Based on the results, the study confirmed the existence of preferences between types of social media platforms and groups of social media platforms in South Africa, based on frequency of use by age group and gender. Social media can thus be seen as a useful tool for collaboration and sharing knowledge to users in a South African context but must be tailored for specific audience needs.

Keywords

INTRODUCTION

Social media usage has fast become a staple in the online world. Various platforms such as Facebook and LinkedIn have embedded themselves for most online users who juggle multiple online personas for different reasons. Social media usage and the gratification gleaned from it has been associated with a number of factors including social interaction, information seeking, passing time, entertainment, relaxation, communicatory utility, convenience utility, expression of opinion, information sharing, and surveillance/knowledge about others (Whiting and Williams, 2013). Due to a massively growing online community, it has become increasingly important to understand the role social media plays in online decision making and behaviour (Asur and Huberman, 2010).

In order to understand this role, it becomes necessary to understand the difference in usage of social media by diverse groups of the population, specifically whether they differ by factors such as age and gender. However, little has been investigated within a developing country context regarding the usage drivers of online social media platforms to date, such as in South Africa, where despite infrastructure and economic hurdles, online social media usage continues to grow. Many studies previously conducted focused on a single platform for a specific purpose, and not a comparison of usage across platforms (Bosch, 2017; Duffett, 2017; Steenkamp and Hyde-Clark, 2014). This points to a need for a broad, general study of social media usage (e.g., probability, frequency) and the drivers behind it (e.g., social, approval) for South African social media users.

Therefore, the research problem that this study investigates is the current lack of in-depth understanding of social media platform usage in South Africa. The objective of the study is to delve into the true driving factors underlying the usage of social media in South Africa today. This was done by examining social media usage in a South African context by making use of a survey tool distributed to a random sample of South Africans, and assessing whether motivation for social media usage varied based on background influences, namely gender and age.

The remainder of this paper is structured as follows. The next section covers the key literature reviewed as part of this study, followed by an explanation of the research method and planning of the research used to conduct this study. The next section provides the data analysis, as well as key findings and discussions from the results. The final section draws useful conclusions in answering the research questions presented and includes recommendations on future studies.

Research Question

Based on the specified research problem, the research question and sub-questions for this study are:

- What drives South African users to access specific social media platforms?
    - Do users commonly use complimentary or substitutive groups of social media platforms?
    - What role does age factor into social media platform needs, choice, and usage?
    - What role does gender factor into social media platform needs, choice, and usage?

BACKGROUND LITERATURE

Defining Social Media Usage

Web 2.0 refers to technologies which allow individuals and groups to build networks by collaborating, sharing information, interacting with one another and promoting online social communities. These technologies include tools like blogs, video sharing, presentation sharing, instant messaging, and social networking and is intended to construct a more socially connected and integrated platform (Gaál, Szabó, Obermayer-Kovács, and Csepregi, 2015).

These tools can be used to encourage knowledge management within the workplace and equips people with a means to collaborate and interact with information, self-publish, share expertise, and find resources. Social media is the easiest and cheapest knowledge management system available (Warr, 2008).

More and more, organizations have recognized that social media needs to be seen as an integrated system rather than stand-alone platforms in order to influence online consumers (Hanna, Rohm and Crittenden, 2011). In this way, it has been found that users are normally active on one or more social media platforms and therefore their online social needs may be fulfilled across different, but complimentary or substitutive, platforms (Mangold and Faulds, 2009).

From an interaction perspective, social influence has been widely used to explain group and collective behaviour. The decision to interact through online social networks is a social phenomenon whereby the use and interaction of users is the dependent factor (Cheung and Lee, 2010). Usage is either based on internal satisfaction or the ability to influence and be influenced by the social interaction. According to a study, quoted by Korschun (2013), the number of social media users are expected to rise from 970 million users to 2.44 billion users by the end of 2018. The prediction of this rapid growth emphasises the question around motivation behind the usage of different social media platforms in South Africa.

Contextualizing Social Media Usage

A major portion of the usage of social media remains the social component, which still mirrors basic social norms and human social needs (Cialdini and Trost, 1998; Fuchs, 2017). Human behaviour, historically and today, remains governed significantly by these needs. Many people are turning to social media to fulfil these needs (Chen and Yu-Qian, 2015; Elliot, Kasser, Kim, and Sheldon, 2001).

Literature has shown that these needs differ based on a number of factors such as age and gender (Fietkiewicz, Baran, Lins, and Stock, 2016a; Fietkiewicz, Lins, Baran, and Stock, 2016b; Fietkiewicz, Lins, and Budree, 2018). These factors, together with individual user needs, influence the reasons for the use of social media. The key factors identified in literature have been age, gender, personality traits, level of computer knowledge and usage, along with social, educational, and commercial influences (McElroy and Moore, 2012; Ryan and Xenos, 2011). Personal influencing factors for social media usage can be based on personality or satisfying individual human needs (Chen and Yu-Qian, 2015). Other external influencing factors also exist, such as intention of use, online capabilities, or ease of site use. Users may be influenced by different factors based on specific contexts and environments, which in turn influences usage patterns (Ainin, Jaafar, and Tajudeen, 2018).

Social Media Age Usage Dynamics

Prensky (2001) coined the notion of digital immigrants (people raised or born before digital technology became popular) and digital natives (people brought up or born after or during digital technology becoming popular) (Prensky, 2001). Further research demonstrates that younger people are using the internet as a social media tool to communicate as too are older people that are susceptible to trying new activities and are more likely to use social media (Correa, Hinsley, and De Zúñiga, 2010). Prensky (2001) also states that the reason why younger generations tend to use social media is because they grew up with these digital choices at their fingertips to be able to communicate and interact.

Social Media Gender Usage Dynamics

A study completed by Hofstede (1980) aimed at establishing how cultural differences manifest themselves in the following dimensions: firstly, acceptance of unequal power distance distribution (PDI); secondly, uncertainty avoidance (UAI); thirdly, acceptance of individualism (IDV); and lastly, disposition toward masculine attitudes and behaviour (MAS) in society. It was found that men rated advancement and earning power important while women rated interpersonal aspects, service, and physical environment important. Therefore, we have seen that men are taught to be assertive and women to be more nurturing (Gefen and Straub, 1997).

In more recent times, men were found to use social media to gather information, such as the contact details of anyone they feel could add value and status to their lives. Even though many platforms allow one to build profiles and add "friends," this did not seem to call to the underlying nature of men. Women, on the other hand, who are believed to be more nurturing by nature tended to appreciate the more mainstream functionality most social media platforms offer. These give them opportunity to carry out activities that allow them to express themselves by revealing more about their personal lives through images (Instagram), videos (SnapChat), and shared interests on platforms such as Pinterest- activities of which men are less interested in (Vermeren, 2015).

Social Media Commercial and Social Usage

Social media has given marketers the power to interact directly with their brands, thus moving from one-directional mass messages (one-to-many communication) to a more personal and interactive exchange. However, it is important for marketers to remember that social media members are expecting a social, not a marketing, experience. Social media platforms are continuing to grow, giving businesses the opportunity to engage directly with their consumers while creating and maintaining a positive opinion of their product. Further goals which can be achieved via social media include humanizing one's brand, managing a company's brand reputation, creating brand supporters, generating sales leads, resolving customer service issues, and crises handling (Boies, 2013).

Social networking platforms may allow organizations to improve communication and productivity by disseminating information among different groups in a more efficient manner, resulting in increased productivity. Social media and Web 2.0 are two popular buzzwords, as well as technological concepts, which have brought about persuasive changes in business-to-business communication, business-to-customer communication, and customer-to-customer communication (Kietzmann, Hermkens, McCarthy, and Silvestre, 2011).

In addition, a study performed by Sigalaa and Chalkiti (2015), which investigated the relationship between social media usage and creativity, revealed that businesses must shift focus from recognizing

and managing creative individuals (micro level) or organizational contexts (macro level) to constructing and facilitating creative social networks (meso level) (Gaál et al., 2015).

From a teaching and learning perspective, it has been shown that individuals learn most effectively when they interact with other learners and participate in study groups. With the rise of social media, virtual groups came to life. These virtual study groups allow students to engage in various activities via social media platforms to interact and share ideas. The group learning format has been proven to appeal to the younger generations who are more socially conscious. However, the use of social media within the education industry should always rely on sound learning theory and support the curriculum. Furthermore, it is encouraged that educators receive training on using social media platforms as a learning tool to ensure positive effects on students. It is also advised that the school leadership formalize policies to include proper and ethical usage of social media tools among students and educators (Tomaszewski, 2012).

Social Media Usage in South Africa

The use of social media in South Africa has continued to grow, specifically with reference to the number of users and the intensity of use by current social media members (World Wide Worx, 2016). SA leads as one of the countries with the most mobile social networking users on the continent (UNICEF, 2012). For the second consecutive year, social media apps have dominated user downloads from all three major app stores within SA, displaying how genuinely embedded mobile social media apps have become in the country. According to World Wide Worx (2012), social networking in SA has overcome the age barrier and the urban-rural divide.

According to the research conducted, it has been revealed that Facebook and Twitter have grown at a similar rate in South Africa at around 100,000 new users a month in 2014 (CITE). LinkedIn has also grown substantially, but at a slightly lower rate to reach 1.93 million South Africans and remains popular to business to business (B2B) because of its focus on professional conversations, while Pinterest is the fledging among the major social networks, with only 150,000 users in South Africa (Perrin, 2015).

Twitter adoption in the country has increased dramatically as it rose by 129% in a year, as registered users more than doubled from 2.4 million in 2012 to 5.5 million in 2013 (Gareth, 2015). From less than 100,000 users in 2012, Instagram has been making its mark in the country, adding more than half a million users in a year (CITE). In 2013 this increased to 680,000 users, suggesting that this figure was only going to grow further as Android adoption in the country took off. At that time, Instagram was limited by the fact that BlackBerry held a dominant share of the South African smartphone market, and the app was only available on iOS and android (Lauren, 2013).

Social Media Usage Demographics in South Africa

It has been shown that approximately 25% or 13 million of all South Africans are using Facebook (World Wide Worx, 2016). Of those users, the majority are between the ages of 20 and 29 years old. Senior citizens above the age of 60 represent 7% of users (Kemp, 2016). Furthermore, Facebook is the first social media platform which has seen an equal interest by both males and females (World Wide Worx, 2015), according to Veerasamy and Govender (2013), previously 63% of Facebook users were female.

Ossendryver states that in South Africa, the genders are equally represented with 5.6 million users on Facebook per gender (Ossendryver, 2015). Furthermore, the fastest rising social media sites are the

visual platforms such as Instagram and YouTube. Over the past year, Instagram and YouTube users have grown by 65% and 53%, respectively (Ossendryver, 2015).

Within South Africa, youth have used social media platforms to communicate and promote various activist movements in an effort to create awareness and gather support (Mitchell and Murray, 2012). In 2015, a range of cultural, political, and diversity issues were raised on social media including #BlackLivesMatter, #ILookLikeAnEngineer, #IStandWithAhmed, and #OscarsSoWhite. These activism campaigns sparked in depth conversations on social media, shedding light and creating awareness on the reality of diversity and how minority groups are being treated at school, in the workplace, and in the media. The hashtag #OscarsSoWhite produced almost two billion impressions (Morrison, 2016).

The use of social media can impact South Africa in various ways. For many companies online marketing through social media has become one of the most influential ways to get products or messages across to their customers and for many people, it is the quickest way to stay in contact with friends. There are many positives from the use of social media within South Africa, but there are also negatives. By using Facebook, Instagram, and YouTube, more of the user's personal information becomes accessible to other people. One of the main factors most people are afraid of is data security and the uncertainty of whether their information is safe online (Hillis, 2016).

CONCEPTUAL RESEARCH MODEL

There are several theories on inter-generational differences, as well as research on user behaviour characteristics for specific generational and gender specific groups (Fietkiewicz et al., 2016a; Fietkiewicz et al., 2016b; Fietkiewicz et al., 2018). Based on previous studies around social media usage, this study conducted a broad analysis of social media usage looking specifically at generational groupings and gender dynamics while taking into account the influence of different human needs on user behaviour (Hermida, Fletcher, Korell, and Logan, 2012; Hughes, Rowe, Batey, and Lee, 2012).

The model conceptualized from literature (shown in Figure 1) splits generational studies into three cohorts (Generation X, Y, and Z), but the borders between the generations may overlap (marked grey in the Figure). Every social media user interviewed is classified into one generational cohort by his or her year of birth. The users' information behaviour in terms of the adoption of social media (amount of social media subscribed), the usage frequency, and the motivations was then investigated. The model allows for the differentiation of usage along gender lines as well.
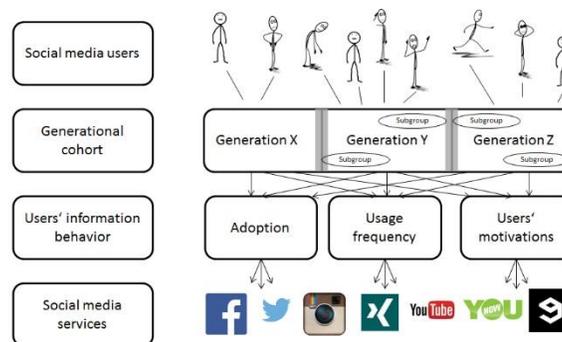

Figure 1. Conceptual Research Model. *Source:* Fietkiewicz et al.2016b**.**

Based on the literature above, the following working propositions were developed and tested through the study:

Proposition 1: Users tend to be active on a single or related group of complimentary and/or substitutive social media platforms that satisfy their specific online needs.

Proposition 2: There are inter- and intra- generational differences in social media usage related to the amount of social media adopted, the frequency of use, and the motivation.

Proposition 2: There are gender differences in social media usage related to the amount of social media adopted, the frequency of use, and the motivation.

METHODOLOGY

Survey Instrument

This study used a quantitative-based methodology, with data collected through an online survey which was distributed via a combination of social media, email, and face-to-face. The research instrument and scales were originally developed and tested in a study conducted across Germany and Poland and proven to deliver efficient results for analysis (Fietkiewicz et al., 2016b).

The survey was distributed as randomly as possible among males and females from different educational levels and ages within South Africa to examine their use of social media. A web-based online survey with direct contact through email and social media was chosen for time and cost efficiency purposes. Online surveys are flexible when carrying out research as it can be conducted in various ways, such as via email, social media, as well as face-to-face (Evans and Mathur, 2005).

Online surveys are advantageous as it can be managed in a time efficient way. It is a faster way of getting one's research out to respondents. It is also convenient as respondents are able to complete surveys in their own time and able to use as much time as they like to read through and respond to the questions. Moreover, it also enables the researcher to do follow-ups on whether or not the respondent has completed the survey (Evans and Mathur, 2005).

However, utilizing a web-based data collection method, especially in a country such as South Africa, has many drawbacks. Many people may not have internet access in a society such as South Africa as it is still a developing country and the majority of people cannot afford the luxury of having internet access. This can then make it much more difficult to find respondents that do not have accessibility issues. Furthermore, this may have an impact on the convenience of the respondent as they may have to answer the survey during working hours, which may be the only opportunity in which they have access to the internet (Lefever, Dal, and Matthíasdóttir, 2007).

The survey focused on evaluating thirteen different social media platforms and was comprised of forty-two questions which took respondents approximately three to five minutes to complete. The survey was designed in a way that respondents only had to select an option that closely related to the respondent. Furthermore, none of the questions required an explanation for any given response. The survey focused on four questions for each social media platform, which measured the use of the platform, why the respondent was using the platform, and what is significant to the respondent on each of the different social media platforms.

The significant questions were set up in a seven-point scale answer rating. This seven-point scale rating, which focused on the use of the social media platform, ranged from "Almost Never" to "I am always

online". Furthermore, the seven-point scale answer rating was also included in the questions focused on why the platform was being used by the respondent and what was significant to the respondent on each of the different social media platforms, which ranged from "Fully Disagree" to "Fully Agree". This then allowed the analysis of user motivation as stipulated by Kilian, Hennigs, and Langner (2012). Moreover, the survey also included a question that allowed respondents to list any other social media platforms used by them.

The final section of the online survey required respondents to enter information such as year of birth, gender, country, and education, which would enable researchers to use statistical analysis as well as correlation analysis from the collected data. Finally, respondents were given the option to select whether or not they were interested in receiving feedback on the outcomes of the online survey.

Sample

The survey focused on three distinct age groups, namely 18-35, 36-49 and 50+. The sample size consists of 1,146 individuals ranging from the aforementioned age groups. The sample was contacted across a number of media in order to be as random as possible.

According to Qwerty Digital (2017), 15 million people in South Africa make use of social media platforms, which represents a 27% penetration rate of the total population. Based on the figures above, a representative sample at a 99% confidence level and an error margin of 4% would require 1,036 participants. This implies that the sample size is sufficiently representative of the social media user population in South Africa.

DATA ANALYSIS

Of the 1,146 participants in the study, 1,005 completed the survey and were at least 18 years old. The data analysis was conducted using the sample of these 1,005 cases. The investigation of age-dependent differences was based on the three age groups- 8 to 35, 36 to 49, and over 50-year-olds - who were represented by 64.2%, 23.2%, and 12.3% respectively. In total, 52.4% of the participants were female and 47.6% were male.

General Analysis of Social Media Use

The first part of data analysis investigated the general trends in social media use in South Africa, ranging from probability and frequency of social media use, through the importance of several motivational factors while using the platforms, to interrelations between these factors.

Which social media are most popular in South Africa? As presented in Table 2, over 80% of the participants use Facebook, followed by YouTube (77.6%) LinkedIn (59.4%), and Google+ (51.7%). Almost half of the participants use Instagram (47.4%), followed by Twitter (38.1%), and Pinterest (21.6%). The remaining investigated social media platforms are used by less than 10% of the participants (9GAG by 9.35%, Tumblr by 3.78%, Flickr by 2.19%, Foursquare by 1.59%, XING by 0.3%, and YouNow by 0.1%). These social media were excluded from the more detailed analysis.

The frequency of use was marked by the participants on a 7-point scale: 'almost' 'never', 'seldom', 'once a month', 'once a week', 'several times a week', 'every day', and, 'I am always online'.

	Probability of use	**Mean frequency**[*]	**SD**
Facebook	83.48%	5.31	1.353
YouTube	77.61%	4.43	1.478
LinkedIn	59.40%	3.51	1.515
Google+	51.74%	4.10	1.979
Instagram	47.36%	4.88	1.565
Twitter	38.81%	3.62	1.780
Pinterest	21.59%	3.45	1.607
9GAG	9.35%	3.71	1.649
Tumblr	3.78%	3.66	1.529
Flickr	2.19%	3.26	1.630
Foursquare	1.59%	2.81	1.328
XING	0.30%	3.00	2.646
YouNow	0.10%	2.00	.

[*] Frequency of use could be marked on a 7-point Likert scale
from 'almost never' (1) to 'I am always online' (7).

Table 1. Probability of Social Media Usage and Mean Frequency of Usage by the Participants (n = 1,005).

From the seven most popular social media, the one used most frequently by all age groups is Facebook, with 5.31 mean frequency (between several times a week and every day). The second platform most frequently used is Instagram, with mean frequency of 4.88, followed by YouTube ($\overline{m}$ = 4.43) and Google+ ($\overline{m}$ = 4.1). These platforms are used between once a week and several times a week. Social media applied less frequently are Twitter ($\overline{m}$ = 3.62), LinkedIn ($\overline{m}$ = 3.51) and Pinterest ($\overline{m}$ = 3.45).

	Facebook	**Twitter**	**Instagram**	**LinkedIn**	**Google+**	**Pinterest**	**YouTube**
Facebook	1.000	.104	.182[**]	.179[**]	.110[*]	.016	.063
Twitter		1.000	.103	.223[**]	.067	.002	.175[**]
Instagram			1.000	.090	.008	.070	.161[**]
LinkedIn				1.000	-.024	.125	.184[**]
Google+					1.000	.229[**]	-.072
Pinterest						1.000	.093
YouTube							1.000

[**]. Correlation is significant at the 0.01 level (2-tailed); [*]. Correlation is significant at the 0.05 level (2-tailed).

Table 2. Correlations Between Frequencies of use of Different Social Media Platforms.

With help of the Spearman's rank correlation coefficient, it was possible to estimate if respondents tended to use certain groups of social media more or less frequently. These correlations enable the estimation of potential positive or negative (linear) relationships between two variables (e.g., frequency of Facebook usage and frequency of Twitter usage). As seen in Table 3, there appears to be a positive correlation between usage frequency of Facebook and usage frequency of Instagram and LinkedIn (p ≤ 0.01) as well as Google+ (p ≤ 0.05). Hence, users applying Facebook more frequently also apply these social media more often (or vice versa).

A positive correlation was found between the usage of Twitter and LinkedIn and YouTube ($p \leq 0.01$). Instagram only showed one positive correlation despite the one with Facebook, namely with the usage frequency of YouTube. LinkedIn correlates on the highest level with Twitter ($r_s = 0.223$), followed by Facebook and YouTube, all three correlations being significant at the 0.01 levels. The usage frequency of Google+ correlates with the use of Facebook and Pinterest. For Pinterest, this is the only significant relationship. Finally, YouTube usage frequency correlates with Twitter, Instagram, and LinkedIn.

Hence, when considering the frequencies of social media use in South African, significant interdependencies between certain types of social media channels were found. From the results, it appears that Facebook is one nucleus for social media users, as its use is significantly correlated with Instagram, LinkedIn, and Google+. Another two important social media knots are given for YouTube and LinkedIn. The usage frequency of YouTube is positively correlated with the use of Twitter, Instagram, and LinkedIn, whereas the use frequency of LinkedIn is correlated with Facebook, Twitter, and YouTube. Interestingly, there are no significant negative correlations, meaning that a less frequent usage of one social media platform goes with a more frequent usage of another one. Also, it appears that users applying Facebook more frequently do not necessarily apply Pinterest and YouTube as frequent. More frequent Pinterest users instead choose the Facebook 'alternative' Google+. Also, there is no correlation between usage frequency of YouTube and any of the social networking services like Facebook and Google+.

	Friends, followers[*]	SD	Likes, RTs[*]	SD	Data protection[*]	SD
Facebook	2.80	2.010	2.85	1.922	5.67	1.892
Twitter	2.58	1.773	2.39	1.640	5.18	2.150
Instagram	3.26	1.977	3.36	1.958	5.54	1.930
LinkedIn	3.73	2.022	4.23	1.927	5.39	1.927
Google+	2.67	1.832	2.29	1.625	5.27	2.138
Pinterest	1.91	1.349	2.03	1.461	5.59	2.012
YouTube	1.81	1.469	1.77	1.422	4.97	2.363
Flickr	2.82	1.563	3.05	1.558	5.41	2.261
XING	3.33	2.082	3.33	2.082	4.33	3.055
Foursquare	2.25	1.571	3.06	1.914	5.25	2.517
9GAG	1.85	1.473	2.01	1.548	5.36	2.155
YouNow	4.00	.	3.00	.	3.00	.
Tumblr	2.08	1.583	2.26	1.655	4.63	2.530

[*] Respondents were asked if the following motivational factors are important to them;
The values could be marked on a 7-point Likert scale from 'fully disagree' (1) to 'fully agree' (7).

Table 3. Mean Values for Different Motivational Aspects.

To estimate the different motivation factors for using the investigated social media platforms, we have compared the mean values for three aspects: (i) importance of having many friends or followers, (ii) importance of getting many likes, retweets (RTs), or re-pins, and (iii) the importance of data protection. The importance of each aspect could be marked on a 7-point scale. As we can see in Table 4, it is clear that for all investigated social media platforms, the most important aspect while using them is data protection. Aside from the less frequently applied social media platforms YouNow ($\overline{m} = 3.00$) and XING ($\overline{m} = 4.33$; however, with a high SD-value pointing at a wide dispersion), YouTube exhibits the

lowest value for data privacy ($\overline{m}$ = 4.97), whereas Facebook the highest one ($\overline{m}$ = 5.67). Interestingly, the SD-value for Facebook and data protection is the lowest one.

While using Facebook, users highlighted getting a lot of likes ($\overline{m}$ = 2.85) is slightly more important than having a lot of friends ($\overline{m}$ = 2.80). A similar tendency is shown for Instagram and Pinterest. As for Twitter, having more followers appears to be more important than likes and/or retweets. Users of Google+ and YouTube also prefer friends or subscribers to likes or up-votes. Interestingly, all the mean values, aside from data protection, are rather low. For example, the importance of up-votes on YouTube gets approx. 1.77 out of 7 points. Except for LinkedIn and Instagram, all values for the most popular social media do not exceed the mean of 3. LinkedIn is the one platform with highest importance of the category Likes (in this case, references and skills-confirmation) with a mean value of 4.23 as well as friends/contacts with the mean of 3.73, followed by Instagram with mean motivation of 3.36 for likes and 3.26 for followers. The high values for XING and YouNow are due to a smaller user pool that is less representative. The values for XING have relatively high SD-levels. There was no SD computed for YouNow, since it was applied by only one participant.

Furthermore, Spearman's correlation coefficient was calculations were conducted for the "frequency of use" and "motivation" factors which were identified as two of the most important aspects when using social media platforms. This was done for the seven most frequently used social media platforms.

Facebook	Friends	Likes	Data protection
Usage frequency	.116**	.144**	-.018
Having many friends	1	.722**	-.279**
Getting many likes		1	-.200**
Data protection			1

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Table 4. Spearman's Correlation Between Usage Frequency and Motivational Factors for Facebook (n = 839).

For Facebook (Table 5), there is a positive correlation between usage frequency and the desire for having a lot of friends and getting many likes. It appears that the bigger this desire for likes or friends, the more frequent the usage of Facebook. There also appears to be a very high correlation between wanting to get a lot of likes and having a lot of friends (r_s = 0.722, p ≤ 0.01). Hence, these two motivational factors appear cumulatively. There are only negative correlations with desire for data protection. However, only two of them, correlating with the motivational factors, are significant. This means that people valuing their data privacy are potentially less likely to desire more Facebook friends or likes.

Twitter	Followers	RTs, likes	Data protection
Usage frequency	.357**	.342**	.013
Having many followers	1	.832**	-.080
Getting many RTs or likes		1	-.034
Data protection			1

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Table 5. Spearman's Correlation Between Usage Frequency and Motivational Factors for Twitter (n = 390).

The correlations for Twitter (Table 6) are very similar to the ones for Facebook. A higher importance of having a lot of followers appears to come with higher importance of likes and retweets, and both of them correlate with the usage frequency. The only difference with Facebook is that even though there are two negative correlations with data protection, none are significant.

In the case of Instagram (Table 7), there is again a positive and significant correlation between likes and followers, as well as the usage frequency. The only significant negative correlation is given between data protection and having many followers. Since Instagram is used for sharing pictures and short videos that sometimes may be (very) personal, a negative correlation with desire for good data protection is not surprising. Also, there is no negative correlation between data protection and usage frequency. This could imply that even though some users appreciate privacy, it does not mean they use Instagram less frequently. These participants may be passive users who only follow others and do not post anything on the platform.

Instagram	Followers	Likes	Data protection
Usage frequency	.359**	.340**	.051
Having many followers	1	.855**	-.106*
Getting many likes		1	-.078
Data protection			1

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Table 6. Spearman's Correlation Between Usage Frequency and Motivational Factors for Instagram (n = 476).

There is are partially similar tendencies for the remaining four social media platforms (Tables 8-11). There are positive correlations between having many friends or contacts and getting a lot of likes (Google+, Pinterest, YouTube) or references (LinkedIn). From a data protection perspective, there is only one positive correlation with getting many references for LinkedIn. The data implies that the desire for data privacy is not necessarily correlated with usage frequency or having many contacts in any way. However, users appreciating privacy also like to get many references from peers. This is the only positive correlation for all seven social media platforms given for data protection. A possible explanation could be the fact that LinkedIn is the only "professional" social network, where disclosure of some data is necessary for better networking or better chances at job-hunting, or because the type of data disclosed differs from, for example, vacation or party pictures that are usually posted on platforms like Facebook or Instagram.

LinkedIn	Contacts	References	Data protection
Usage frequency	.430**	.348**	.024
Having many contacts	1	.619**	.035
Getting many references		1	.170**
Data protection			1

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Table 7. Spearman's Correlation Between Usage Frequency and Motivational Factors for LinkedIn (n = 597).

Google+	Friends	Likes	Data protection
Usage frequency	.210**	.198**	.056
Having many friends	1	.775**	-.015
Getting many likes		1	-.048
Data protection			1

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Table 8. Spearman's Correlation Between Usage Frequency and Motivational Factors for Google+ (n = 520).

Pinterest	Followers	Re-pins	Data protection
Usage frequency	.264**	.327**	.012
Having many followers	1	.825**	-.120
Getting many re-pins		1	-.084
Data protection			1

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Table 9. Spearman's Correlation Between Usage Frequency and Motivational Factors for Pinterest (n = 217).

YouTube	Subscribers	Up-votes	Data protection
Usage frequency	.141**	.149**	-.032
Having many subscribers	1	.856**	-.021
Getting many up - votes		1	-.009
Data protection			1

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Table 10. Spearman's Correlation Between Usage Frequency and Motivational Factors for YouTube (n = 781).

Age-Dependent Differences

The study then focused on the motivation for using specific social media platforms based on different age groups and looked at possible differences in the frequency of use.

According to Figure 2, Facebook and YouTube are most popular among all age groups; however, its adaption rate declines with age. For the youngest age group, 18 to 35-year-olds, the next most preferred platforms are LinkedIn (61%) and Instagram (60%), followed by Google+ (52%) and Twitter (44%).
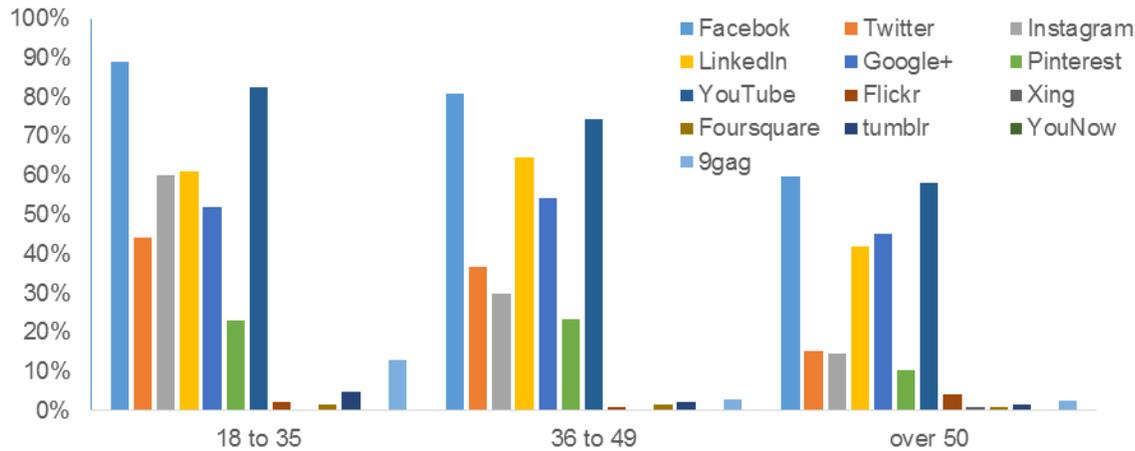
Figure 1. Social Media Use by Age Group: 18 to 35 years old (n = 647), 36 to 49 years old (n = 234), and over 50 years old (n = 124).

Pinterest is at 23% with 9GAG b 13% of the sample, whereas the remaining investigated platforms are used by under 10% of the 18 to 35-year-olds. For the second age group (36 to 49 years of age), LinkedIn (65%) and Google+ (54%) are most popular after Facebook and YouTube, followed by Twitter with 37%. Instagram (30%) is less popular than within the younger group. The popularity of Pinterest appears to be similar (23%), however, the remaining platforms are represented by under 10% of the respondents from this age group. The third age group of over 50-year-olds shows general decline in social media use. This is evident if we compare the use of most popular platforms between the oldest and the youngest age group, the adoption of Facebook and YouTube declines from 90% and 83% to 60% and 58% respectively. The second most applied pair of platforms are Google+ (45%) and LinkedIn (42%), followed by Twitter (15%), Instagram (14.5%), and Pinterest (10%). The remaining social media are applied by under 10% of participants.

The analysis of variance between age groups regarding the usage of social media platforms indicates whether the differences between these groups are indeed significant. According to Table 12, the most significant differences between the age groups can be seen for usage of Facebook, Twitter, Instagram, LinkedIn, YouTube, and 9GAG ($p \leq 0.01$). Also significant are the differences for Pinterest and Tumblr ($p \leq 0.05$). The outcomes for the remaining platforms- Flickr, XING, Google+, Foursquare, and YouNow- are not statistically significant. This means that the differences in usage of these platforms are not necessarily referable to the age group. When considering age as a factor influencing the usage frequency of the investigated platforms (Table 12), the results are significant for only five social media platforms. There appear to be significant differences in usage frequency by age group for Facebook, Instagram, Google+, YouTube, and 9GAG. The values for remaining platforms are statistically not significant.

	F	Sig.		F	Sig.
Do you use Facebook? * Age Group	23.974	.000	Frequency Facebook * Age Group	8.584	.000
Do you use Twitter? * Age Group	12.986	.000	Frequency Twitter * Age Group	0.313	.816
Do you use Instagram? * Age Group	48.141	.000	Frequency Instagram * Age Group	12.283	.000
Do you use Flickr? * Age Group	1.348	.258	Frequency Flickr * Age Group	0.264	.771
Do you use LinkedIn? * Age Group	6.397	.000	Frequency LinkedIn * Age Group	2.534	.056
Do you use XING? * Age Group	0.596	.618	Frequency XING * Age Group	27.000	.121
Do you use Google+? * Age Group	1.861	.135	Frequency Google+ * Age Group	3.827	.010
Do you use Pinterest? * Age Group	3.544	.014	Frequency Pinterest * Age Group	0.685	.562
Do you use YouTube? * Age Group	13.069	.000	Frequency YouTube * Age Group	5.946	.001
Do you use Foursquare? * Age Group	0.202	.895	Frequency Foursquare * Age Group	2.406	.129
Do you use Tumblr? * Age Group	4.055	.007	Frequency Tumblr * Age Group	1.092	.365
Do you use YouNow? * Age Group	0.186	.906	Frequency YouNow * Age Group[a]	-	-
Do you use 9GAG? * Age Group	9.787	.000	Frequency 9GAG * Age Group	3.414	.037

a. Fewer than two groups - statistics for Frequency YouNow * Age Group cannot be computed

Table 11. Analysis of Variance Between Age Groups Regarding the use of Social Media and the Usage Frequency.

As we can see in Table 13, there are differences in the usage frequency between the age groups. The analysis of variance gave us insights into which of these differences are statistically significant (marked with (*)). The youngest age group (18 to 35) applies Facebook ($\overline{m}$ = 5.45), Instagram ($\overline{m}$ = 5.06), YouTube ($\overline{m}$ = 4.56), and LinkedIn ($\overline{m}$ = 3.62) most frequently. The age group of 36 to 49-year olds uses Pinterest ($\overline{m}$ = 3.65) and Twitter most frequently ($\overline{m}$ = 3.65). The oldest age group of over 50-year-olds uses Google+ most frequently ($\overline{m}$ = 4.62). In general, the youngest group of participants uses most of the social media platforms in average more frequently than the other two groups, whereas the oldest group uses them, except for Google+, least frequently.

Tables 14 to 20 present the mean values for motivational factors by the three age groups. The aspect of many friends or followers is most important for the youngest group, with the exception of Google+, where all aspects are more important for the oldest group of over 50-year-olds. Except for Google+ and Pinterest, the youngest group is also the one mostly interested in getting likes and such. The group of 36 to 49-year-olds is the one most interested in getting re-pins or likes on Pinterest. Finally, the two older groups value data privacy more than the youngest one. An analysis of variance for the different age groups and motivational factors yielded significant outcomes for having many followers or getting many likes on Instagram (p $\leq$0.01), and getting a lot of likes or data protection on Facebook, having many followers on Twitter, and getting many references on LinkedIn (p $\leq$ 0.05).

	18 to 35 y/o	36 to 49 y/p	Over 50 y/o
Freq. Facebook*	5.45	5.12	4.70
SD	1.235	1.494	1.619
Freq. Twitter	3.62	3.65	3.47
SD	1.785	1.734	1.982
Freq. Instagram*	5.06	4.20	3.53
SD	1.493	1.538	1.806
Freq. LinkedIn	3.62	3.36	3.12
SD	1.522	1.485	1.464
Freq. Google+*	3.89	4.38	4.62
SD	1.999	1.959	1.764
Freq. Pinterest	3.38	3.65	3.31
SD	1.655	1.493	1.548
Freq. YouTube*	4.56	4.22	3.94
SD	1.480	1.438	1.413

Table 12. Mean Usage Frequency of Seven Most Popular Social Media Platforms among the Participants by Age.

Facebook	Friends	SD	Likes	SD	Data protection	SD
18 to 35	2.90	2.082	2.97	1.941	5.55	1.954
36 to 49	2.53	1.779	2.65	1.917	5.96	1.667
over 50	2.70	1.943	2.36	1.685	5.80	1.865

Table 13. Mean Values for Different Motivational Factors when Using Facebook by Age Groups.

Twitter	Followers	SD	Likes, RTs	SD	Data protection	SD
18 to 35	2.74	1.809	2.48	1.675	5.15	2.157
36 to 49	2.17	1.617	2.16	1.517	5.17	2.132
over 50	2.05	1.580	2.05	1.580	5.58	2.194

Table 14. Mean Values for Different Motivational Factors when Using Twitter by Age Groups.

Instagram	Followers	SD	Likes	SD	Data protection	SD
18 to 35	3.46	2.014	3.56	1.982	5.47	1.940
36 to 49	2.23	1.406	2.37	1.476	5.90	1.803
over 50	2.50	1.689	2.61	1.852	5.72	2.137

Table 15. Mean Values for Different Motivational Factors when Using Instagram by Age Groups.

LinkedIn	Contacts	SD	References	SD	Data protection	SD
18 to 35	3.78	2.038	4.37	1.917	5.28	1.973
36 to 49	3.78	1.983	4.02	1.941	5.58	1.899
over 50	3.13	1.951	3.81	1.889	5.67	1.953

Table 16. Mean Values for Different Motivational Factors when Using LinkedIn by Age Groups.

Google+	Friends	SD	Likes	SD	Data protection	SD
18 to 35	2.68	1.794	2.24	1.560	5.19	2.162
36 to 49	2.57	1.863	2.35	1.752	5.33	2.182
over 50	2.82	2.001	2.45	1.726	5.57	1.877

Table 17. Mean Values for Different Motivational Factors when Using Google+ by Age Groups.

Pinterest	Followers	SD	Re-pins	SD	Data protection	SD
18 to 35	1.97	1.428	2.03	1.486	5.51	2.082
36 to 49	1.75	1.126	2.07	1.438	5.78	1.853
over 50	1.92	1.320	1.85	1.345	5.77	1.922

Table 18. Mean Values for Different Motivational Factors when Using Pinterest by Age Groups.

YouTube	Subscribers	SD	Up-votes	SD	Data protection	SD
18 to 35	1.89	1.578	1.84	1.530	4.83	2.437
36 to 49	1.61	1.105	1.68	1.231	5.33	2.157
over 50	1.71	1.368	1.46	0.871	5.07	2.210

Table 19. Mean Values for Different Motivational Factors when Using YouTube by Age Groups.

Gender-Dependent Differences

Analysis of variance between genders for the usage of social media (probability) and the frequency of use of social media showed that there may exist gender-dependent differences significant for Facebook, Twitter, Flickr, LinkedIn, Pinterest, YouTube, 9GAG ($p \leq 0.01$), and Instagram ($p \leq 0.05$). These are related to the probability of social media use, and for Facebook, Twitter, Google+, and YouTube ($p \leq 0.01$) the usage frequency. As Table 21 shows, men are more probable to use YouTube (85%) followed by Facebook (approx. 80%), whereas women choose Facebook first (87%) followed by YouTube (70%). Still, when applied, Facebook is used most frequently by both sexes ($\overline{m} = 5.09$ by men and 5.49 by women).

For men, other most popular platforms are LinkedIn (68.1%), Google+ (49.8%), Instagram (43.8%), and Twitter (43.3%). Female social media users are less probable than men to apply LinkedIn (51.5%) or Twitter (34.8%), however, they are more likely to use Google+ (53.8%), Instagram (50.9%), or Pinterest (30.3% compared to 12.1% of men). Male users (12.7% compared to 6.3% of women) in turn choose the platform 9GAG. The remaining social media are represented by under 10% of male or female users.

When considering the usage frequency, the most frequently applied services by men after Facebook are Instagram and YouTube ($\overline{m}$ = 4.79 and 4.70 respectively), followed by XING and Tumblr ($\overline{m}$ = 4.00). As for women, the most frequently used platforms following Facebook are Instagram and YouTube ($\overline{m}$ = 4.96 and 4.10), but also Google+ ($\overline{m}$ = 4.31).

	Male	SD	Female	SD
Facebook	5.09 (79.6%)	1.495	5.49 (87.1%)	1.193
YouTube	4.74 (85.2%)	1.362	4.09 (70.6%)	1.527
LinkedIn	3.59 (68.1%)	1.552	3.42 (51.5%)	1.465
Google+	3.86 (49.8%)	2.047	4.30 (53.8%)	1.901
Instagram	4.79 (43.8%)	1.629	4.94 (50.9%)	1.512
Twitter	3.86 (43.3%)	1.814	3.35 (34.8%)	1.706
Pinterest	3.26 (12.1%)	1.692	3.52 (30.3%)	1.575
9GAG	3.84 (12.7%)	1.681	3.45 (6.3%)	1.583
Tumblr	4.00 (5.0%)	1.477	3.13 (2.8%)	1.506
Flickr	3.16 (3.8%)	1.537	3.75 (0.8%)	2.217
Foursquare	3.00 (2.1%)	1.155	2.50 (1.1%)	1.643
XING	4.00 (0.4%)	2.828	1.00 (0.2%)	.
YouNow	0.00 (0.0%)	.	2.00 (0.2%)	.

Table 20. Mean Frequency and Probability (in brackets) of Social Media Use by Gender.

Analysis of variance between genders for the different motivational factors when using social media implies that there might be gender-dependent differences significant for privacy on Facebook, Instagram, LinkedIn, YouTube ($p \leq 0.01$), as well as privacy on Google+, Tumblr, and 9GAG ($p \leq 0.05$). For both sexes, data privacy is the most important factor (Table 23). Men are more motivated than women by friends and followers to use most of the platforms, except for Google+ and Pinterest. As for likes, RTs etc., they are more important for women when using Facebook, LinkedIn, and Google+, and more important for men when considering Twitter, Instagram, Pinterest, and YouTube.

	Friends, followers				Likes, RTs				Data protection			
	Male	SD	Female	SD	Male	SD	Female	SD	Male	SD	Female	SD
Facebook	2.91	1.956	2.71	2.051	2.75	1.802	2.93	2.016	5.44	2.004	5.85	1.774
Twitter	2.66	1.780	2.49	1.766	2.50	1.686	2.26	1.581	5.09	2.208	5.28	2.082
Instagram	3.25	1.963	3.24	1.991	3.35	1.943	3.34	1.974	5.18	2.127	5.82	1.713
LinkedIn	3.86	2.036	3.56	1.997	4.21	1.927	4.26	1.931	5.17	1.987	5.66	1.820
Google+	2.66	1.776	2.68	1.880	2.16	1.441	2.40	1.761	5.03	2.171	5.46	2.092
Pinterest	1.86	1.382	1.93	1.341	2.10	1.586	2.01	1.416	5.33	2.038	5.69	2.000
YouTube	1.88	1.480	1.72	1.454	1.83	1.447	1.71	1.392	4.63	2.400	5.34	2.267

Table 21. Mean Values for Different Motivational Factors when Using Different Social Media by

Gender.

DATA ANALYSIS FINDINGS

The study investigated the driving forces behind the use of specific social media platforms in South Africa across age and gender groups. It was carried out by means of a survey, whereby 1,146 random individuals within the age groups 18-35, 36-49, and 50+ answered forty-two closed-ended questions evaluating thirteen different social media platforms, with the addition of demographic information. The questions measured the use, the reason for use, and the significance of each social media platform, using a seven-point scale answer rating. Based on the survey's design, respondents could only select an option that closely related to them.

Spearman's rank correlation coefficient was used to determine what social media channels the respondents used more frequently. This method revealed positive correlation between a number of the social media channels. Facebook, the most popular channel, exhibited a relatively high number of positive correlations to other channels, according to usage, when compared to the correlations the other channels exhibited. This implies that there are significant interdependencies that exist between certain types of social media channels, however the most important factor of consideration when using these platforms is still data protection.

A high correlation between wanting to get many likes and having a lot of friends was also found. The positive correlation was particularly evident for ages 18-35 and 36-49. Adversely, a negative correlation exists with the desire for data protection, particularly evident within ages 50+. Therefore, the desire for data protection reduces the frequency of usage, as well as the desire for friends and likes.

Gender-based usage patterns were also found to differ from platform to platform, with men more likely to be present on a number of social media platforms than women. In addition, it was found that the main concern influencing the use of platforms for both men and women was privacy.

Based on the findings above, the findings for the propositions stated are:

Proposition	Finding
P1: Users tend to be active on a single or related group of complimentary and/or substitutive social media platforms that satisfy their specific online needs.	True
P2: There are inter- and intra- generational differences in social media usage related to the amount of social media adopted, the frequency of use, and the motivation.	True
P3: There are gender differences in social media usage related to the amount of social media adopted, the frequency of use, and the motivation.	True

CONCLUSIONS AND RECOMMENDATIONS

This research paper reveals the extent to which social influence affects collective behaviour across age and gender throughout social media. Prior research demonstrated that younger people are using the internet as a social media tool to communicate, as, too, are older people who are susceptible to trying new activities and are more likely to use social media. Additionally, younger generations are more likely to use social media because they grew up with these digital choices at their fingertips to be able to communicate and interact. This research verifies the latter, in that the youngest group of participants, ages 18-35, use most of the listed social media platforms (on average) more frequently than that of the two older age groups, who use them less frequently with the exception of Google+ for ages 50+.

In a society comprising of digital immigrants and digital natives, it was determined that usage is either based on internal satisfaction or the ability to influence and be influenced by social interaction, indicating that society behaves according to social norms and approval. The findings of this study are particularly relevant in a world of increasing social media usage across all age groups for both social and business reasons. The understanding of preferences by the various groups enhances the overall grasp of motivation to use different social media platforms. This understanding can be extrapolated to better recognize key touchpoints, effective communication methods and influencing factors impacting users of different social media platforms.

The topic of motivation behind social usage in South Africa can now be explored beyond the findings of this paper. A qualitative analysis of the motivations of different groups would shed more light on what motivates people in their activities online. There are numerous aspects that relate to usage of social media and empirical exploration would aid in gaining more knowledge on the subject.

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