



Investigating the effectiveness of digital marketing to attract prospective students to study at the University of Technology, Gauteng Province, South Africa

Colette Khabo-Mmekoa

Haaga-Helia University of Applied Sciences

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ABSTRACT

Author(s) Colette Khabo-Mmekoa
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Thesis title Investigating the effectiveness of digital marketing to attract prospective students to study at the University of Technology, Gauteng Province, South Africa
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<p>Tertiary education demand is on the rise globally as a result of more knowledge-based and innovation-driven economies. Universities worldwide work to attract prospective students, widen their networks, improve their standing and finances, and promote cross-faculty interdisciplinary research. Marketing for higher education is required to offer a different service to customers who can afford it. In other words, education provides people with choices. Based on how the education has been advertised, students may leave their home nations and visit another country because they have considered the education beneficial.</p> <p>The aim of the study was to investigate the effectiveness of digital marketing in attracting prospective students to study at the University of Technology, Gauteng Province, South Africa, with objectives to (i) investigate the different digital platforms used to attract prospective students; (ii) assess the most effective digital platform used; (iii) determine the impact of digital technology on the application of prospective students; and (iv) compare the accessibility of the digital platform in rural and urban areas.</p> <p>A quantitative study was used where a census in the form of a survey was sent to all first-year students registered for the 2023 academic year in various programs across all campuses of the University of Technology. Closed questionnaires were sent through the survey's uniform resource locator (URL), and students accessed it through their personal and registered UoT4life emails. The link was accompanied by a cover page, an information leaflet, and an informed consent form. Participation in the study was voluntary and confidential. Respondents could withdraw at any time without consequences. All ethical requirements and considerations were observed.</p> <p>Data was analysed using the Statistical Package for Social Sciences (SPSS) version 27 and presented in charts, graphs, and tables. The outcome of the study revealed that the digital platform used, which is Facebook, had a positive influence in recruiting the students and covered both rural and urban potential students.</p>
Keywords Tertiary education, Prospective students, Digital marketing, UoT4Life emails

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ABBREVIATIONS

DVC: Deputy Vice Chancellor

DVC DT: Deputy Vice Chancellor Digital Transformation

HE: Higher Education

HH: Haaga-Helia

HoD: Head of Department

ICT: Information and Communication Technologies

IT: Information Technology

4IR: Fourth Industrial Revolution

MIS: Management Information System

SA: South Africa

SAQ: Self-administered questionnaires

SAE: Student Academic Experience

SM: Social Media

UoT REC: University of Technology Research Ethics Committee

UoT: University of Technology

URL: Uniform Resource Locators.

VLE: Virtual Learning Environment

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1 INTRODUCTION AND STUDY OVERVIEW

1.1 Background and Justification

Higher education is becoming more competitive due to the rise in demand for tertiary education worldwide as a result of increasingly knowledge-based and innovation-driven economies. When combined with an expanding middle class, the globalization of education has driven an influx of students from industrialized countries to study abroad in search of top-notch education, (OECD, 2018). Universities all across the world are working to attract new students, expand their networks, improve their position and finances, and foster cross-faculty interdisciplinary research (Hénard, Diamond, & Roseveare, 2012:2013).

According to the most recent Student Academic Experience Survey (SAE), (2019:4), less than one in every four Higher Education (HE) students believes their HE experiences was better than expected, while more than 65% report a mixed experience and the remaining students are underwhelmed by their HE experiences. According to the survey results, one reason for such a low rating is a lack of support that students receive while working towards achieving HE goals (Waheed et al., 2020:106-9).

Higher education marketing has been extensively researched in terms of branding (Pringle & Fritz, 2019:19-44), advertising (Jan & Ammari, 2016:168-180), and customer orientation (Guilbault, 2016:132-142). Furthermore, it is obligatory to offer a different service to customers who can afford it (Mogaji & Yoon, 2019:1561-1581). In other words, education provides people with options. Higher education institutions are increasingly focusing on improving the student experience by adopting digital technologies such as Virtual Learning Environment (VLE) and Social Media (SM) (Waheed et al., 2020:106-9). With the ability to cross geographical boundaries, public higher education institutions with a strong digital presence can attract students of all levels who are familiar with the digital world, which they would not be able to reach if they only used traditional marketing techniques (Makrydakos, 2021:28-38).

Students can decide to leave their home countries and travel to another country because they have found the education worthwhile, based on how it has been marketed. While an effort has been made to understand students' motivation and universities' marketing strategies worldwide, studies on marketing higher education in Africa are scarce (Mogaji, Farinloye & Aririguzoh, 2017).

Despite the enormous potential of students, the increasing number of private universities, and more institutions creating offshore satellite campuses, it is worthwhile to consider how higher education is being marketed in Africa.

Higher education institutions' marketing directors need to be aware of the changes that have altered the field of higher education marketing. African institutions must make an effort to coordinate their marketing activities to reach potential students, especially those in rural, undeveloped areas, and other stakeholders. The top 500 universities in the world may join up to establish campuses in other rising global markets. The team requires skilled human resources with the in-depth information needed to decide where funding should be immediately spent in the institutions' marketing plan. According to a report by Ghotbifar (2017:1-14), people's view has been shaped by a technology-based bubble whose access is restricted to a digital platform from the time of learning about daily events in the morning paper to instantaneous fulfilment with updates from social media. As a result, companies adopted media-platform strategies to provide a direct, intensive, and quantifiable method of interacting with customers. Digital marketing is the name given to the tactic (Lamberton & Stephen, 2016:146-172).

A prominent study by Lorange (2017) advocates that most universities and educational institutions reported using digital marketing in some capacity to involve students and reach potential applicants; higher education providers reported high levels of usage from their digital marketing campaigns. Digital media has grown significantly, and it is widely used all over the world. Everybody has subsequently used it unintentionally to engage in the digital era. The study by (Kannan, 2017:22-45) echoed that digital utilization is the most efficient tool to reach potential consumers. Studies by Khaushik (2017) also have identified that 49.74% of the internet webpage views originate from mobile devices. This serves as a motive for the majority of educational institutes to target the mobile audience for their marketing campaigns. Technologies are transforming service delivery, including in higher education (Rana et al., 2019:114-123). Digital marketing has turned into a vital tool for competing in the market. The rapid and steady pace of digital change, which according to Price Waterhouse Coopers (2018) and Information Age (2017), is making the change toward the digital transformation of higher education marketing more and more necessary.

Using productivity theories, research is being conducted to determine the true potential of digital technologies in higher education (Henderson et al., 2017:1567-1579). Many users are currently connected through various mobile social media platforms, which are gaining popularity as a medium for reaching out to large user bases for both social communication and business collaboration (Pringle & Fritz, 2019:19-44). Hence the aim of the study is to explore the role of digital marketing to attract the prospective students to study at the University of Technology (UoT).

This is one of the pillars of social development - which raises the question of whether digital marketing in higher education is a cause or a consequence of increasingly prominent socio-economic dynamics of growing importance. Higher education institutions face challenges in directing their marketing strategies to specific channels of communication. In light of the habits of today's modern Net generations, i.e., future university students, they have found a solution for their promotional activities by highlighting the value of social media as a tool of digital marketing. In this way, the UoT serves as a creator of market trends in the age of internetization, which is the subject of our research.

1.2 Problem statement

Previously, most institutions used to promote and advertise their services using a primary platform dependent on budget. Institutions that could afford the most significant budget communicated their services enormously through television commercials or radio jingles. Contrary to that, institutions with lower budgets would resort to using the options of fairs and publications in magazines. The global world has enabled having and using the digital platform as a communication tool. In utilising this tool, the budget is not restricted to the platform's access. Still, instead, it is proportional to the scope of customers they want to target and reach; therefore, the investment enables them to undertake such a task (Krskova, 2017:293-319). The problem experienced is that at the beginning of the year, students who have passed well will show up looking for admission, but regrettably, because they had not applied online and are in most cases from the rural areas, they would be denied admittance. Those who do enroll learnt about the UoT from their family or someone who had previously attended. The UoT may need to improve its communication channels to reach students in remote areas. The Fourth Industrial Revolution (4IR) plays a significant role, but social media also plays a massive role. The question asked is the UoT heard of? There are advertisements in the press promoting other institutions, and UoT needs to make its voice heard.

Currently, UoT uses billboards that can be costly to advertise, and different departments have their social media platforms used and followed by their students. To apply, important information is not well disseminated to prospective students who want to study at the UoT. We live in a digital era where student expectations are expanding at an exponential rate, which is one of the driving forces for the digital transformation of marketing (NNG, 2018). Social media has become a significant mode of communication for today's youth. The most powerful consumer market segments in the world, the Generation Z and the Millennials are capable of strong peer persuasion with just the proclamation of an opinion or preference provided by a simple touch of a button.

The UoT needs to have social media coordinators who will ensure that the information is coordinated and accessible from all the faculties so that whoever desires to study at the UoT will be well informed of the past and current affairs of interest in the departments they wish to study in. These can be made accessible because of the available technology, and the young people have access to that technology. In addition, the digital era and information and communication technologies have brought enormous changes in both social and economic spheres, causing tremendous shifts in promotion activities and contributing to user empowerment. The current socioeconomic trends in consumer behaviour in the context of the application of modern technology have created a fundamental shift in marketing dynamics and given importance to digital marketing. This is the core of this study to look at the effectiveness of digital marketing to attract prospective students to study at UoT.

1.3 Aim and Objectives

This study aimed to investigate the effectiveness of digital marketing in attracting prospective students to study at the University of Technology, Gauteng Province, South Africa.

In order to accomplish the main aim of the study, the following objectives were pursued:

- To investigate the different digital platforms used to attract the prospective students.
- To assess the most effective digital platform used
- To determine the impact of digital technology on the application of the prospective students.
- To compare accessibility of the digital platform in the rural and urban areas.

1.4 Research questions

The intension of the study was to provide answers to the following questions.

- Which digital platform is used to attract prospective students to study at the UoT?
- Which digital platform is effective in attracting prospective student?
- Does the chosen platform have an impact in attracting prospective students?
- Does the digital platform reach the prospective student residing in rural and urban areas?

1.5 Rationale for the study

H₀: The availability of digital platforms will not result in an increase in the number of prospective students enrolling at the University of Technology.

H₁: The availability of the digital platforms will result in an increase in the number of prospective students enrolling at the University of Technology.

1.6 Conclusion

This chapter provided a summary of the research study's background, identifying the research problem, objective and rationale of the study. The next chapter explorean overview of the literature reviewed about using digital marketing in higher education globally. The chapter also would help discover new insights for making digital marketing effective in attracting the students to the University of Technology in Gauteng Province.

2 LITERATURE REVIEW

This section will provide a review of important literature to our research. We shall establish the theoretical foundation for our research.

2.1 Introduction

Marketing is important in all organizations, and in order for organization to survive and thrive in a changing environment, it must become a key component of their overall strategy. Different authors define marketing as a process that involves planning, promotion and pricing of products, services and ideas (Ringold et al., 2007: 251- 260). The best definition is given by (Kotler and Armstrong 2006) in which they described the practice of marketing as the “analysis, planning, implementation, and control of carefully formulated programmes designed to bring about voluntary exchanges of value with target markets to achieve institutional objectives”. Fig 1 below depict the marketing plan used to define the marketing objectives of the business that align with the corporate mission and vision of the organization.



Figure 1. Diagram depicting the Marketing plan (Royal free photo)

Previous studies have revealed that the general concept of marketing communication has shifted from mass communication to personal communication, with the growth analysis revealing that the emphasis has shifted from products to customers. Its forms and types have also changed from a simple set of individual tools to a complex system (Blakeman, 2018; Smith & Zook 2019; John & De'Villiers, 2020:102052). The aim of the new model is to address the client's requirements more thoroughly than the one before, starting with their requests and needs (Marketing 2.0) to a person's active life position (Marketing 3.0), to a person's mind, emotions and spirit (Marketing 4.0) (Kotler et al., 2016).

Since marketing has been open to new ideas and trends since the 20th century and continues to do so today, many businesses and brands have switched from direct marketing to digital marketing in recent years. This is because digital marketing is the playground for people to stay current with their lives, and as technology has advanced over time, the number of social media applications, websites, and shopping apps has also increased significantly.

2.2 Digital Marketing Overview

The Internet, a communication tool created in the late 20th century, has transformed social structure, corporate culture, and individual attitudes. This medium of contact has transformed the world into a global village (Marshall and Bruce, 1992). The internet has made it easy for a continuous communication between producers and consumers, overcoming physical distance. Many researchers have identified this medium as an important medium for marketing in their studies (Keegan & Green, 2008:643; Liu, et al., 2011:231-240; Järvinen et al., 2012:102-117). The growth of marketing through this particular tool has reached its pinnacle with the availability of social media via the Internet. Social media has significantly accelerated marketing growth as indicated in Fig 2 below that explores digital marketing's potential.



Figure 2. Exploring digital marketing potential (Homeaff.com)

The digital revolution has altered customers' perceptions of business strategies. People's perceptions have been molded by a technology-based bubble whose access is limited to a digital platform, from the era of learning about the day's events in the morning newspaper to immediate gratification with updates from social media (Ghotbifar, 2017:001-014). As a result, companies have implemented strategies that are carried out through that media platform in order to provide an

interactive, focused, and measurable means of reaching consumers. This strategy is frequently referred to as digital marketing (Lamberton & Stephen, 2016:146–172).

2.2.1 Definition of digital marketing

Digital marketing is also known as "online marketing," "internet marketing," or "web marketing." Simply said, digital marketing refers to the use of the internet, social media, and mobile devices to promote a brand to the client (Barone, 2019). Digital marketing is also defined as an umbrella word for the promotion of goods or services through the use of digital technologies, primarily the Internet, but also mobile phones, display advertising, and any other digital medium (Sathya, 2017). Technological convergence and device multiplication have resulted in an expansion of the ways in which people think about Internet marketing and have pushed the boundaries towards a new concept of digital marketing—user-centered, more measurable, ubiquitous, and interactive.

Marketing experts and brand owners believe that digital marketing is the newest way to understand customer behaviors, which will help reach customers more than traditional or offline marketing because social media users are more likely to present their lives on social media channels such as Instagram, Twitter, and Facebook. As a result, brands have created social media accounts to stay in touch with their customers and to keep track of new trends and people's preferences, as brands target a specific segment of customers in their advertisements for each product to reap the benefits of these digital channels and to improve brand performance. In South Africa, growth in the use of digital marketing has improved significantly. By the end of January 2022, there were reportedly 41.19 million active internet consumers in South Africa. The same study discovered that about 28 million Internet users in the nation used social media, which was equivalent to about 46% of the total populace. (Statista, 2023).

Social media has grown in popularity around the world. In their study, Hayes, Ruschman and Walker (2009:109-124), found that the impact of social media as a marketing tool for a university has a positive relationship between those who follow its social media pages and the likelihood of applying to study there. They consider social media an excellent two-way communication tool that allows the university to collect valuable information through interaction with students and prospective students, allowing it to be used as a targeted promotion tool that influences university selection decisions. A business must comprehend the many digital marketing channels in order to have a successful digital marketing plan. To implement a marketing strategy that advances the business, it is crucial to determine the channels that are best for the company (Georgiou 2014).

2.2.2 Traditional marketing vs Digital marketing

Prior to the digital transformation, traditional marketing, as we know it today, was the only type of marketing. Traditional marketing is a broad word that encompasses many different types of marketing and advertising. According to Durmaz and Efendioglu (2016), the primary goal of traditional marketing is to provide time, place, and possession utility to customers in order to create value and persuade them to purchase what the company is selling. Traditional marketing encompasses all of the platforms that existed prior to the introduction of digital marketing.

Digital marketing on the other hand has evolved into a necessary instrument for market competitors. Because everyone is unintentionally immersed in the digital world, its use is the most efficient tool for reaching out to prospective customers (Kannan 2017:22-45). Digital Marketing has expanded the boundaries of education.

In their study, Hayes, Ruschman and Walker (2009:109-124), found that the impact of social media as a marketing tool for a university has a positive relationship between those who follow its social media pages and the likelihood of applying to study there. They consider social media an excellent two-way communication tool that allows the university to collect valuable information through interaction with students and prospective students, allowing it to be used as a targeted promotion tool that influences university selection decisions.

Based on Maringe's report (2006), higher education has transformed from a reliance on government support to a fiercely competitive market. Higher education's transition from a reliance on government funding to a competitive market implies that colleges must compete for students in the recruitment market. This has allowed educational institutions from all over the world to no longer find it difficult to market themselves to their audience or suffer from a lack of brand awareness. Education institutions now have the chance to show the advantages that students can gain from the services they offer, not only in their own country but also on a global scale, as a result of the extensive distribution of information (Patruti Baltes, 2015:111-118).

Furthermore, higher competition and a changing social environment have compelled both public and private higher education schools to become more proactive and market-oriented. As a result, institutions now deal with a wide range of problems and difficulties, therefore, universities must understand ways to attract students and how to market themselves (Kusumawati, 2013).

Choudaha and Chang (2012) warn that the atmosphere of severe competition among universities around the world, as well as budget cuts, forces colleges to become more strategic and focused on international student recruiting. Because of this, international student recruiting is a critical component of many colleges' financial survival in the United States and elsewhere.

In this regard, institutions are pressed to provide high-quality education, to exist as a reputable university, to achieve enrolment success, to improve competitive positioning, to provide contemporary and well-designed academic programs, and to maintain financial strength (Cetin, 2003:57-75). Furthermore, current trends in technological education development which include artificial intelligence, inclusion of digital learning environment for the next generation, improving cloud security, student and faculty data and facilitating data exchange with organizations, suppliers, and governments all require the service of digital marketing which inevitably bring risks and challenges (EDUCAUSE, 2020). This has compelled higher education administrators to realize the need to operate more like a business and market their offerings using sound strategies (Hancock & McCormick, 1996:59-67).

2.2.3 Pros and cons of digital marketing

In essence, digital marketing is an essential component of the digital business transformation process. The advantages of digital marketing are becoming more and more widespread every day as new marketing techniques are incorporated based on information and communication technologies, described below by (Veleva & Tsvetanova, 2020).

2.2.4 The pros of using digital marketing

A business must comprehend the many digital marketing channels in order to have a successful digital marketing plan. According to Forbes (Forbes Press Release, 2016), 82% of retail store customers conduct their research online which means that even before customers know what product or service they want, they go online to look for solutions to their problems and gain a greater understanding of the issue at hand. Data like this encourages even small businesses to implement some of the digital marketing strategies to expand their reach. The crucial advantage of digital marketing is that it is much more cost effective with respect to traditional marketing channels. Another significant advantage of digital marketing is that it enables businesses to target their ideal customers. In addition, there is the ability to obtain feedback.

Possibly one of the most beneficial digital marketing advantages is the improvement of the company's conversion rate, which is a direct consequence of specific lead targeting. Higher conversion rates lead to higher revenue, which helps companies grow their businesses and expand their operations (Storm, 2020). Another benefit of digital marketing is the help it gives in increasing engagement, and through the engagement, the brand image may increase. This increase allows customers to go for creditable brands and loyalty when they wish to shop. Furthermore, digital

marketing efforts can be rapidly updated and modified in response to current trends, industry changes, or the success of earlier projects. This adaptability guarantees that plans remain relevant in a changing corporate landscape.

2.2.5 The cons of using digital marketing

According to Veleva & Tsvetanova, (2020), the cons of digital marketing is the inability to regulate every component. There is a constant requirement for content to be developed, edited, approved, and released. The responsible employee must respond to feedback and update or modify web pages and marketing pages regularly as negative feedback is one of the most significant drawbacks of internet marketing. Negative evaluations submitted by dissatisfied customers are available to the entire public and have the potential to influence your consumers' purchasing decisions.

To properly use digital marketing, you will need the services of someone with the relevant industry knowledge as well as a complete grasp of your company. Search engines have restrictions on content because they significantly rely on digital marketing; as a result, they frequently publish guidelines outlining what is and is not permitted. The effort can become obsolete due to new page ranking algorithms, necessitating significant revisions to your marketing plan. Some of the cons of using digital marketing include the audience fatigue that can result from constant exposure to digital advertising. Users may get desensitized to online advertisements, demanding innovative approaches to capturing and retaining their attention.

Online communication channels are frequently used in digital marketing. Misinterpretation or miscommunication are possible, especially with cross-cultural or varied audiences, emphasizing the importance of precise and culturally sensitive messages, while digital marketing is a powerful force in today's corporate landscape, its efficacy is dependent on a deliberate and intelligent strategy that balances its benefits and drawbacks. Businesses that leverage the capabilities of digital marketing while addressing its limits will be better positioned for success in the digital era as technology improves.

2.2.6 Pros and cons of traditional marketing

Traditional marketing is still considered the most popular way of marketing for businesses. This marketing strategy employs print media such as newspapers and periodicals, as well as television, radio, flyers, brochures, banners, and postal mailings. These methods have been proven to be effective and sustainable (Walker, 2019).

2.2.7 The pros of using traditional marketing as outlined by Simona and Ramona (2020) include:

Easy access to local audiences: Using FM radio and local newspapers, businesses can easily target potential customers in a particular city. Flyers in the mail are another effective marketing method in some suburbs or nearby areas. The customers have hard copies. Advertisement materials like flyers and magazines can be kept as hard copies, which your customers can go through repeatedly.

Easy to understand: As these are all offline methods, anyone without internet access can be easily reached through this approach. As people become well aware of these marketing methods, it becomes easier to understand the message.

Established trust: Traditional marketing has a lengthy history and is frequently associated with credibility and trust. Traditional media such as television or newspapers are seen as more authoritative by some audiences.

Brand Familiarity: Traditional marketing channels contribute to brand familiarity. Consistent exposure through television ads, billboards, or print media can enhance brand recognition over time.

Personalized Interaction: In-person events and traditional methods, such as direct sales or trade exhibits, allow for personalized interactions with potential consumers, building a sense of connection.

2.2.8 The cons of traditional marketing as outlined by Simona, and Ramona (2020) include:

Less engaging: This is one of the major drawbacks of traditional marketing, as there is little to no engagement between businesses and their customers. Due to the lack of any proper channel for receiving feedback, there is no sure way to know what the customer feels or thinks about the product.

More expensive: Traditional marketing is not the least expensive form of advertising. Advertising on television, print, and radio can be costly. Small enterprises may find this prohibitively expensive.

Less expertise is required: you don't have to rely on other web design companies for your content and marketing. In traditional marketing, things are well under your control.

It is difficult to keep track of Return on Investment (ROI) parameters: It is really difficult to measure how successful or otherwise your marketing campaign was, as there are no channels to gather the data.

Inability to Target Specific groups: Traditional approaches may struggle to properly target specific demographics or interests, perhaps resulting in a waste of money by reaching groups who are less likely to be interested in the product or service.

Limited Accessibility: Traditional marketing relies on physical areas such as billboards or TV airtime. This restricts accessibility, especially when contrasted to digital marketing platforms' global reach.

Traditional marketing approaches have advantages in terms of physical presence and established trust, but they also have drawbacks in terms of expense, restricted analytics, and adaptability. Depending on the nature of the business, target demographic, and campaign objectives, the best marketing plan frequently combines a well-balanced combination of traditional and digital tactics.

2.3 Digital channels in marketing

Digital marketing has evolved into a new phenomenon that combines personalization and mass dissemination to achieve marketing objectives. Technological convergence and device multiplication have resulted in an expansion of the ways in which people think about Internet marketing and have pushed the boundaries towards a new concept of digital marketing—user-centered, more measurable, ubiquitous, and interactive. As such, digital marketing is explained as the use of digital channels and platforms to promote products or services to a target audience (Yasmin et al., 2015:69-80). Communication channels have a strong impact on the entire value chain. The importance of communication channels using digital marketing tools for direct client engagement was emphasised during the Covid -19 period (Constantinescu-Dobra and Mădălina-Alexanda 2021:29).

Organizations and individuals can interact with and engage with their target audience by using a range of online platforms and communication channels known as digital channels (Fig 3). Flexible communication channels enabled companies customized information for various target segments. The companies also needed to check on the costs associated with online communication channels, as the costs were affected by information, distance, or dispersion strived at.

Furthermore, digital marketing consists of a wide variety of technological and electronic utilities used for internet-based marketing. (Azra et Kazalac, 2011:611-627). The most popular methods of communication used are the company home sites, e-mail, social media, and blogs. (Leeflanf et al., 2014:1-12), highlight social media and mobile apps as the most promising growth areas for businesses in the next two to four years.



Figure 3. Understanding main channels in digital marketing (Technoroll.org)

Marketing has evolved since the 20th century, utilizing various platforms like social media, websites, and shopping applications to keep audiences informed and engaged. Different channels are used in keeping the audience informed and they include but not limited to the ones presented below: **social media, email marketing, content media, Influencer marketing, search engine marketing (SEM), affiliate marketing, marketing performance, and viral marketing:**

2.3.1 Social media marketing

Social media involves online activities that allows people to socialize and network through words, pictures, and videos. It transforms human interaction and organisations by encouraging dialogue and knowledge sharing (Solis, 2008). Users form communities share interest, allow them to contribute, offer views, and exchange information in either closed or open settings (Juslén 2009;. SocialMediaDefined 2014). Marketing and advertising have greatly benefited from the use of social media sites like Facebook, Twitter, Instagram, YouTube and LinkedIn. Social media has transformed the Internet from a platform for knowledge to a platform for influence. Social media's vast user base has made it crucial for businesses to integrate into their digital marketing strategies, as it significantly impacts customer interactions and purchasing decisions (Juslén 2009).

Another newly added channel to social networking is Tiktok. It was introduced in 2016 and has since been a huge online success. By 2019, it had gained momentum, overtaking Instagram and making the list of the most downloaded programs of the decade (Anderson, 2020:7-12). Its popularity stems from the fact that the program combines elements of creativity and self-expression with elements of digital marketing. Users can post their movies and then modify them in various ways based on the topics of their choice, allowing them to collaborate.

2.3.2 Email marketing

Email marketing is an ancestor of internet communication, so users will feel at ease when utilizing it. It is a popular internet marketing approach for digital marketers, showcasing special offers, content highlights, and event promotions, ensuring long-term growth and success. According to the study, there are already close to 4 billion email customers worldwide, and there will be 500 million more in three years time (Vujasin, 2020). The graph below (figure 4) indicates that the number of emails sent or received increases year after year, and forecasts show that there will be 30% more emails sent or received between 2017 and 2023.

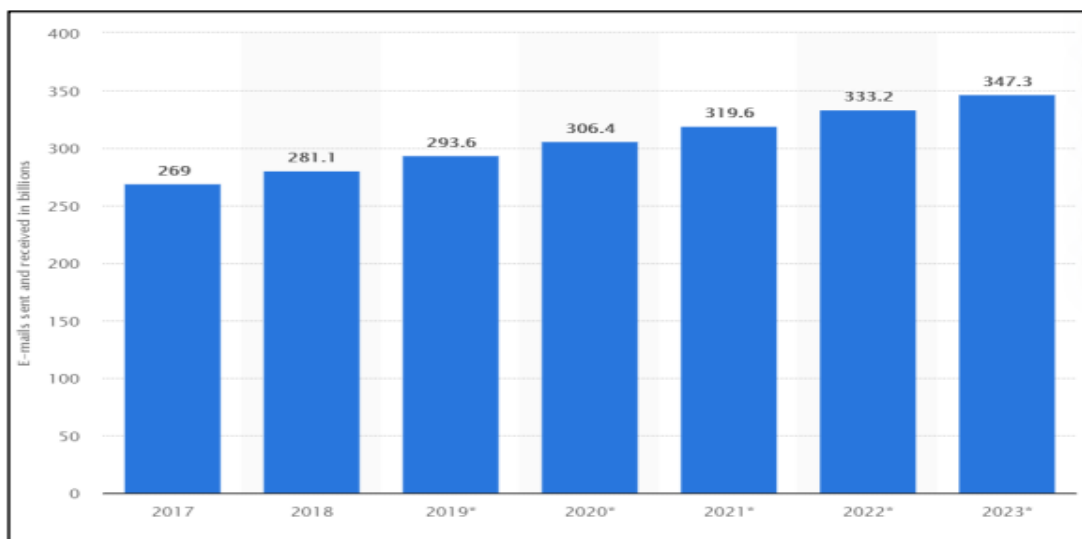


Figure 4. Graph depicting the amount of emails received/sent annually Source: Statista (2019)

This is an indication that email marketing is crucial for businesses as it allows them to reach a wide audience and categorise clients into different groups, enabling them to receive tailored messages and materials.

2.3.3 Advantages of email marketing

Various authors have highlighted the advantages of email marketing as follows:

Studies by Wreden (1999) explain email as the "killer Internet platform" because it can be tracked and targeted with such precision. Due to its ability to send a vast number of emails at low marketing expenses, as well as its higher response rates and enhanced client loyalty, email is a vital tool for businesses.

In their study, Jackson and DeCormier (1999:135-140), unearthed that communication done via email provides marketers with convenient communication with customers to build a strong relationship.

Carlton, (1999) showed how email marketing saves money and time, and how it helps to build strong relationships with customers because the campaign lifecycle is short. In other words, email marketing gives customers useful information and gives them immediate feedback on the effectiveness of marketing campaigns.

According to Chaffey (2013), merging email marketing with other communication mediums can boost its effectiveness.

2.3.4 Content marketing

Content marketing is explained as a strategic marketing approach that creates and distributes valuable, relevant, and consistent content to attract and retain a defined audience, ultimately driving profitable customer action (Nosrati et al., 2013:56-63; Lou & Xie, 2021:376-402). It is a digital marketing channel through channels like blogs, articles, videos, podcasts, and infographics used by businesses to build strong relationships with their target customers (Järvinen & Taiminen, 2016:164-175).

These platforms help promote brand awareness, build thought leadership, and draw in the target audience (Lopes and Casais, 2022). Studies by Patel (2020) revealed that 60% of marketers publish at least one piece of content daily, with custom content ranking as their top priority. Content marketing costs 62% less than traditional marketing and generates three times the number of leads.

2.3.5 Influencer marketing

According to Brown and Hayes (2008), Influencer marketing involves external influencers influencing consumer purchasing decisions. The influencers promote brand's offerings on their personal social media profiles. As such the creator has large followings that can help businesses expand their reach and credibility among target audience.

Furthermore, the influencers are strategically chosen to correspond with the brand's identity and target market, ensuring that the message is honestly received. By engaging potential customers in an environment that feels real and connected with their interests, this tailored strategy improves the effectiveness of influencer marketing.

In essence, influencer marketing has become a critical component of modern company strategies. It not only helps a brand's reach, but it also taps into the psychological dynamics of trust and authenticity, affecting consumer views and influencing purchasing patterns.

2.3.6 Search Engine Marketing (SEM)

Search Engine Marketing (SEM) is a comprehensive digital marketing approach that includes both organic and paid search methods, allowing websites to appear when specified terms are searched. This complete strategy incorporates Search Engine Optimization (SEO) and Pay Per Click (PPC), as well as organic and paid listings, to increase a website's exposure and relevancy in search engine results pages (SERPs). (Introduction to SEO-ebook.pdf: 3-5).

The integration of PPC and SEO is essential for a comprehensive SEM strategy. PPC provides instant visibility through sponsored channels, whereas SEO uses organic efforts to build long-term, sustainable awareness. They work together to increase a website's visibility across multiple search engine landscape sectors, optimizing potential for user engagement and conversions. SEM is a dynamic and ever changing area that enables websites to traverse the competitive digital terrain, ensuring they not only appear but thrive when consumers seek information related to their services.

2.3.7 Search Engine Optimization (SEO)

The Search Engine Optimization (SEO) is an essential component of SEM. SEO refers to a set of methods for increasing a website's organic visibility by optimizing its content, structure, and overall online presence (O'Neill et al., 2011). SEO aims to match a website with search engine algorithms through deliberate keyword optimization, content refinement, and technical upgrades, leading to increased rankings and visibility. According to (Hernández et al., 2009), an SEO tool attempts to capture users who are actively looking for information about a product related to the firm, converting them into potential clients openly expressing their needs.

2.3.8 Pay Per Click (PPC)

According to Chaffey (2009), companies can use pay-per-click (PPC) to rank their website on search results by paying for text advertisements displayed when a specific key phrase is entered by users. Furthermore, Morgan & Hunt (1994:20-38) identified PPC Marketing as one of the important actions in digital marketing; it affects the appearance of a website or webpage in paid search engine results,

which appear at the top of the search engine page and have a special mark to differentiate them (Morgan & Hunt 1994:20-38). Additionally, PPC has a large user base and is a highly focused method of marketing that includes Google ads as well as Facebook and LinkedIn social ads.

2.4 Affiliate Marketing

Affiliate marketing is described by Chaffey (2009) as "a commission-based arrangement where referring sites (publishers) receive a commission on sales or leads by merchants (retailers or other transactional sites)". It is one of the most effective online partnership methods for increasing website visitors. Akçura (2010:1-16) further explains that affiliate marketing programs help firms to increase their reach and acquire customers from other firms when the firms agree to refer their customers to third parties. The affiliate partner is rewarded a payout for providing a specific result to the retailer or advertiser.

2.5 Marketing performance

Lebans and Euske (2006) describe performance as a set of monetary and non-monetary metrics that demonstrate how well an organization's goals are met. It is important that marketer evaluate the marketing performance to see if goals and objectives are met using the data and metrics. This includes not only financial results, but also qualitative measurements that show the effectiveness of marketing techniques in reaching broader goals. As a result, (Gronholdt et al., 2006:243-252; Horga, 2012) define marketing performance measurement as evaluating the relationship between marketing activities and business performance.

Achieving organizational performance depends largely on how an organization adapts to changes in the external environment. Higher education institutions are engaged in a fierce battle to attract and enroll prospective students. In this competition, marketing becomes a strategic instrument, influencing the perception of the institution, promoting its distinct value propositions, and ultimately influencing enrollment numbers. In this setting, analyzing marketing performance is more than just a matter of analytics; it becomes a critical component of student recruitment success.

Marketing performance is inextricably linked to the success of student recruitment campaigns. Institutions can adapt their tactics to resonate with the target audience by examining the efficacy of various marketing channels, messaging, and campaigns. This cycle of ongoing development is critical in a setting where student preferences, demographics, and communication methods are constantly changing.

Higher education marketing performance is a thorough examination that goes beyond financial indicators. Understanding the influence of marketing operations on broader organizational goals, reacting to external changes, and strategically positioning the institution in a competitive landscape are all part of it. Higher education marketers can not only examine their current performance but also orient their plans toward continued success in attracting and enrolling students through thorough measurement and analysis.

2.6 Viral marketing

Chaffey and Smith (2008) define viral marketing as a method that takes advantage of the Internet's network impact. This strategy is effective at fast reaching a huge number of individuals, similar to how a computer virus spreads through computers worldwide. Viral marketing employs a variety of material types, such as video clips, music, links, photographs, or text, to turn word-of-mouth communication into a dynamic force on online platforms (Sudarevic, Vlahovic, & Surjanovic, 2013).

Sudarevic et al. (2013) emphasize a key shift brought about by viral marketing—the digitalization of conventional word-of-mouth communication. This transition enables people to share news, information, and entertainment via email or in-person word-of-mouth, increasing the message's potential reach and impact.

Cruz and Fill (2008:745) highlight the practical benefits of viral marketing by highlighting its capacity to attract traffic and drive purchases. When a piece of material goes viral, it attracts a large audience, causing a chain reaction as people share it with their networks. This organic sharing not only raises exposure, but it may also result in tangible commercial consequences such as increased website traffic and sales.

Furthermore viral marketing offers a significant opportunity to reach a large internet audience. People like to share their experiences, opinions, and involvements with products and services for a variety of reasons.

According to Frick (2010), social media platforms like YouTube, Facebook, and Twitter serve as powerful vehicles for amplifying content. If the content is compelling enough to resonate with users, it can achieve rapid and widespread visibility, potentially garnering hundreds or even millions of views. The observation that people like to share their experiences, opinions, and interactions with products and services is crucial. Understanding the factors behind user sharing is critical for developing material that is appealing. Viral marketing takes advantage of the natural human desire to share intriguing, amusing, or useful content with others, converting consumers into brand champions.

Viral marketing stands at the intersection of technology, human behavior, and content creation. It takes advantage of the internet's network effect, changing the way information spreads and boosting the influence of word-of-mouth communication. The capacity to swiftly reach a large audience and provide meaningful results makes viral marketing an effective technique in the digital age. Understanding the fundamentals of viral marketing becomes critical for developing content that catches attention and resonates with people as businesses traverse the landscape of social media and online interactions.

2.7 Challenges and solutions in digital marketing for universities

In the rapidly evolving digital era, universities, including the University of Technology, face a myriad of challenges when it comes to implementing and optimizing their digital marketing strategies. Digital marketing has become an essential tool for universities seeking to attract and engage prospective students, enhance brand visibility, and maintain a competitive edge. However, the landscape of digital marketing is dynamic and multifaceted, presenting universities with a range of intricate challenges that need to be addressed for successful outreach.

These may include 1) attracting the right audience to the University. This is one of the key challenges in higher education marketing. Thus, crafting marketing strategies to appeal to your diverse target audiences, such as traditional students, adult students, and international students, can be complex. Each group has unique needs, expectations, and motivations, which your marketing efforts must address effectively. The second challenge 2) Low engagement on social media. The challenge lies in frequently creating and posting new content that resonates with prospective students. Failing to do so suggests to prospective students that the institution lacks a vibrant community and is behind the times. This assumption might result in low engagement, leading to missed opportunities to connect with prospective students, and this might result in a negative impact on the recruitment's efforts. Adapting to rapidly changing technology is another challenge higher institutions might face. Thus, technology is shaping everything from how institutions communicate with prospective students to managing their brands online. Hence, staying ahead of the curve can be challenging, with new tools, platforms, and trends emerging frequently (Smith, 2019).

A powerful approach to converting prospective students into enrolled ones is showcasing former students' success stories. Demonstrating past graduates' and current students' real-life outcomes and experiences can provide tangible proof of your school's value, thereby making a compelling case for prospective students. The approach could be through 1) Website Testimonials: Include a section dedicated to testimonials from successful graduates on your university website. These personal accounts provide potential students with insights into life at your school and the possibilities

that await them after graduation. 2) Social Media Highlights: Share graduate success stories on your social media channels. These stories celebrate your graduates and showcase the results of your institution's education to prospective students. 3) Email Campaigns: Send these narratives emails to prospective students at crucial decision-making times, such as during application periods or after campus tours. 4) Virtual Events: Invite successful graduates to speak at virtual events. Hearing directly from graduates can significantly impact prospective students and help them visualize their potential success at your school. Lastly 4) Alumni Spotlights: Feature an "Alumni Spotlight" series on your school blog or newsletter. These in-depth profiles can cover a range of fields and demographics, showing the vast opportunities your school offers (Brown, 2020).

2.8 Conclusion

This chapter provided a review of the extensive scholarly work in the areas relevant to this inquiry, thus created a basis for understanding the subtleties and intricacies around the efficiency of digital marketing in the context of student attraction for South Africa's University of Technology by digging into considerable research work. The chapter's primary goal is to research and evaluate the influence of digital marketing in encouraging prospective students to consider and pursue studies at the University of Technology. The chapter gives insights into the many dimensions, theories, and empirical findings that have formed the knowledge of digital marketing in the education sector by synthesizing existing research.

As the chapter progresses, it carefully investigates major subjects such as the impact of digital marketing on student enrolment, the usage of online platforms in reaching and engaging potential students, and the emerging trends in the education sector's digital marketing landscape. This rigorous examination of existing scholarship not only identifies gaps in the present knowledge base, but also establishes the framework for the research's succeeding stages. Although the effectiveness of digital marketing in attracting prospective students to the higher learning institution is well-documented in the literature. Universities must continue to be versatile and sensitive to changing digital trends and student preferences.

Furthermore, the effectiveness of digital marketing for universities is ultimately determined by the quality and relevance of the content they produce, their ability to engage with prospective students meaningfully, and their commitment to data-driven decision-making. To successfully recruit and retain students, the University of Technologies must invest in ongoing research, testing and modification of its digital marketing strategies.

The next chapter outlines the research methodologies that include a full overview of the study's design, sampling procedures, data gathering strategies, and analytical frameworks. It will serve as a guide for readers, providing transparency into the methodical processes used to answer the research questions and add to the body of knowledge. It will act as a roadmap for readers, providing them with an open and transparent understanding of the methodical procedures followed in order to address the research questions and add to the corpus of current knowledge. Overall, this strategic framework, which progresses from a literature review through research methodology, shows a careful and academic approach to expanding our knowledge of how digital marketing affects student attraction in the context of higher education.

3 RESEARCH METHODOLOGY

A literature review was conducted in the preceding chapter to explore the effectiveness of digital marketing. This research study seeks to explore the effectiveness of digital marketing to attract prospective students to study at the University of Technology. The researcher utilized quantitative research method for this study, as it was in line with the purpose of this research.

According to Creswell (2003), quantitative research methods assist researchers in reaching conclusions based on facts and figures; it primarily uses numerical data to prove (or refute) the generated hypotheses. A cross-sectional study was undertaken for this study where data was gathered from a large number of people at one point in time. This method was chosen because data could be collected from the different campuses across all the faculties at a given time.

Cross sectional study is explained by (Setia, 2016) as a study that seeks to gather data from a group of subjects at only one point in time. The method chosen helped achieve the object set as it was relatively easy and inexpensive to be used over a short period through a questionnaire survey.

The study's introductory chapter outlined the four research objectives which included: **firstly**, the study sought to investigate the different digital platforms used to attract prospective students to study at the UoT. **Secondly** to assess the most effective digital platform used. **Thirdly** to determine the impact of digital technology on the application of prospective students, and lastly to compare the digital platform accessibility in rural and urban areas. Chapter 3 details the research methodology for this project.

3.1 Study design

This study is quantitative in nature. Various researchers and educators define quantitative research differently. Cohen and Manion (1980), for one explain quantitative research as social research that employs empirical methods and empirical statements. According to him, an empirical statement is one that describes what "is" the situation in the "actual world," as opposed to what "ought" to be the situation. Empirical statements are typically represented in numerical terms, another aspect of quantitative research is the use of empirical assessments. Empirical evaluations are described as a type of analysis that aims to evaluate the extent to which a certain program or policy empirically meets or fails to meet a specific standard or norm.

Creswell (1994) provided a concise description of quantitative research, stating that it aims to understand phenomena by gathering numerical data that are then examined using mathematically based procedures" (in particular statistics) to support or refute developed hypotheses.

Given (2008) explain quantitative research as a method of explaining phenomena by collecting numerical data, analyzing it using mathematical methods, and displaying statistical results.

The target population for this study included all the first years registered for the 2023 academic year at the university of technology. A census in the form of a survey comprising a structured closed questionnaire was used to collect data from first-year students enrolled in different programs at the different campuses of the university of technology. Census is defined as the overall process of collecting, processing, tabulating, analysing and publishing the demographic, economic and social data of the population and housing units in a specific country or part of it without dropping or repetition and assessing, classifying, analysing and publishing the data at a specific period of time called the Census Reference Point (JOR 2004 PHC Methodology EN).

It comprised questionnaires that addressed aspects related to the effectiveness of digital marketing that included **awareness**: how the student became aware of the university technology 'program and offerings; **influence**: including to what extent the digital marketing efforts influence the decision of prospective students to consider studying at the UoT; **information quality**: which asked if the digital marketing content provided relevant and useful information about the university's offering program; **engagement**: which involved how engaged the prospective students were with the digital marketing content, **conversation**: Did the digital marketing efforts lead to prospective students requesting more information? **Comparison**: How did the effectiveness of digital marketing compare to other traditional marketing methods in attracting prospective students?

To ensure that the census was accurate and effective, a pretest of questionnaires was conducted beforehand, which helped identify areas for improvement. This helped ensure that the survey was clear, unbiased, and effective. In collecting the data, the survey was posted online with a uniform resource locator (URL) link. The students accessed the survey using either their personal or registered UoT4life emails. This method was chosen because a broader population would be reached. The collected data was analysed using the Statistical Package for the Social Sciences (SPSS) version 27, which allowed for an in-depth examination of the effectiveness of digital platform marketing for attracting prospective students who intend to study at the university of technology. The results of this analysis are presented in a comprehensive report that includes charts, graphs, and tables. Overall, this approach proved to be an effective means of collecting and analysing data, and the results will be useful for future efforts to attract prospective students to the university of technology.

3.2 Population and Sample Size

According to the research undertaken by Henry (Henry, 1990; Bickman & Rog, 1998), the study population is defined as the operational definition of the target population. Meanwhile, Polit and Hungler (1999:37) define a population as an aggregate or totality of all things, subjects, or individuals that meet a set of criteria. For this particular study, the population included all 2023 first-year students (N = 10364) registered at UoT in all faculties as specified by Management Information System (MIS) (HEDA 2023). A census was conducted as the population of each campus was initially unknown. The study focused on first-year students, and data was directly collected from the entire population of interest, rather than relying on a predetermined sample size. This method was preferred as the findings would represent a complete and accurate picture of the first year registered.

3.3 Inclusion and exclusion criteria

Inclusion: In this study, a comprehensive approach was taken to include all first-year students registered at the University of Technology(UoT). This inclusive criterion assures that the research includes all first-year students, regardless of gender or age. The study's broad inclusion policy aims to capture a varied and representative sample of UoT's first-year student population.

The inclusion of all first-year students provides a comprehensive view, allowing the research findings to reflect the many experiences, viewpoints, and features of this cohort. This inclusive stance recognizes the importance of understanding all first-year students' collective experiences, promoting a holistic analysis of the topics under inquiry.

Exclusion: Senior students, and all participants who did not grant permission to take the questionnaires were excluded in the study.

Conversely, to maintain the integrity and ethical standards of the study, certain exclusions were implemented. Senior students who had completed their first year were not included in the study. This intentional omission ensures a clear emphasis on the unique experiences and challenges experienced by first-year students, excluding any potential confounding impacts from senior students' distinct dynamics.

Additionally, participants who did not grant permission to take the questionnaires were excluded. This ethical viewpoint adheres to the idea of voluntary involvement, protecting individuals' rights and autonomy. The willingness of participants to participate in the study is critical to upholding the ethical

norms of informed consent. By excluding senior students and individuals who did not provide consent, the study narrows its focus to the specific cohort of interest—first-year students who willingly participate. This tailored approach improves the relevance and accuracy of the findings, providing to a more nuanced understanding of the experiences and perceptions of this specific group within the UoT community.

The inclusion and exclusion criteria strives to maximize the research's validity and ethical considerations. It also ensures a complete examination of the first-year student experience while adhering to the norms of voluntary participation and privacy.

3.4 Data collection

The gathering of data is central to any research design, regardless of the field of study. Sapsford & Jupp, (2006) define data collection as the process of carefully gathering the desired information with the least amount of distortion so that the analysis can provide credible and logical answers. A structured closed questionnaire survey was utilised to obtain the data from first-year students enrolled in several programs at the UoT. The survey's uniform resource locator (URL) was posted online, and students accessed it using their personal and registered UoT4life emails. The link included the cover letter and a survey letter. This method was chosen for reaching a broader population. The following is the technique used for gathering the information:

- A pilot study was conducted to determine whether the respondents' anonymity was maintained. Once that was accomplished, an email explaining the study with a request to participate in the survey was sent to the emails of the respondents informing them of the project. The email contained the link, and the related information about the study.
- To remind individuals who had not responded to the request, weekly emails were issued to the respondents.
- Because the study employed the census method, electronic questionnaires were distributed to all 10,364 eligible participants. The questionnaire was made available for 8 weeks, providing participants plenty of time to complete it at their leisure. To ensure data accuracy and speedy recording of participants' input, the responses were promptly uploaded and recorded on the MS Forms platform.

The responses were submitted anonymously and as such, the researcher could not identify them or conduct any further investigation.

3.4.1 Questionnaires

A questionnaire is a research tool that consists of a series of questions designed to elicit information from respondents (Sekaran & Bougie, 2013). The questionnaire can be completed in person, over the phone, online, or by mail. Questionnaires frequently use both open and closed ended questions to acquire research data, and they can obtain both quantitative and qualitative data. The study followed the quantitative approach to collect data.

This study utilized primary data sources for questionnaires. Ajayi (2023) defines primary data as an original data source, in which the information was gathered directly by the researcher for a particular objective or goal. Questionnaires provide anonymity and avoid bias (Neuman, 1997:251). Electronic questionnaires are convenient as they allow respondents to complete in the comfort of their space at their own time (Sekaran and Bougie 2013).

3.4.2 Validity

Validity is an essential consideration not just for evaluation but also for measurement (De Bruin, 2010:49-55). It also describes how well the data collected covers the actual area of investigation (Ghuri and Gronhaug, 2005). There are various methods that can be used to validate the study (construct, content, face and criterion). For the purpose of this study content validity was considered.

According to Marcus & Smith (2010), content validity is explained as “the degree to which an assessment instrument is relevant to, and representative of, the targeted construct it is designed to measure”. A construct refers to a trait that cannot be directly observed, but can be measured by observing other indicators that are associated with it. To ensure validity, a pilot study was done where the survey was sent to few participants to establish anonymity in the response of the questionnaires.

The questionnaires included informed consent, confidentiality, and clear and concise instructions prior to the start of the questions. The questionnaires were designed so that they collected the data required to answer the questions pertaining to the effectiveness of digital marketing to attract prospective students to study at UoT.

3.4.3 Reliability

Reliability is explained as the consistency or stability of a measurement (Cropley, 2022:38). It is the accuracy of the data instrument that consistently produces the same results if used in the same situation on several occasions (Heale and Twycross, 2015:66-67). In this study, reliability was tested

through a pilot study in which the questionnaires were distributed to a group of people to determine the widespread distribution of the questionnaire's understanding and identify if there were any discrepancies. The findings revealed no discrepancies, as such questionnaires were distributed on a large-scale phase. The data was gathered using a standardized self-administered questionnaire to ensure a high-quality research study and the dependability of this investigation.

3.4.4 Data analysis

Quantitative data analysis is explained as the systematic collection and evaluation of measurable and verifiable data. It includes a statistical technique for evaluating or interpreting quantitative data (Creswell, 2007). Data was analysed using the Statistical Package for Social Sciences (SPSS) version 27, and presented in chart, graphs and tables. Participation in the study was voluntary and confidential. Respondents could withdraw at any time without consequences. The researcher draws the conclusions through inductive reasoning making this method a structured and rigorous approach to derive meaningful insights from numerical information.

3.4.5 Ethical considerations

The study received ethical clearance from UoT's ethics committee, involving both the Higher Education Development and Support, Research and Innovation Committee (HEDS-RICH-REC) and the University of Technology Research Ethics Committee (UOT REC). These committees are essential in guaranteeing that the research complies with ethical standards and protects participants' rights and welfare. Participants are asked to participate voluntarily, and giving informed consent prior to survey completion is a sign of a commitment to upholding transparency and honoring individual autonomy.

Furthermore, the gatekeeper permissions letters from the office of the Deputy Vice Chancellor for Digital Transformation and the Corporate Affairs and Marketing department were granted which demonstrates a strategic approach by recognizing the necessity of obtaining approvals from important university decision-makers or authorities. This thorough description of informed consent, ethical clearance, and gatekeeper permissions highlights accountability and transparency throughout the study's implementation in addition to attesting to the careful preparation of the research.

3.5 Conclusion

In light of the research objective to investigate the effectiveness of digital marketing to attract prospective students to study at the university of technology, Gauteng Province, South Africa, the researcher was granted the permission to access the email of the respondents through the office of the Deputy Vice Chancellor-Digital transformation (DVC-DT), emphasizing the strategic necessity of comprehending the digital world in student recruiting. This study aimed to explore how digital marketing channels attract prospective students to the University of Technology (UoT). By accessing respondents' email communications, we aimed to understand the complexity of digital marketing strategies and their impact on student engagement, including knowledge on whether these marketing channels effectively reach prospective students in diverse locations, including rural and urban areas.

4 RESULTS

4.1. Introduction

The study aimed to investigate the effectiveness of digital marketing in attracting prospective students to study at the University of Technology (UoT). The researcher used the primary data collected from the census of first year registered students across all campuses of the university of technology. The sample size consisted of all the respondents, in this case 736 participants were involved in the study. This chapter outlines the data analysis and findings of the study, which intended to address the four research questions listed below:

- Which digital platform is used to attract prospective students to study at the UoT?
- Which digital platform is effective in attracting prospective student?
- Does the chosen platform have an impact in attracting prospective students?
- Does the digital platform reach the prospective student residing in rural and urban areas?

In order to address the questionnaires, the researcher collected data on the demographics, communication and technology; digital marketing knowledge; and learners' perspectives. The data collected was analysed using the Statistical Package for Social Sciences (SPSS) software, and the results were presented in the form of frequencies and percentages to allow for a clear and concise presentation of the data.

4.2 Characteristics of the study population

A total of 734 participants who responded to the questionnaires, were considered for analysis of the effectiveness of digital marketing in attracting prospective students to study at the University of Technology (UoT). The inclusion of this varied group allowed a thorough evaluation of the elements impacting prospective students' judgments regarding UoT's digital marketing efforts.

The geographical distribution of participants provided information on the regional representation within the respondent pool. Notably, the results indicated that the majority of the respondents (54.1%) were from rural areas (Fig 5). This demographic insight reveals that persons living in rural areas are very engaged with the UoT's digital marketing initiatives.

Following closely with about 28.1% of participants were from the urban areas, indicating the significant presence and influence of digital marketing initiatives in attracting potential students from cities. The study's capacity to collect responses from both rural and urban areas improves its external

validity, allowing for a more nuanced understanding of the efficiency of digital marketing across different geographic contexts. The study's ability to gather responses from both rural and urban areas enhances its external validity, providing a more comprehensive understanding of digital marketing efficiency across different geographical contexts. In contrast, 17.8% of respondents were from semi-urban environment.

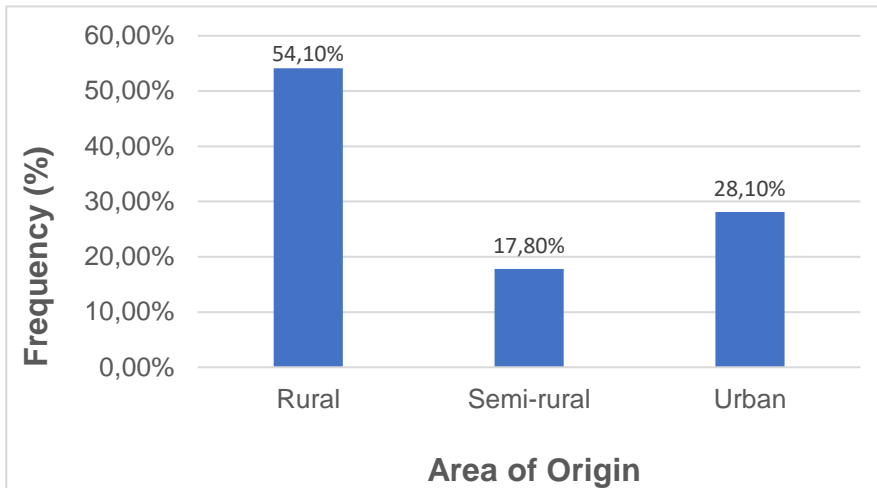


Figure 5. The percentage of the population size per area of origin.

4.3 Distribution of respondents by campus

The survey relied on the primary data collected from the the first year students registered across all UoT campuses. The findings of the survey indicated that most of the respondent were from Arcadia campus (47.7%) followed by Pretoria campus (25.5%). Mbombela, Witbank and Polokwane campuses had less respondent of 0.1%, 2.9% and 3.0 %, respectively. Figure 6 below depicted the percentage distribution of responses by campus.

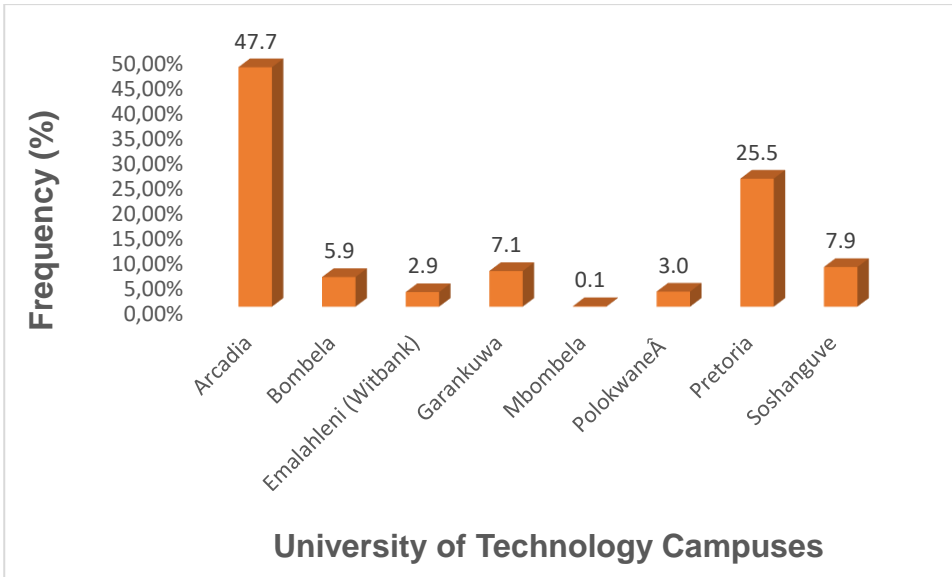


Figure 6. Figure showing the frequency of the responded by campuses.

4.4 Distribution percentage of the source of information with regard to the UoT

In the framework of university selection and decision-making research, participants were asked on how they learned about the UoT and communication channel used to attain this knowledge. Various response through which the learners became aware of the university are illustrated on Figure 7 below. The results of the survey revealed that friends (37.1%), family members (25.9%) and social media (24.2%), are key influencers in assisting students in discovering about the UoT. The teachers (10.6%) at high schools and magazines (2.2%) plays a minor role as sources of information about UoT.

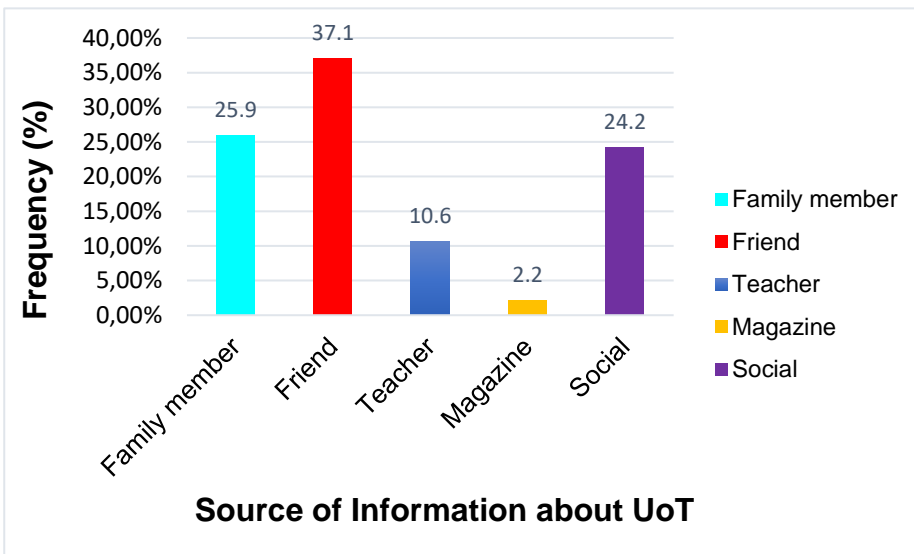


Figure 7 The frequency of the source of information with regards to the UoT.

4.5 Distribution of respondents' discovery channels about UoT

In addition to the source of information about the UoT, respondents were asked about the discovery channels used to obtain information about the UoT. Figure 8 below depicts the discovery channels used by the respondent with regards to the UoT. The findings revealed a diverse exposure patterns among the participants. A vast majority of learners, 60.7%, reported to have found the institution on Facebook, while 29.0% of the respondents reported that they had never been exposed to any specific channel in learning about the university. Moreover, 7.8% of the learners reported to have learned about the UoT from the YouTube channel. Tiktok and Instagram played less roles by 1.8% and 0.7%, respectively.

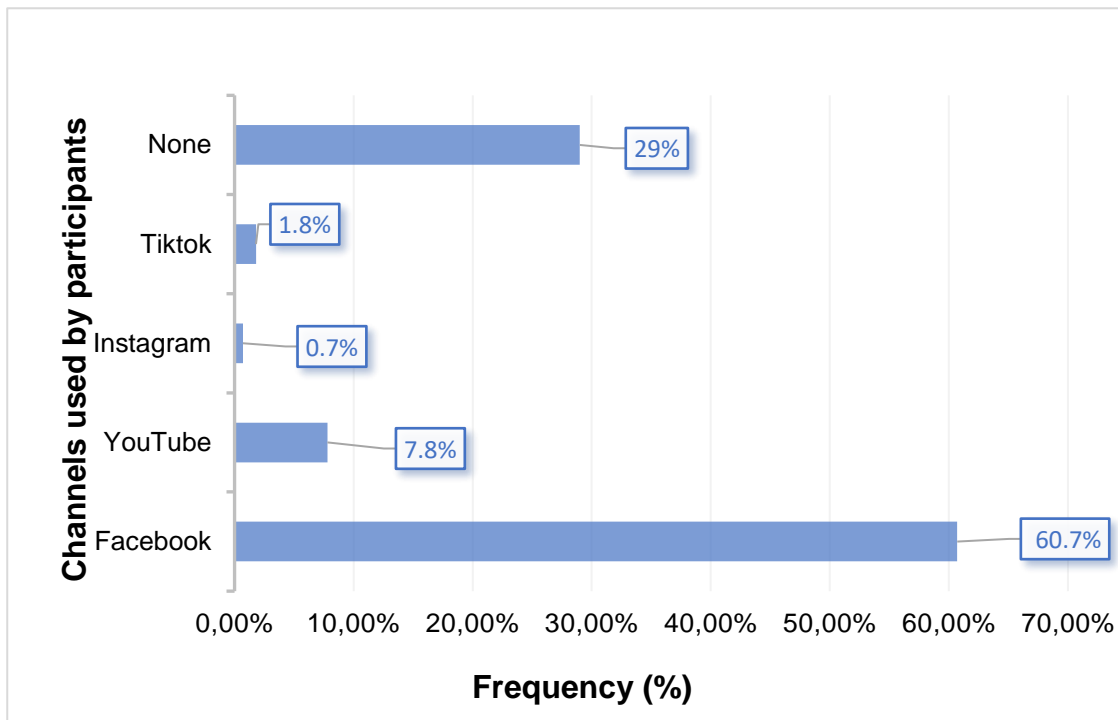


Figure 8. The discovery channels used by the respondent with regards to the UoT.

4.6 The percentage distribution of the digital marketing knowlegde by the particitpants

Table 1 below depicts the knowledge of digital marketing among the participants in this study. In order to gather information about the knowledge of digital marketing amongst the participants, various questions were asked and they included: access to having laptops or computers. The results revealed that the majority of the respondents have laptops or computers (95%). The results further revealed that 4.8% of the respondents never had laptops or computers. In addition, the majority of the participants showed good skills in web search (53.9%), while 3.1% showed no skills in web search. Amongst other questions asked during the survey was knowledge of the familiarity of various

digital marketing strategies. It was revealed that email marketing (35.8%) plays a key role, followed by social media (29.5%). An overwhelming percentage of participants indicated having access to online accounts (91%), with only 9% not having any of the accounts. Furthermore, 80.8% of the participants indicated that they have been exposed to online adverts about UoT, while 19.2% showed that they had never been exposed to an online adverts about UoT. Lastly, a significant total number of participants (60.7%) reported that they had not participated with UoT through online platforms. The remaining 39.3% indicated to have never participated with UoT through any online platforms.

Table 1. Knowledge of digital marketing by participants

Variables		Frequency %
		N=734
Access to laptops/computers	Yes	95
	No	5
Duration spent on using computers	0-2 years	41.2
	3-5 years	40.0
	>5 years	14.0
	Never had	4.8
Web search skills	Poor	3.1
	Acceptable	28.5
	Good	53.9
	Outstanding	14.5
Knowledge on the familiarity of various digital marketing strategies	Social media	29.5
	Search engines	1.9
	Mobile advertising	2.2
	Influencers	1.6

	Email market- ing	35.8
	Content market- ing	1.0
	Affiliate	0.7
	All of the above	12.4
	None of the above	14.3
Online account platforms	Yes	91
	No	9
UoT online advert ex- posure	Yes	80.8
	No	19.2
Participation with UoT using online platforms	Yes	60.7
	No	39.3

4.7 Perception of students on the UoT's marketing effectiveness

Furthermore, participant's perceptions regarding the UoT's marketing strategies and whether if they believed the university was using marketing to its greatest capacity was investigated. The results of the survey are shown in Table 2. The findings revealed that the majority of the respondents (57.40%) believed that the university was marketing itself to its maximum potential, while 23.60% expressed concern that the university was failing short of its potential. A total of 19.00% of the learners remained unsure about the university's marketing capabilities. Moreover, 72% of the participants indicated to have actively followed the UoT on various online platforms while 28% indicated to have never followed the UoT on any online platforms.

As part of this exploration, a question to determine whether the learners had previously applied to another UoT was also included in the survey. The response revealed a large majority of respondents, with 77.6% of learners revealing that they had previously applied to another UoT, and only 22.4% of respondents said the current UoT was their first choice. In addition, the participants were also questioned on their opinion regarding if the UoT has the potential to grow its presence through online

marketing. The findings demonstrated a significant increase in the percentage of respondents (81.30%) who believed UoT's presence might be improved through internet marketing. Furthermore, 17.10% of respondents were unsure that the institution has the ability to increase its presence through online marketing.

Finally, a survey was conducted to rate the university in terms of information dissemination. The outcome revealed that 48.0% of the respondents rated the UoT as very good in disseminating information, while 27.0% of the respondents reported the dissemination of information as good. Furthermore, 17.00% of participants rated the information as excellent, while 6.00% of respondents found the dissemination acceptable. Only about 2.00% of participants thought the information dissemination was poor.

Table 2. Perception of students on the UoT's marketing effectiveness

Variables		Frequency % N=734
Effectiveness use of digital marketing by UoT	Yes	57.4
	No	23.6
	Maybe	19
Social media engagement with UoT	Yes	72
	No	28
Preferences of students when applying to the UoTs	Current UoT	22.4
	Other UoTs	77.6
Do you think current UoT's visibility can be increased through online digital marketing?	Yes	81.3
	No	1.6
	Maybe	17.1
Did the current UoT provided sufficient details about the subject matter of interest?	Yes	86.1
	No	13.9
Evaluation of UoT's information Dissemination	Excellent	17
	Very good	48
	Good	27
	Acceptable	6
	Poor	2

5 DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter describes the findings of the current study, which intended to answer four main research questions. The survey covered a wide range of topics, such as demographics, marketing and outreach, communication tactics, and technology factors. The data was analyzed using statistical methods which offered a complete picture utilizing frequencies and percentages.

The study's primary focus was to address the following research questions:

- Which digital platform is used to attract prospective students to study at the UoT?
- Which digital platform is effective in attracting prospective student?
- Does the chosen platform have an impact in attracting prospective students?
- Does the digital platform reach the prospective student residing in rural and urban areas?

To accomplish this, data was gathered on demographics, marketing approaches, outreach/communication methods, and technological use. The Statistical Package for Social Sciences (SPSS) was used to analyse the data, allowing the researcher to get insights into the responses and views of the participants. The study aimed to provide relevant insights into the participants' opinions, preferences, and levels of acquaintance with the subject under investigation by applying this rigorous data analysis approach.

5.2 Analysis by objectives

5.2.1 To investigate the different digital platforms used to attract prospective students.

We live in an academic world that is quite competitive. Online marketing has evolved as a critical tool for UoT's wanting to broaden their reach and strengthen their presence in today's fast-paced digital landscape. Technology has fundamentally changed how institutions can interact with their target market using numerous constructive communication channels. The current emergence and popularity of social networking sites like Facebook, Twitter, YouTube, and LinkedIn, particularly among young people, has increased admissions authorities' interest in using them for marketing purposes (Bado & Nyangau, 2012).

In this survey, it is worth noting that the university's marketing and outreach used the following platforms to reach prospective students: Tiktok (1.8%), Instagram (0.7%), YouTube (7.8%), and

Facebook (60.7%), but 29% of the respondents reported that they had never used any of these channels before. Interestingly, students reported learning about the institution through traditional ways as well. For example, information about the UoT was communicated through family members (25%), friends (37.1%), social media (24.2%), teachers (10.6%), and the magazine (2.2%). Based on this information, it is critical to note that the UoT did not rely solely on digital communication but also used traditional methods to attract potential students to the various programs.

In conjunction with other institutions of higher education, a study conducted by the University of Massachusetts Dartmouth on the use of social and digital media by universities as part of outreach and marketing purposes revealed that 100% of the participating institutions are currently employing some form of social media. However, there is no reliable information available on how effective the use of such tools is in terms of enrolment or elevating institutional value (Nerisa, 2018). Social networking sites were originally designed for college students to build and maintain a network of friends.

Various researchers (Cappex.com, 2010; Fusch, 2011a, 2011b; PBP Executive Reports, 2010; Varsity Outreach, 2011; Popiolek, 2015) have investigated the evolution of social networking sites like Facebook, which were initially designed for college students but later expanded to a wider audience. Platforms such as Twitter and LinkedIn quickly followed suit. With the growing presence of high school students on these sites, admissions staff saw the opportunity to use them as excellent marketing tools for communicating with and recruiting prospective students.

Furthermore, the study by Bado & Nyangau, (2012), indicated that the use of social networking sites was created for college students to build and maintain a network of friends, with Facebook serving as an example of social networking site that was originally designed for college students. However, the site grew in popularity outside of higher education and was made open to anybody with an email address later on. Other sites, such as Twitter and LinkedIn, quickly followed suit. This study concurs with the report by Nerisa (2018), that shows that Facebook is the commonly utilised with 98% of colleges and universities having a presence on the platform.

A total of 84% of the institutions reported using Twitter account for communication and outreach; 86% of the institutions had a YouTube channel or maintained a presence on the platform. About 66% of the surveyed institutions used blogs as part of their digital media outreach strategy. Approximately 41% of the institutions employed podcasts as a means of engagement and communication and 47% of admissions staff used LinkedIn for outreach and professional networking purposes. These figures are indicative of the widespread utilization of various social and digital media platforms among universities for outreach and marketing purposes.

In another study, Boateng & Amankwa (2016) highlight the positive effects of social media on bringing together academic stakeholders such as instructors, students and other parties in order to support the building of knowledge during teaching and learning. This research highlights the potential

benefits of using social media platforms as tools to increase communication, cooperation, and information sharing within the academic community. Furthermore, social media may provide opportunities for involvement, conversation, and idea sharing, resulting in a more engaging and rich educational experience.

In addition, Subair et al. (2012:53-62) reported on their study on the usage of social media among undergraduates at Obafemi Awolowo University in Ile-Ife, Nigeria, and discovered that: 97% of undergraduates utilized WhatsApp, demonstrating its extensive use for communication and group conversations. 85% of students use Facebook for social networking and keeping in touch with family, friends, and peers. Instagram was utilized by 65% of the students, most likely to share photographs and short videos. YouTube was used by around 62% of the students, suggesting its popularity for watching videos and learning new things. 25% of the undergraduates surveyed utilized Twitter to keep up with trends and news. 21% of students used LinkedIn for professional networking and job searches. Google Plus was used by 15% of undergraduates. Snapchat, noted for its multimedia messaging features, was utilized by 10% of the students, and Skype was used by 7% of undergraduates for video calls and online communication.

These statistics provide useful information about undergraduates at Obafemi Awolowo University in Ile-Ife, Nigeria, in terms of social media platform preferences. They present data on how students used various social media platforms as of 2012, which can aid in understanding the changing environment of digital communication and its impact on education and social relationships. The analysis of how well digital platforms work to draw in potential students produced insightful findings. According to the information presented, it is evident that several universities used various platforms to encourage prospective students to enroll at their institutions.

5.2.2 To assess the most effective digital platform used

Learners utilised various discovery channels like TikTok, Instagram, YouTube, and Facebook to gather information about the UoT (Fiallos et al., 2021; Bado & Nyangau, 2012). The findings from the current study revealed a diverse range of exposure patterns among the participants related to how they learned about the institution. Notably, a substantial majority, comprising 60.7% of the respondents, reported that they discovered the university through Facebook. In comparison, 29.0% of respondents stated that they had never been exposed to any one channel when researching universities. About 7.8% of students reported that they learned about the University of Technology (UoT) from the YouTube channel, demonstrating the platform's substantial importance in information dissemination. Only 1.8% and 0.7% of the learners, respectively, attributing their knowledge of UoT to TikTok and Instagram. These social media platforms contribute substantially smaller roles as

compared to Facebook. The findings report Facebook is a popular and influential channel for interacting with prospective students due to its large user base and advertising options.

Our findings concur with several of the studies undertaken. For example, the findings of Alwagit et al. (2015) from the Kingdom of Saudi Arabia (KSA) stated that Facebook and Twitter were the most commonly used platforms, yet inefficiently applied in recruiting the student. In another study undertaken by Alsufyan and Aloud (2017), the researchers reported that students were recruited through Facebook, YouTube, LinkedIn, and Twitter. According to DigitalBuzz (2012), Facebook has over 500 million users worldwide, primarily between the ages of 18 and 24, with a 74% annual growth rate, while Wikipedia (2012) lists it as one of the most popular social networking websites among young college students, alongside MySpace, Twitter, and YouTube. This research has highlighted the role of social media in reaching and engaging with potential students, however, it is limited in providing information pertaining to mobile applications and websites.

Another perspective to explore is the use of mobile applications and websites by higher institutions of learning. In today's digital age, where smartphones and mobile devices are widely used, it is crucial for institutions to have mobile-friendly platforms that provide easy access to information and application processes. Investigating the effectiveness and accessibility of these platforms can shed light on the impact of digital technology on the application process for prospective students. Contrary to the findings, Rutter et al. (2016), argues that many of the organizations employ different technologies, e.g. Web 2.0, yet some did not understand how to use them effectively to improve the reputation. Therefore, institutions should prioritise the development of mobile-friendly platforms to ensure easy access to information and application processes. This can include optimising websites for mobile devices and developing user-friendly mobile applications.

According to the results of the study, Facebook is the most popular and widely utilised social networking platform among the surveyed participants. These findings align with previous studies undertaken by Barnes and Mattson in 2009 and 2010, as well as Barnes and Lescault in 2011, and Bado and Nyangau in 2012. Furthermore, the findings of the study are supported by another study that looked at the top 25 universities in Asia and Africa. According to the results of these study, Facebook, YouTube, and Twitter were the key social media platforms used by the majority of the top 25 institutions in Asia, whilst the top 25 universities in Africa favored Facebook, LinkedIn, and Twitter. These consistent findings highlight Facebook's important position in social media usage among educational institutions and students in many areas (Paladan, 2018:159-167). According to various sources (Cappex.com, 2010; Fusch, 2011a, 2011b; PBP Executive Reports, 2010; Varsity Outreach, 2011), Facebook has developed great followers as it is popular for its features that include:

- **It has extensive global reach:** Businesses may reach a large and diverse audience, including people from different locations, backgrounds, and demographics

- **Ease of discovery:** Facebook offers companies a platform where they may be quickly found by customers looking for goods, services, or information relevant to their sector. This discoverability increases the likelihood of luring in new clients.
- **Cost-Effective Marketing:** When compared to conventional advertising strategies, Facebook might be a more affordable marketing tool. Businesses can reach a sizable number of potential clients even on a tight budget.
- **Opportunities for Engagement:** The platform provides a variety of engagement capabilities, including likes, comments, and shares, enabling companies to communicate with their audience directly. This interaction strengthens relationships and encourages client loyalty.

5.2.3 To determine the impact of digital technology on the application of prospective students.

In this study, it is evident that both digital and traditional platforms utilized by the UoT had a positive impact on the prospective students. Notably, 95% of the students reported to have knowledge on the platforms used by the UoT, while 53% indicated to having a good web search skill valuable for navigating digital platforms effectively. This tech-savvy generation also demonstrated a strong online presence, with 91% of the students reporting having online accounts. Furthermore, 80.8% reported to have had exposure with online advert. The exposure to the platforms aided in their research and navigation of numerous digital platforms in search of pertinent information that could be useful to them. These findings highlight the impact of digital platforms in reaching and engaging potential students who are becoming more used to digital technologies and online resources. Also demonstrating the potential for the UoT to effectively use digital channels for communication, recruitment, and information dissemination in order to adapt to the interests and behaviors of this tech-savvy group.

These findings concur with the report of (Patruti Baltes, 2015) who reported that digital marketing has expanded the boundaries of education. The widespread dissemination of information has opened up new opportunities for educational institutions to showcase the benefits that students can gain from the services they offer, not only within their home country but also on a global scale.

According to Cybersecurity and Infrastructure Security Agency (CISA) report- It is important that the UoT take measures to protect the information provided by prospective students. This may be done by securing data storage, encrypting sensitive data, conducting regular security audits, and adhering to applicable data protection rules. Prioritizing data security not only fosters trust among prospective students, but also displays UoT's dedication to upholding the highest ethical and legal standards in

the management of personal information. By taking this comprehensive approach to research, adaptation, and data security, the UoT not only strengthens its global presence but also its commitment to providing prospective students with a secure and reliable environment in which to access information and submit applications.

5.2.4 To compare accessibility of the digital platform in the rural and urban areas.

Access to digital platforms has emerged as a significant factor defining social and economic inclusion in today's fast expanding digital landscape. As technology continues to transform how we live, work, and communicate, the digital gap, particularly between rural and urban regions, has become a major problem. This disparity in access has far-reaching ramifications not only for individual chances, but also for education, employment, healthcare, and overall quality of life. This study looked into the accessibility of digital platforms in both rural and urban settings, acknowledging the specific dynamics that lead to digital inclusion or exclusion in different settings. It is reported by (Ruxwana et al., 2010) that urban locations frequently benefit from robust digital infrastructure and connection, whereas rural areas confront significant problems due to infrastructural gaps, restricted internet access, and socioeconomic differences.

As UoT had applications from all over South Africa, it was of interest that the study revealed unique insights into the students geographical origins, illustrating the breadth of the institution's outreach and dedication to diversity. Remarkably, 53.9% of the pupils, represented the rural communities. Their participation highlights the university's dedication to promoting empowerment and education in rural areas, bridging the educational opportunity gap between urban and rural areas. A considerable 27.9% of the student body originated from urban centers, demonstrating the institution's appeal to city people seeking superior education and professional development. This urban student representation is most likely due to the university's proximity and outstanding academic offerings.

Furthermore, 17.8% of the students were from semi-rural origins, demonstrating the institution's significance in assisting students from places between rural and urban areas. These findings demonstrate the university's commitment to accessibility and diversity, attracting students from diverse backgrounds and providing chances for personal development and academic performance.

The university's diverse student body enriches the learning environment and supports its commitment to making education available to all South Africans. This is despite the study conducted by (Aruleba & Jere, 2022) that reported on the global digital divide and the economic and social issue that explained the digital gap experiences between the developed and the less developed countries.

The digital divide is explained as the global disparities in accessing the internet and other Information and Communication Technologies (ICT) that drive globalization by households, individuals, and businesses (Aruleba & Jere, 2022). Some of the reasons that lead to the digital gap are: (i) because, in most developing countries, the flow of information into big cities or metropolitan areas is much higher than in rural and local communities; (ii) the fundamental cause of this is because rural towns find it difficult to keep up with the growth of digital connection; as a result, Internet and broadband infrastructures are difficult to penetrate in these communities (Velaga et al., 2012) and (iii) Other reasons include the fact that most residents in these places are uneducated and find it difficult to obtain Information technology (IT). In addition to the university of technology's varied student body, it is critical to understand that access to information technology (IT) and education issues in some communities can have a big impact on a lot of different parts of life, including higher education.

5.3 CONCLUSION

According to the study's findings, it is evident that the University of Technology (UoT) has had a positive influence on its attempts to recruit prospective students. According to survey respondents, UoT has effectively used both digital and conventional marketing approaches to market itself to its fullest potential. This combined reaction highlights UoT's marketing strategic expertise. The university has managed to create a well-rounded and effective marketing strategies that resonate with its audience by incorporating the old and new methods.

The positive recognition highlights the institution's dedication to innovation and proactive approach to meeting the changing needs of prospective students. The success of the university in developing a comprehensive and dynamic marketing strategy not only distinguishes it, but also positions the university to a beacon in the competitive landscape of student recruitment. This remark emphasizes the university's successful approach to attracting prospective students, showing a well-rounded and efficient marketing plan. The success in attracting prospective students is a direct result of the University's commitment to a holistic marketing plan.

The outcome indicated that Facebook was preferred as a digital channel since it effectively reached both rural and urban potential students. This shows the university's deep awareness of the different audience demographics.

The research emphasizes Facebook's efficacy in reaching potential students in both rural and urban areas, showing the University's deep awareness of different audience demographics. By exploiting a platform that resonates across multiple geographical and socioeconomic contexts, the university not exhibited its versatility, at the same time it promotes itself as a forward-thinking institution with a pulse on its target audience's preferences and accessibility. As a result, selecting Facebook as a preferred digital channel becomes a strategic decision, adding greatly to the overall success of the university's student recruitment efforts. It can be concluded that the method employed to attract potential students was effective, inclusive, and geographically diversified.

Even if Facebook is popular among students, it is critical to remember that in order to reach a diverse spectrum of potential students through numerous platforms, a more comprehensive approach to digital marketing is required. By diversifying its digital marketing strategies beyond a single platform, would guarantee a broader audience and expand the reach.

5.4 RECOMMENDATIONS

Based on the study's findings, the following recommendations are offered in the context of UoT.

- The University of Technology (UoT) can expand its visibility by adding more platforms and channels. -The addition of new platforms and online channels will broaden the reach of information, ensuring that students have access to critical university information. UoT can engage a larger audience and provide potential students with a thorough and easily available source of information by carefully utilising a range of venues such as social media, educational websites, and interactive forums. This method not only boosts visibility but also corresponds to the target audience's various interests and habits, resulting in a more inclusive and effective communication strategy.
- In order to maximize the impact of outreach and exposure, UoT should maintain active engagement and a strong presence on the platform. This entails regular posting and regular updates of interesting and pertinent content, with prompt answers to questions and comments posted. The university will need to establish a sense of community with connection through the creation of an engaging and dynamic online environment. This will hold the interest of the targeted audience. The overall engagement of UoT's online presence can be increased by using multimedia content to attract the prospectus students.
- The UoT can appoint a person to oversee the websites - This will greatly improve the UoT's online presence administration and efficiency. The assigned person can assume the responsibility of a web administrator whose responsibility would be to make sure that the websites are regularly updated with current issues or content. The person would also be able to keep track of user interaction, examine website data and be able to put ongoing development plans into action. This would create a smooth running and user friendly online visits by students and community at large.
- The University of Technology can construct a feedback and survey platform to collect feedback from potential students through online surveys that would help to understand their digital application experiences. By constructing the online survey system, the university would be able to collect valuable insights and feedback from prospective students in relation to their experience with digital application.

In addition, open ended questions can be included to collect a more indepth feedback and suggestion for improvement. This data will benefit the university as there would be a comprehensive understanding of the users experience, in addition to ongoing improvement and optimization of the online application procedure.

- The UoT can offer virtual tours and webinars. The virtual tours would help to boost the university's image. Students will get a complete and immersive tour of the various campus and laboratory buildings. This will serve to establish a sense of connection to the institution, giving potential students a visual awareness of their surroundings. The university can make available educational webinars covering a wide range of topics related to extramural activities, student life, academic programs and support services. This information should be readily available to prospective students. These would allow students to have direct interaction by asking questions of the faculty through online services. By so doing, potential students would be provided with a complete and informative understanding of the university.

5.5 Limitation

The findings and recommendations of this study may have limited generalizability beyond the specific context of higher institutions of learning in South Africa, specifically this University of Technology (UoT). Each institution have its own unique digital marketing strategies and target audience, which may differ from the conclusions of this study. Therefore, caution should be exercised when applying the recommendations to other institutions or countries.

This research does not include a longitudinal analysis of the impact of digital technology on the application process for prospective students owing to time constraints. Examining only the current state of digital platforms, the study does not capture any significant changes or trends over time. Longitudinal analysis would provide a more comprehensive understanding of the evolving impact of digital technology.

This study had intended to reach all the first year students registered for the academic year of 2023 across all the UoT campus. However at the time of conducting the study not all the students had finalised their registration. As such questionnaires were sent to all participants and 736 respondents participated in the study.

Future research should address these limitations by conducting more extensive and longitudinal studies, including a broader range of institutions and countries, and considering a more comprehensive analysis of accessibility factors.

5.6 Personal reflection

In this section, I provide the journey undertaken for this project, which include the challenges confronted, skills developed, collaborations efforts, achievements, time management strategies, feedback received and personal growth.

The University of Technology was founded in 2004, with the goal of redressing existing disparities by making education available to all who could not pay it through a merger with a neighboring technology. The resulting campus had six campuses, from which I conducted my research. The UoT focuses on developing technologists, technicians, and professionals. The majority of UoT students come from various backgrounds. As a lecturer in the department of Science, and interested in pursuing a Masters in Business Administration with Haaga Helia, first thing, we needed to do a dissertation in different fields that were assigned to us by the supervisors, and I chose to do my research in the field of management.

What sparked the interest in choosing the topic.

While studying in rural KwaZulu Natal, I realized that despite the presence of a branded car, many local students had not heard of the University of Technology (UoT). It comes out that students preferred to attend well-known universities for their further education. This prompted me to investigate why UoT was not on their radar. I became interested in bridging this awareness gap and decided to investigate digital marketing strategies. My research led me to choose the topic in digital marketing to investigate if UoT reached students in these places who have not yet discovered it.

In my over a decade of expertise as an instructor in the subject, I've met very few students from Kwazulu Natal's deep rural districts. Further study into their decision to attend UoT revealed a common thread: they were typically influenced by a relative or a friend who had previously attended the University.

Another factor that fueled my interest was the presence of a UoT billboard along my daily commute route. It raised a concern—as not many individuals who did not use the route would see the billboard. They might never come across information about UoT. This observation deepened my conviction to explore digital marketing strategies. This realization further motivated my exploration into digital marketing strategies. I saw it as an opportunity to overcome geographical limitations and ensure that information about the University reaches a wider audience. Beyond the billboard on a single route,

digital marketing could be the key to casting a broader net and making UoT known to a diverse group of potential students, even those in areas less frequented by traditional advertising methods.

Challenges confronted

At the start of my study, I encountered challenges because the topic was unfamiliar to me. Fortunately, my supervisor directed me in the right direction. I reached out to the faculty marketer and marketing department lecturers to understand how things operated and to seek any information to help with my studies. To my surprise, I discovered that each faculty operated independently with little sharing of information. Instead of discouraging me, this discovery motivated me to pursue the inquiry even further. The lack of collaboration across faculties showed a clear need for the study. It wasn't just about understanding digital marketing; it became about bringing people together and improving how things are done at the university. So, even though the obstacles were present, they did not deter me. They strengthened my resolve to contribute to constructive improvements at the university of technology. This project is more than just an investigation; it is a quest to improve conditions for everyone concerned.

At this university, it's a standard practice that all proposals, including those from Haaga Helia students, must gain approval from two key bodies for ethical clearance. The first is the Higher Education Development and Support, Research and Innovation Committee (HEDS-RICH-REC), and the second is the University of Technology Research Ethics Committee (UoT REC). This meticulous two-step process ensures that all proposals meet the ethical standards set by the university. Each proposal is meticulously reviewed at our university by dedicated staff members. This examination is required to establish and maintain the highest quality standards, as well as clarity and a well-structured proposal. This review's criticism directs the researcher on how to improve the proposal. The goal of this thorough evaluation is to ensure that the proposal is polished and perfect when it is presented to the Research Ethics Committee (REC). This thorough examination is critical since no studies may begin until the REC approves them. This reflects the university's dedication to maintaining high research and ethical standards throughout the process.

Skills developed.

When HEDS-RICH-REC initially returned my research proposal, I was disappointed because I discovered that the method I chose in writing, which was anchored in my scientific background, did not correspond with the expectations for a social science researcher. The feedback prompted

significant self-reflection, and I concluded that a new technique was needed. I embarked on a proactive path of self-learning, aiming to improve.

Recognizing a knowledge gap, I sought out social science research books, delving into the complexities of proposal writing unique to my subject. This dedicated effort allowed me to appreciate the subtleties and procedures unique to the social sciences marking a transformative phase in my approach to research proposal writing.

My proposal was significantly revised as a result of the new insights and abilities I had gained. When the revised proposal was resubmitted, the marked improvement was evident in the minimal comments received. This not only validated the effectiveness of my learning efforts, but also emphasised the importance of adaptability and resilience in navigating the interdisciplinary nature of research. The experience served as a valuable lesson that reinforced the need of ongoing learning and the versatility required in designing research proposals that fit the nuanced expectations of various academic areas.

Collaboration efforts.

It was crucial for my study to collect data from first-year students enrolled in several faculties across the institution. The data was systematically obtained using a given URL link, ensuring a consistent and effective data collection approach. Recognising the complexities of the gathered data, I enlisted the help of a statistician. Their involvement was important in analysing the data and transforming raw data into relevant insights. Collaboration with a statistician not only ensured the accuracy of the study, but also laid the groundwork for later data interpretation.

Achievements.

The study adhered to strict ethical requirements, and it was approved by both the Higher Education Development and Support, Research and Innovation Committee (HEDS-RICH-REC) and the University of Technology Research Ethics Committee (UoT REC). This ethical approval confirms the study's dedication to doing research in a responsible and ethical manner.

Because the research required access to student emails, extra safeguards were taken to protect privacy and data. Recognising the importance of protecting students' privacy and data confidentiality, authorization from the Corporate Affairs and Marketing department was requested and granted. Furthermore, permission was received from the Deputy Vice-Chancellor for Digital Transformation (DVC-DV), demonstrating the university's commitment to transparent and responsible use of digital resources.

Gatekeeper letters, which acted as formal verification of the necessary approvals supplied by important authorities, were obtained to facilitate this component of the study. This meticulous method not only follows ethical research procedures, but also indicates a dedication to maintaining the highest levels of honesty and respect for individuals' privacy. From clearance to authorization, the study's commitment to ethical norms ensures that the research is conducted responsibly and with due regard for the rights and privacy of all individuals involved

Time management strategies

The process of completing this research was surely difficult, requiring considerable devotion and sacrifice. Balancing the demands of my academics with my commitments, such as Haaga Helia classes and my work as a lecturer, test setter, and grader for the students for whom I am responsible, proved to be a formidable endeavor. Furthermore, my involvement in departmental activities, which needed close collaboration with the head of department (HoD), complicated my schedule even more. Navigating this complicated web of responsibilities demanded strict time management.

Juggling academic interests, teaching responsibilities, and departmental responsibilities highlighted the need of a well-organized and successful schedule. Recognising the importance of the situation, I am exceedingly grateful for the support of the Head of Department. Their comprehension and recognition of the study's requirements culminated in a group decision to relieve me of some departmental responsibilities, allowing me to dedicate my whole focus and energy to the study until its successful completion.

This assistance not only alleviated the strain, but also emphasised the institution's commitment to assisting its members' academic pursuits. My collaboration with the HoD demonstrates the value of a supportive academic environment in which individuals can overcome obstacles and thrive in their intellectual pursuits. The completion of this course demonstrates not only personal determination, but also the benefits of a supportive academic environment.

Feedback received

There had been internal and external interaction between myself and my supervisor since the beginning of the study. The engagement began in the early phases, when my supervisor became an international partner. He was crucial in influencing the course of my research. His knowledge influenced the path of my investigation. The responses were both constructive and transformative.

Personal growth

The study was a success, meeting its stated goals and casting light on the University of Technology's (UoT) influential usage of digital platforms. This work has provided substantial knowledge, providing a riveting narrative. Even in rural Kwazulu Natal, where UoT is not a household name, the impact of its internet presence is felt strongly, influencing many students' educational objectives. This discovery highlights the extensive and revolutionary reach of digital marketing tactics in addressing a diverse audience.

For me, this research has been a tremendous learning experience, a journey that has increased my understanding of the dynamics of digital marketing. It has been both interesting and rewarding to see its practical benefits on potential pupils. I am grateful to my supervisor, for his unwavering support and help in negotiating the complexity of this study. His guidance has been a guiding influence in guaranteeing the study's success.

Following the submission of the thesis for evaluation, the next step is to translate the results into practical suggestions for the administration of the institution. The goal is to help existing digital platforms evolve so that students can participate more broadly and meaningfully. In essence, this strengthens the institution's position while also offering the financial benefits.

As I progress through this stage, I hope that the study's findings will have a broader impact, encouraging beneficial changes in the University of Technology's strategy for effectively attracting and engaging the students. In conclusion, the investigation into the effectiveness of digital marketing for attracting prospective students to the University of Technology was a resounding success.

The strategic use of the various digital platforms has not only increased our reach, but has also seamlessly resonated with the desires of our potential students. The good comments received, together with the increased online participation and a large rise in potential student interest, demonstrate the success of the investigation.

This study's findings go beyond the statistical significance; they reflect a paradigm shift in how we interact with our audience. The good feedback serves as a guidepost, pointing us to the techniques that are actually appealing to our prospective pupils. The increased online participation demonstrates a vibrant and active community eager to learn more about our institution. Furthermore, the increasing interest among the potential students demonstrates the efficiency of our digital marketing efforts in making a long-lasting impact.

As we come to the end of this chapter, it is clear that our commitment to innovation and adaptation has resulted in the actual results. Our journey thus far not only reinforces our place in the competitive realm of student recruitment, but also elevates the University of Technology to the forefront of employing digital approaches for major engagement.

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APPENDIX

1. SURVEY QUESTIONNAIRES		
1.1 I consent to take part in this study	1 Yes 2. No	
1.2 From which area do you originate from	1. Urban 2. Rural 3. Semi-rural	
1.3 Which campus do you study?	1. Arcadia 2. Bombela 3. Garankuwa 4. Pretoria 5. Soshanguve 6. Mbombela 7. Emalahleni (Witbank) 8. Polokwane	
2.COMMUNICATION AND TECHNOLOGY		
2.1 How did you hear/find out about UoT?	1. Family member 2. Friend 3. Teacher 4. Magazine 5. Social media (Radio and TV)	
2.2 Which digital channel did you learn about UoT?	1. Facebook 2. YouTube 3. Instagram 4. Tiktok 5. None	
2.3. Do you have access to a computer or laptop?	1. Yes 2. No	
2.4. How long have you been using a computer/laptop	1. 0-2 years 2. 3-5 years 3. >5 years 4. Never	
2.5. How would you rate your web search skills?	1. Very good 2. Good 3. Acceptable 4. Poor	

3. DIGITAL MARKETING KNOWLEDGE		—
3.1. Which digital marketing strategies are you familiar with	<ul style="list-style-type: none"> • Affiliate marketing • Content marketing • display advertising • Email marketing • Influencer marketing • Mobile advertising • Search engine marketing • Social media marketing • None of the above • All of the above 	
3.2. Do you have accounts on any online platforms?	1. Yes 2. No	
3.3. Have you seen any UoT adverts on any online platforms?	1. Yes 2. No	
3.4. Did you communicate to UoT using those platforms?	1. Yes 2. No	
3.5. Do you feel that UoT is using marketing to its full capabilities?	1. Yes 2. No	
3.6. Other than UoT, were there any other technology universities you have chosen for your studies?	1. Yes 2. No	
4. LEARNER'S PERSPECTIVE		
4.1. Do you think the UoT can increase its presence through online marketing?	1. Yes 2. No	
4.2. Do you think online marketing will have a big impact in the next few years?	1. Yes 2. No	

4.3. Do you believe UoT offers enough details about the subject matter you are interested in?	1. Yes 2. No	
4.4. How will you rate UoT in terms of information dissemination?	1. Poor 2. Acceptable 3. Good 4. Very good 5. Excellent	