Technology Use by Tshwane Residents for Tourism Purposes: The Case of Patrons at the South African National Park, Muckleneuk Office

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Abstract
There is uncertainty concerning the technology used by Tshwane residents for tourism purposes. The aim of this study was to research the role of technology for tourism purposes used by the patrons at South African National Parks (SAN Parks) in Pretoria, the administrative capital city of South Africa. This study intended to obtain information that could be vital for planning and management purposes to business concerns in the tourism industry, a gap that had not been received academic gaze. This study intended to obtain a description of the research population and to identify the types of technology used by Tshwane residents for tourism purposes, being it for leisure or business purposes.

A quantitative research methodology was followed whereby self-completing questionnaires were distributed to walk-in patrons visiting the Muckleneuk SAN Parks office. Results revealed that the merger between technology and tourism can make a meaningful impact on the prosperity of tourism in South Africa and that technology imprints tourism massively because of its effectiveness and efficiency. Moreover, the study indicated that the technology can be used by tourism enterprises to stay abreast of competition. Integrated communication technology (ICT) is placing South Africa on the map as one of the economically performing countries in Africa.

Introduction
Technology plays a crucial role in tourism and has enhanced the way of doing business in the industry. Tourism is defined by [1] as the movement of people, a sector of the economy and lastly a broad system of interacting relationships of people. Technology has changed how people communicate and the way of conducting business globally. As a result, tourism industry is continually changing due to advancements in information technology with specialized software’s that are shaping tourism industry and its sectors which includes accommodation, attractions, transport, travel intermediaries and government. All sectors within the tourism industry have a way in which they utilize technology to their advantage. The industry requires efficient, accurate and timely information which significantly affects the delivery of a service. Due to the tourism industry’s nature of inseparability, links between different sectors are key for growth and success of the industry, hence application of information technology is critical [2-12].

The role of Information Communication and Technology (ICT) in tourism industry cannot be underestimated as a driving force in the current information driven society. With ICT’s being at the fingertips of tourists, it is easy for tourists to compare accommodation establishments and choose one that portrays the best image possible. Furthermore, there is consumer generated media (CGM) an online technology that includes websites like tripadvisor.com and lonely planet’s thorn tree travel which is made for posting comments about tourism facilities and services for everyone to see tripadvisor.com. ICT has provided new tools and enabled a new distribution channel that is creating a new business environment. This is evident in the aviation industry due to effective ways of trying to achieve cost savings by reducing human resources dependency which led to the emergence of the no-frill low cost carrier airline model. The low cost carriers increased aviation travel as a result of lower prices that led to mode switching and stimulated business and leisure tourism alike.

ICT tools have facilitated business transaction, distribution of product services and providing information to consumers across the globe. The change has been so fundamental in the travel agency business, where the travel agency has been the traditional intermediary for airlines, as airlines promoted the purchase of their tickets on airline websites by-passing the travel agencies. ICT provided the platform for airlines to distribute their products. For example, airlines tickets are sold directly to customers. This is an advantage for customers and airline due to costs savings. Whilst this presents a threat to airlines, as this means that they became increasingly dis-intermediated. In addition, airlines started reducing the commission they were paying to travel agencies, and some airlines stopped paying commission all together. These fundamental changes have been as a result of the societal force called technology, which is a macro force outside of the control of organizations. According to [2] macro forces are external to the business and bring changes that an organization should only respond to. ICT has fundamentally changed the way that business is conducted in tourism, empowering the customers through consumer generated media. Among sectors of tourism, airlines have benefited from the advancement of ICT as a means of addressing perish ability by reducing prices when demand is low through using online platforms including an application integrated with the yield management system. The internet provided a new distribution network for airlines, in so doing, by-passed the travel agency which was the traditional intermediary between the airlines and the airline customers. ICT’s development was in this case a threat to the travel agency business model, because airline commission was a major source of revenue, ICT threatened to dis-intermediate travel agencies. Consequently, this ended up in reducing fares because

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customers that booked online omitted travel agency commission that inflated the total price of the ticket. This was influenced by the low cost model used by low cost carriers in the context of the pioneer kulula.com launched by British Airways/Comair in South Africa [13-21].

The attractions sector has integrated technology to tangibles the service offerings. For example, the Table Mountain National Park in Western Cape, South Africa uniquely integrates technology as an attraction. This attraction is managed by the South African National Parks (SAN Parks) and is one of the new Seven Wonders of Nature and is a UNESCO World Heritage Site. Table Mountain utilizes the Global Positioning Systems (GPS) as a means of providing detailed directions for guests to the location. This has provided the advantage of increasing pleasure of driving to the destination with detailed directions, making the journey enjoyable and relaxing. This also adds on the quality of the tourism service offering.

Tourism product consumption is a process; guests travel to the destination which is in a fixed location. This is one of the characteristic of the tourism product offering, leading to tourism product offerings that treated as export because they are consumed at the destination area due to the inseparable nature of tourism products and services. According to [2] ICT communication tools are imperative to bring customers to the destination to consume the tourism product offering. Attractions use ICT to sell tickets online, to keep records of visitors, engage in relationship marketing with customers and most importantly, can be used to tangibles the offering through visual and acoustic experience in a form of videos, pictures and client testimonials. The quality of the website and the packaging of products and services can help to reinforce a favorable image in the minds of customers and potential customers.

The emergence of ICT has made things easier for customers and organizations. This is evident through the development of complaint and/or compliment websites such as www.hellopeter.com which provides a platform for customers to share their experiences. Companies are granted an opportunity to respond to the complaints and/or compliments generated. As a result, Consumer generated media (CGM) has become the second generation of ICT revolution. “The impact of social media is so significant that today’s Internet has been touted as the second generation of the World Wide Web - i.e., the Web 2.0, due to the vast amount of information, the richly improved interactive and, more importantly, the shift of power in online communication from institutions to individual consumers and communities” [22-28]. In other words, information cannot only be produced and disseminated by news media or institutions; everyone can now share their thoughts with millions of people through the Internet and social media platforms. One of the defining features of ICT is that it has increased the level of communication and interactions with customers and companies, making conversation immediate, and real time. The rapid penetration of cell phones in South Africa amongst the population has greatly benefited the social networking sites, especially smart phones. The use of cell phones for social networking presents enormous opportunities for exploiting market opportunities. For example, social media tools make it easier to communicate with customers and prospects as guests start with an internet search before booking accommodation. Therefore, CGM plays a part in the consumer decision making process, as the comments posted by past customers can be regarded as “proof” of the service experience, for an intangible tourism product offering. This stage of research is imperative, because of the intangible nature of the tourism product offering presents a risk for any tourist expenditure. This is attributed to the fact that the tourism product offering is a service that is produced, and the service can only be experienced firsthand. It is therefore difficult to assess, the particular experience that the customer will get when consuming the tourism product offering; leading to the institutionalization of social networking as a lifestyle activity, which has increased number of people that communicate using social networking sites. This has created a great potential for social networks as a tools of reaching customers and promoting offerings of companies. On the other hand, the converse is also true, in cases where negative service may yield negative reviews by customers on social networking platforms such as Face book, YouTube, tweeter etc.

From companies perspective there are different system which are utilized such as Global Distribution Systems (GDS) which includes Galileo, Sabre and Amadeus. GDSs play a decisive role in tourism sector since it brings the buyers and producers of tourism products together. According to [29,30] GDS and Internet are the backbone of world information networks, which provides the infrastructure and networking facilities for airlines, tour operators, travel agencies and other tourism operators to process and obtain information, make reservation and market tourism products. GDSs were the primary distribution arm of the tourism industry, but it specifically favored principals such as the major airlines, and the major hotel groups. This effectively was an embodiment of the mass-tourism development paradigm as it reduced the developmental nature of tourism, by excluding small, medium entrepreneurs. However, through the internet, bookings can now be made direct with the service provider as they readily use real-time booking software that links the service provider and the guest. Tourists are decision makers, and ICT allows customers to access information through consumer generated media. On a positive side, since tourism product offerings are intangible, guests can only experience the service when they consume what they have bought. CGM generated information about service offerings serves as a form of proof for current and potential guests about the level of service that will be delivered.

One of the strategic tools utilized by SAN Parks is the tracking device on animals that assists in tracking the geographical location of animals in the park. This device plays an important role in terms of curbing rhino poaching. The role of tracking devices in not limited to this, it can assist in tracking animals as they craze across different biomes in the park. According to the media release by SAN Parks on the 23 February 2012, the organization have employed lot of rangers to assist in protecting animals especially rhinos which are at risk of being dehorned. If these tracking device were to be adopted they may save SAN Parks a lot of money when it comes to hiring people. According to SAN Parks (2012), 130 rhino have been killed in the Kruger National park and it is reported that there is an increase in rhino pouching since September 2010 from 99 to 130 in January 2012. The park still depends on the community to help while they try to invest in the technology devises of tracking animals.

Methodology

The study carried out a search for knowledge on technology for tourism development among Tshwane residents. Quantitative research methodology was used, whereby data was collected and statistics were analyzed. The primary research objective was to investigate the technology used by the patrons at South African National Parks (SAN Parks) in Tshwane area. This study intended to obtain a limited amount of information on a large number of respondents among the population of Tshwane. Descriptive research was exploited whereby self completed questionnaire surveys were distributed at the Muckleneuk office of...
SAN Parks. Sampling method applied was non-probability sampling, whereby each patron at Muckleneuk office of SAN Parks were studied but not all of the residents had an equal chance of being included in the study. Convenient non-probability sampling method was used as it was convenient for the researcher in terms of accessibility of the Tshwane population [32-37]. Moreover, the population of Tshwane is too broad and the researcher had minimum time for data collection and the researcher had insufficient time and funds for the project. Hence, the choice of the SAN Parks Muckleneuk office at 643 Leyds Street as the location was prudent. Participants in the survey were incoming or walk in clients for accommodation reservations at SAN Parks. The number of people that participated in the research was 25. The research instruments used were self-completion surveys questionnaires, and Statistical package for Social Sciences (SPSS) was used for data coding. [38-46], mentions that it also allows generating data files, output files and graphics; printing tabular results and preparing graphs and charts. Data was captured directly from the questionnaires onto an Excel spreadsheet in their coded format. Due to the fact that the study was to find out the technology used for tourism purposes by patrons of SAN Parks, Bivariate analysis was used. Bivariate analysis will be indicated by scatter grams and cross tabulation, the relationship of technology and tourism were analysed.

**Interpretation of Results**

The sample included both males and females. Table 1 reflects that 51.39% females who participated in the questionnaire were more than males 48.61%. Majority of respondents (58.67%) were between the age of 21 and 35 years, followed by respondents between the ages of 36-50 years (21.33%). Participants aged 20 years and younger were the least group that participated in the study (13.33 %). Participants with a technical diploma (34.25%) participated mostly in the questionnaire, followed by those with a degree (23.29%). The least participants were those with no formal education (1.37%). Participants at a professional level (32%) took part on the questionnaire while 6.67% were unskilled participants. Tshwane respondents were represented by 77.03% of the sample these percentage shows residents of Tshwane are the ones who participated the most hence the survey took part in their home town. From a different angle it can be that the survey has reached its primary objective which is to investigate the technology used by Tshwane residents for tourism purposes. The study confirms that the youth still represents the bulk of the population in South Africa. In the case of tourism in South Africa, it is encouraging that the youth were the bulk of the research participants. It can be assumed that they will consume tourism product offering over the course of their lifetime, which is imperative for the institutionalization of holidays.

About (58%) respondents found it easy to obtain tourism information online compared to (4.05%) that finds it difficult to access online tourism information, as indicated in Figure 1. 48.65% participants preferred to make online reservations, while (4.05%) did not agree to it or have other methods of making bookings. This indicates that there is skepticism when it comes to trusting technology concerning online payments. About (26.39%) respondents indicated that they do not trust online technology when processing payments. However, only a small group of participants (1.39%) trust technology when coming to online payments. The results present an opportunity for SAN Parks to use ICT as a communicating and purchasing tool as the research respondents get information online in addition to making online payments. Further research can be undertaken to find out the reasons that 26.39% of the respondents do not trust making online bookings. SAN Parks can further investigate if the lack of trust for online-booking has an adverse effect on the booking of its tourism service offerings.

Figure 2 indicates that (41.33%) respondents preferred to speak to a relevant person when they want to obtain particular information, followed by (33.33%). However (1.33%) respondents indicated that they do not prefer to talk to a person when they want tourism information. The study reaffirms that the tourism industry is a service industry where the guests require human contact. The nature of the tourism service offerings which is intangibility, confirms the importance of the human factor in the production of the tourism service offering.

Figure 3 reflects that (41.89%) participant's find today's technology easy to use while a small percentage (2.70%) do not agree with the statement. This may be caused by numerous reasons including agitation when it comes to online transactions as (43.24%) respondents found it easy to obtain the required information on their own without any assistance from the second person, while (1.35%) indicated the need for assistance when it comes to obtaining information themselves. Even though 25.33% respondents indicated that they still need assistance.

**Table 1: Demographic results.**

<table>
<thead>
<tr>
<th>GENDER</th>
<th>MALE</th>
<th>FEMALE</th>
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<tbody>
<tr>
<td>AGE 20 Years</td>
<td>13.33%</td>
<td>13.33%</td>
</tr>
<tr>
<td>21-35 years</td>
<td>58.67%</td>
<td>58.67%</td>
</tr>
<tr>
<td>36-50 years</td>
<td>21.33%</td>
<td>21.33%</td>
</tr>
<tr>
<td>50+ years</td>
<td>6.67%</td>
<td>6.67%</td>
</tr>
</tbody>
</table>

**Table 2: Social network.**

<table>
<thead>
<tr>
<th>Social network preference</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linked In</td>
<td>3.23%</td>
</tr>
<tr>
<td>Twitter</td>
<td>3.23%</td>
</tr>
<tr>
<td>Mxit</td>
<td>6.45%</td>
</tr>
<tr>
<td>WhatsApp</td>
<td>16.13%</td>
</tr>
<tr>
<td>Facebook</td>
<td>70.97%</td>
</tr>
</tbody>
</table>

**Figure 1: Online Tourism.**
from the second person concerning online services, other (6.67%) respondents indicated cosines when it comes to using technology to obtain information and indicated that it assists in the booking process. It is crucial to note that (38.67%) participants responded positively to the availability promotional materials such as CD's, and DVD's followed by (37.33%) who also agreed that there is a need for promotional materials. On the other end, (1.33%) participants stated that they do not see the need for the promotional materials which are offered on the market, whilst, 45.95% respondents recognized the need for electronic guidebooks. Other participants (1.35%) did not see the purpose or need of the electronic guidebooks at all. When it comes to social networking sites, majority of respondents (42.67%) agreed to the usage of social networks of all types. While (5.33%) did not use the social network. This indicates that Tshwane residents are active when coming to social networking sites because (41.33%) respondents find call centers more helpful or user friendly when it comes to modern day consumer in the tourism market while a percentage of 2.67% still experience difficulty or sees call centre as a not preferred choice.

Participants indicated that (43.24%) utilize the destination marketing websites, such as the website of South African Tourism and (1.35%) do not utilize the destination marketing websites. Despite the uptake of mobile phones, growth in South Africa's ICT sector has not brought affordable, universal access to a full range of communication services. The wide availability of cell phones makes mobi.sites an important technology platform, especially using new generation smart phones. (57.33%) Respondents make use of mobi.sites followed by 28%. Other respondents (43.24%) indicated that they use advice and recommendations available online as compared to (2.70%) participants who do not utilize the online advice and recommendations. The power of CGM is reaffirmed by the fact that 43.24% of respondents used CGM for advice and recommendation. SAN Parks needs to constantly monitor the comments generated about it on CGM and needs to employ an agency to actively manage consumer generated media.

About 70.97% respondents preferred Face book as a social network whilst (16.13%) respondents preferred to use WHATSAPP. Linked In and Twitter ranked the lowest at a percentage of 3.23 meaning respondents do not use or do not have access to it. Social networking sites are an important communication tool used by millions of people, and having a presence on these sites is a business imperative. SAN Parks needs to ensure that its social networking presence keeps up with trends and remains relevant in the constantly changing landscape of social networking.

**Conclusion and Recommendations**

Most tourism companies use technology to benefit their daily operations. The adoption of ICT platforms and forms of technology by businesses in response to the changes that ICT has had on consumers and how business is conducted has transformed the industry. According to [2] ICT changes brought about impact on the customers, competition and the company. Therefore, SAN Parks needs to stay abreast with the latest developments in the ICT landscape in order to keep the company relevant to customers whilst maintaining a competitive advantage against the competition. Investments in ICT may be great, however, the possible loss of revenue presented by the loss of customers due to lack of integration in ICT and social network platforms in company's processes cannot be quantified, but can be regarded as a high cost to incur. Companies invest more on technology so that it makes life easier in the future and user friendly for employees and external users of the system including Tshwane residents. In simple terms information technology is the modern way of communicating and getting information to reach different people and give them knowledge. According to the evidence that has been gathered through this study, it is evident that technology affects, people's lives and tourism sector as a whole. The constant monitoring of CGM is now a business imperative as customers attach much value to the comments. CGM is contested terrain and a negative comment is therefore not necessarily a blemish on a business, what is imperative is the response of the company to the negative comment. This is the area, where SAN Parks must excel, in resolving and responding to comments posted about it on CGM. Due to the variable nature of the tourism service experience, the production of negative experience is almost a certainty. However, with continued staff training, variable service delivery can be mitigated by using a service blueprint. The investments in human resources will be long terms, as this will increase the value of the human resources in delivering excellent service, in an age where customers are increasingly demanding. Even though the South African market (both tourism suppliers and customers) have access to both computers and internet, ICT is not exploited to its full potential for tourism purposes, it is promising that the usage of technology continues to grow in time. From a tactical point of view, it's important that consumer generated media professional or an agency is contracted to manage the reviews and the responses that a company gives.

It is therefore recommended that companies should invest in technology to better lives of clients and the running of the business. The investment in technology must be accompanied by internal marketing programs that would ensure that the best human resources are attracted to ensure that the technology is used optimally. Continuous improvement must be attained by ensuring that customers add an information feeder to their technology advances that they adopt, as new forms of technology are adopted by customers, and as they ditches other platforms. A detailed marketing strategy must be created for ICT Marketing to ensure that the company has a detailed strategy on how it will communicate on these platforms. Majority of respondents use mobi.sites means that SAN Parks and other tourism organization must invest in mobi.sites to deliver an appropriate message. SAN Parks needs to ensure that its website is safe when it comes to online payments that it regularly verifies the safety of its website for accepting online payments. It is recommended that all the five sectors of tourism should have a linkage where payments can be done in real time and increase the security features available for online payments. An element of education is necessary to ensure that people's fears are not a challenge to the safety of online bookings. A reservation system where a client will be able to access all the tourism sectors at once like the one used by agents to prepare itineraries for the clients is necessary. This type of system will ensure that bookings are done correctly. This system may assist in terms of finding locations of nearer attractions, facilities nearer to the accommodation which may also be booked. So much investing on technology still needs to be done. The rise of social networking sites and mobi.sites makes people become more connected through the mobile platforms. [47-54] Noted that the high and growing amount of traffic generated from mobile phones in Africa. This means that mobi.sites
must be having functionality like a website of a company, by providing detailed information in addition to being a sales site.

With reference to domestic tourism, destination marketing websites remain relevant to more than 40% of the respondents; it’s imperative that they remain relevant, attractive and satisfy the needs of customers. Measures must be put in place to strengthen the payment platform online, and dispel negative perceptions about the safety of online payment systems. Further research needs to be undertaken to find out the experience of SAN Parks patrons with the SAN PARKS website, and the presence of SAN Parks on social networking sites. With tourism being so important in the development of SA, it affects all spheres (social, economic, environment, and political); it is imperative to exploit ICT mechanisms and the role it plays within the tourism sector. In most cases, the tourism industry utilizes ICT for information dissemination by both tourism suppliers and consumers. Consequently, drawing from the study, it appears that most residents do not use technology for tourism development purposes. However, this study may assist tourism businesses in terms of planning and management purposes. It is therefore recommended that further studies be conducted to investigate the level of awareness on using technology for tourism [13-19].

References