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Exploitation of Technology by Tshwane Residents for Tourism Development Purposes

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***Abstract*—**This article investigates technology used by Tshwane residents intended for tourism purposes. The aim is to contribute information for planning and management concerning technology within the tourism sector in the city of Tshwane, South Africa. This study identified the types of tourist related technologies used by the Tshwane residents, be it for business purposes or personal use. The study connected the exploitation of technology for tourism purposes through unpacking the tourism sector as it utilizes technology. Quantitative research methodology was used whereby self-completed questionnaires were chosen as research instruments. The research study carried out a search for knowledge on technology for tourism and the Tshwane residents; however the study revealed that technology has certainly imprinted tourism massively because of its effectiveness and efficiency. Technology has assisted tourism businesses stay abreast of competition with integrated communication technology (ICT) and because of that, SA is on the map as one of the economically performing countries in Africa. Moreover, technology and tourism make a meaningful impact on job creation and Gross Domestic Product (GDP).

***Keywords*—**Information and Communication Technology, Technology for tourism, Tshwane residents.

I. Introduction

TECHNOLOGY has been classified as objects, knowledge, activities and as a socio-technical system [1]. Hence, the interest of this study lies with the last definition, which looks at technology as socio-technical system because it includes the use of objects and the involvement of people.

The study focus is on identifying technology used by the residents in Tshwane metropolis for tourism development. There are lots of tourism activities that take place in Tshwane, an area located in Gauteng province in South Africa (SA). These tourism activities are propelled by technological advances such as the unique infrastructure in Gauteng province, the newly founded Gautrain which is one of the fastest trains in Africa. Such unique developmental infrastructure plays a particular role in Gauteng as far as tourism is concerned. Gautrain project has transformed the way of doing business in tourism and affects operators within the industry. Furthermore, this technological innovation has increased competitive advantage for SA as a tourist destination, including the Tshwane area. This has led to Tshwane tourism exploiting such an opportunity and promotes the city as a tourist destination, thus making people notice and wants to visit Tshwane.

In the Ministers Meeting, the Minister of Tourism in SA, Marthinus van Schalkwyk [2] mentioned the importance of tourism industry in the economy as "it contributes almost 9% towards the world GDP, internationally tourism accounts for 8% of global employment, making the industry a major contributor in job creation". Tshwane has the highest economic growth compared to all cities in SA [3]. The tourism industry has been revolutionized more if compared with other industries by internet in the last few decades [4], for instance in the accommodation sector, the calypso computer software (CCS) is used for operation, product management reservations and documentation. It is clear that technology enables tourism businesses to go global with interactive websites where clients are able to view prices, promotions and share experiences with other travelers [5]. It is therefore vital to investigate the technology for tourism that is utilized by the residents of Tshwane to access the tourism industry.

II. The Use of ICT in Tourism

Tourism is broad; hence, definitions of tourism vary. In most cases tourism includes time, distance, stakeholder, tourists' needs, as well as involving people travelling to, or visiting a destination. However, a comprehensive tourism definition considers all the stakeholders, such as tourists, service sector, government and the host communities [6]. All of these stakeholders expect to benefit from tourism. Although tourism is a discretionary activity, it is an economic role player locally and globally. Given the above characterization, tourism is a dynamic phenomenon and it is affected by geography, sociology, and marketing, thus making tourism very important. The size of tourism alone suggests that it generates large volumes of information to be processed and communicated [7]

Tourism is an information business; ICT's facilitates communication and access of that information that is expected to be up to date instantly. Although people still do things traditionally; ICT in tourism is pivotal and will continue to affect the growth of the tourism industry. According to [8], tourism is also an international business; therefore information needs to be communicated across different industry players which include government, suppliers, retail outlets, and consumers. It is therefore essential to look at the five sectors of the tourism industry and usage of technology within these sectors. In most instances accommodation sector gets 25-35% of the total tourist spending [9]. This indicates that

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accommodation plays an important role because the tourists' number one concern is the place of stay for the duration of their tour. In the process of deciding the place to stay or to lodge, tourists consider factors such as safety, convenience, efficiency, and budget. With ICT's being at the fingertips of tourists, it is easy for them to compare accommodation establishments and choose the one that portrays the best image possible of securing the specific market. Furthermore, there is consumer generated media (CGM) among others; an online technology that includes websites like tripadvisor.com and lonely planet's thorn tree travel which are made for posting comments about tourism facilities and services for everyone to see [9]. Additionally, geographic information systems (GIS) [10] mechanisms such as Google earth have become accessible for masses recently [11]; GISs are installed in hand held devices like cell phones and GPSs, this provides convenience for customers.

Businesses benefit from the tourism industry. There are three different types of commerce namely; business to consumer (B2C), business to business (B2B), and consumer to consumer (C2C) [12]. B2C transactions incorporate trading and delivery of commodities and services to consumers as well as the entire support information and mechanisms required for transactions. For example, a tourist buying a flight or a hotel room, from the company. Commonly in tourism, B2C takes place because it involves the sale of goods and services to the tourists. B2B transactions include trading between producers such as hotels and intermediaries who are travel agents. The last business transaction is C2C transaction which involves consumers informing other consumers on good or bad service encountered. Advantage for the seller is that e-commerce eliminates the costs involved with owning a store and reduces inventory [13]. This makes it easy for a company to operate. All different types of commerce exist within the tourism sector and utilize technology. The internet has made a lot possible and easy for both businesses and people to access the internet from anywhere in the world with mobile devices that are customized with internet access and other advanced technological features. South African tourism companies have benefited from technology.

The following is a graph indicating the access of internet in SA.

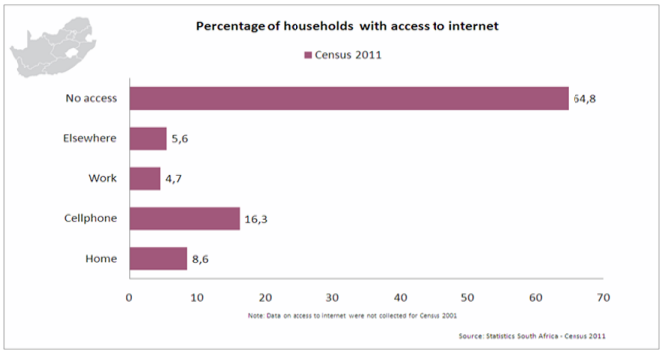


Fig. 1 Percentage of households with access to internet [16]

It is crucial to note that there has been gradual growth in terms of household with access to internet in South Africa. The issue of seeking and obtaining information is no longer a much of a problem as compared to previous years because there is an improvement in accessing information. Tourists tend to travel to desired places, no matter how far a destination is. ICT has provided a platform for people choose to travel because of ease of accessing information to make an informed decision based on the destination information and images, videos as well comments about the destination from fellow travelers. The internet has enhanced the tourism world on the part of businesses, marketing, and research.

III. Methodology

This paper was in pursuit for knowledge on technology for tourism development among Tshwane residents. Quantitative research methodology was used. Data was collected and analyzed. 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 surveys were implemented at the center of Tshwane area (Church Square). A sample was randomly selected, mostly from Tshwane residents and a few visitors from other provinces. Sampling method applied was non-probability sampling whereby each member of the Tshwane population was studied but not all of the residents had an equal chance of being included in the study because the residents were not at the area where the researcher distributed the questionnaires. The research instruments used were self-completion questionnaires, surveys and Statistical package for Social Sciences (SPSS). Marczyk, Dematteo and Festinger[14], purports that survey studies ask large numbers of people questions about their behaviors, attitudes and opinions via oral or written questionnaires.

The information on technology for tourism development was obtained through interacting with the Tshwane residents and giving them structured questionnaires to complete. Data was captured directly from the questionnaires onto an Excel spread sheet in their coded format. To eliminate mistakes all 100 questionnaires were double checked to see if the data is consistent with what is on the spread sheet. The SPSS was used to analyze the coded data. Jennings [15], mentions that it also allows generating data files, output files and graphics; printing tabular results and preparing graphs and charts. Due to the fact that the study was to find out the technology used for tourism development purposes and the Tshwane residents, bivariate analysis was be used. Bivariate analysis is indicated by scatter grams and cross tabulation, the relationship of technology and tourism were analyzed.

IV. Findings

The research paper pondered on a search for knowledge on technology for tourism development by the Tshwane residents. Fig. 2 represents the demographics of participants.

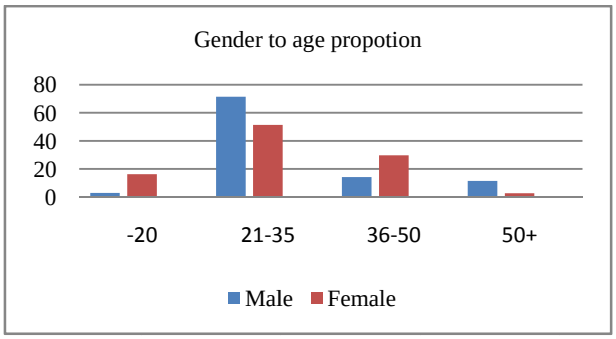


Fig. 2 Gender to Age proportion

About 71.43% of males between the aged 21-35 participated in the study, together with 11.43% males aged +50.Females aged 21-35 were participated the most because about51.35% responded, followed by 29.37% aged 36-50. Participants aged + 50 were the least participating group. Younger respondents participated more than older participants in the survey. One would argue that it is because the survey took place at the city center. The results proved positive, showing that the majority of the participants were Tshwane residents as per the sample of the study.

Fig. 3 indicates the percentage of technology conduct within the tourism industry, from the customer's point of view. About 37.68% participants indicated that they use technology to obtain information on attractions, and 14.49% stated that they never use technology to obtain information on attractions. Whilst, 34.29% respondents use technology to obtain information on transportation and 10% respondents never use technology to obtain transport information. About 28.17% participants seldom and often use technology to obtain accommodation. Only 18.31% participants mentioned that they never use technology to obtain information on accommodation. About 27.94% respondents indicated that they never use technology to obtain tourism related information whilst 26.47% respondents often use it to obtain information. Overall the most participants indicated that they use technology for attractions. On the other end, most participants indicated that they least use technology for transportation functions.

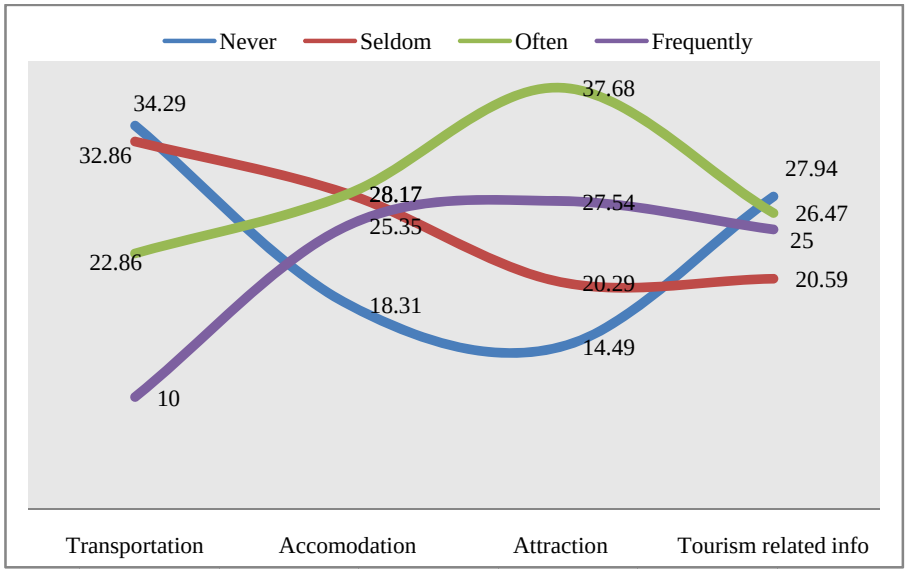


Fig. 3 Technology usages to obtain information

The survey indicated that there are more people with access to a computer than those who indicated that they do not have access to a computer. This may be due to convenience sampling of location where the survey took place (Church Square) which is located in the city of Tshwane.

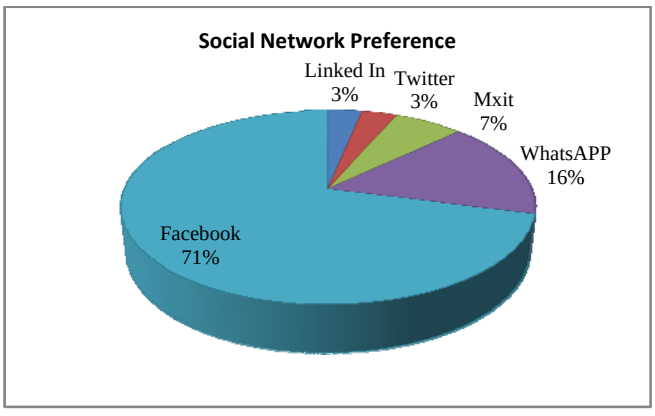


Fig. 4 Social Network Preferences

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Fig. 4 represents the preference of social networks. Most participants, 71% preferred Facebook, followed by 16% who preferred WhatsApp. There were7% of participants preferred twitter as a means of communication, 3% prefers mxit and linked in as a means of communication. The results indicated that majority of the participants were Tshwane residents as per the sample of the study. The study shows that most of the participants (73.91%) have access to technology and they do use it for the purposes of tourism. Most residents who participated in the study were aged 21-35. The respondents who participated (34.25%) indicated that they were educated and employed. The study shows that most of the participants (73.91%) have access to technology and they do use it for the purposes of tourism. Most participants indicated that they use internet for purposes of tourism which includes obtaining attraction information as people are constantly looking for recreation ideas. The respondents (71%) preferred getting tourism related information from Facebook social network because it is popular therefore most people have access to it.

V. Conclusion

Technology has certainly imprinted tourism massively; it is without a doubt that everywhere in the world technology is used to some extent, because of its effectiveness and efficiency. Technology has assisted tourism businesses to stay abreast of competition with ICT. SA is also benefitting from technology and is on the map as one of the economically performing countries in Africa. Moreover, technology and tourism are keys in job creation for SA, including the area of Tshwane. There is a lot on technology that still needs to be investigated as far as tourism benefits are concerned.

This study was conducted based on investigating the technology used by Tshwane residents for tourism development. The description of the research population, which were residents of the Tshwane metropolis and the residents' level of awareness of technology for tourism purposes were identified. The type of tourism-related technology used by residents was determined. Moreover, th reasons why residents use or do not use tourism technology were identified.

Results indicated that the SA market (both tourism suppliers and customers) have access to both computers and internet. Although ICT is not being exploited to its full potential for tourism purposes, it is promising that the usage of technology continues to grow in time. With tourism being so important in the development of SA, it affects all spheres (social, economic, environment, and political) as a result, it is imperative to exploit ICT mechanisms and the role it plays within the tourism sector. In most cases, the tourism industry utilize ICT for information dissemination by both tourism suppliers and consumers. Drawing from the study, it appears that most residents do not use technology for tourism development purposes. It is therefore recommended that further studies be conducted to investigate the level of awareness on using technology for tourism development and planning purposes.

Furthermore, initiatives from tourism organizations and government are prudent in terms of encouraging and informing the public about the usage of technology for tourism; as well as the trends contributing to the industry's success such as technology (ICT). The results indicated that social networking is a widely used form of communication; therefore tourism organizations can use ICT resources to inform tourists about tourism trends. It is then crucial that future research focus on investigating how effective social networks are in terms of getting not only Tshwane residents but also people of SA to travel within their own country; the more information they have access to, the more informed decision they will make about travelling.

References

[1] The UK Technology Education Centre [online]. Available from: http://atschool.eduweb.co.uk/trinity/watistec.html [Accessed 06/06/2012].
[2] Department of Tourism. 2012. M. Van Schalkwyk. Final declaration of the T.20 Ministers Meeting [online]. Available from: http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=27517&tid=68650 [Accessed 06/06/2012].
[3] South Africa. 2009.Tshwane Tourism. [online].Available from: http://www.tshwane.gov.za/Services/TshwaneTourism/Pages/default.aspx [Accessed on 06/06/2012].
[4] A. Sakulsureeyadej. 2011. Technology in tourism.World Tourism Organization (UNWTO) Affiliate Members AM-reports (Vol. 1, 2011) [online]. Available from http://dtxtq4w60xqpw.cloudfront.net/sites/all/files/pdf/unwtodigitalresources_volume1_techtourism_eng.pdf[Accessed 06/06/2012].
[5] F. R. David. 2011.Strategic management: concepts and cases.13th ed.Harlow, Edinburgh: Pearson.
[6] H. Keyser, 2002.Tourism development.Cape Town: Oxford.
[7] P. J. Sheldon.1997.Tourism information technology. Oxford: CAB Publishers.
[8] G. Inkpen.1998.Information technology for travel and tourism. 2nd ed.Edinburgh Gate: Pearson.
[9] D. J. Timothy. & V. B. Teye. 2009. Tourism and the lodging sector. Elsevier.
[10] M. Kennedy.2009.Introducing geographic information systems with ArcGIS: a workbook approach [Online]. 2nd Ed.Hoboken, New Jersey: Wiley & Sons.Available from:[Accessed: 26/11/2012].
[11] E. K. Cromley. & S. L. McLafferty, S.L.2012.GIS and public health [Online]. 2nd ed. New York: Gurlford Pub. Available from: http://books.google.co.za/books? [Accessed: 26/11/2012).
[12] D. Buhalis.2003.eTourism: information technology for strategic tourism management.Edinburgh Gate: Pearson.
[13] R. Goel.2007.E-commerce.USA: New Age International. Available from: http://books.google.co.za/books?id=Ap27K6v1xUC&printsec=frontcover&dq=ecommerce&hl=en&sa=X&ei=bJSzUIKCISnhAeo54CACg&ved=0CDsQ6wEwAA#v=onepage&q=ecommerce&f=false [accessed: 26/11/2012].
[14] G. Marczyk, D. Dematteo. & D. Festinger.2005.Essentials of research design and methodology.Hoboken, New Jersey: Wiley & Sons.
[15] G. Jennings.2010.Tourism Research.2nd ed. Australia: Wiley.
[16] Statistics South Africa. 2012. Census 2011. South Africa. Available from: http://www.statssa.gov.za/publications [Accessed: 01/ \05/2012].