

## Geocaching and Tourism: Treasured Similarities in South Africa

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**Abstract:** There are ongoing plans to grow the tourism industry. Development strategies offer guidelines as to how such growth might take place. Guidelines incorporate policies and targets while, at the same time, encouraging the tourism industry to remain sustainable and implement specific values. Geocaching is a real-life treasure hunting game where participants (geocachers) hide containers (geocaches) in noteworthy locations. These locations are communicated through their Global Positioning Satellite (GPS) coordinates and through clues posted on a website. Geocachers then enter the GPS coordinates into a mobile device and follow the directions to find the cache. Their success in finding the cache is logged by signing a logbook stored in the geocache (treasure chest) and recorded online. Through word-of-mouth (face-to-face and online), geocaching has grown to become one of the world's largest location-based gaming portals. In terms of growth and development, tourism and geocaching share similarities and these are the basis for this research paper. Four shared aspects were identified that relate to motive, rationale, values and environmental impact. Two research studies were conducted. The results indicate that there are similarities between geocaching and tourism in South Africa in their objectives, values and motivation for participation. The tourism industry can learn from Geocaching and vice versa.

**Key words:** Geocaching, tourism, travel, technology, sustainability, environmentally friendly

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### INTRODUCTION

Geocaching is considered a sport or an outdoor activity that is innovative, inexpensive and environmentally friendly (Peters, 2004; Schlatter and Hurd, 2005; Marcoux, 2008). The game involves GPS coordinates that are used by geocachers to find hidden containers at locations that people find interesting or beautiful. Tourism also involves travelling to beautiful locations or points of interest. Tourism, in general, involves all activities people participate in when they travel outside the area they normally live in (Tourism, 2011).

Secondary research on these two concepts shows similar characteristics. The similar characteristics motivated the researchers to gain a deeper understanding of the links between geocaching and tourism. Secondary research were conducted to obtain similarities. Primary research was conducted that involved four research objectives and two research studies.

#### Geocaching

**The history of geocaching:** The activity originated because the accuracy of GPS devices increased. A GPS device, first used in the 1980's by the Department of

Defense in America, became available for use by civilians in the 1990 Dyer, 2004. In the year 2000 the USA removed Selective Access which improved the accuracy of GPS devices from approximately 2.7-1.5 m. It is still the subject of debate whether, in fact, accuracy has instead improved from 6-1.8 m (Peters, 2004; Dyer, 2004). Companies, like Garmin, used the reduction of Selective Access to their advantage and created GPS devices that help travelers to find tourist attractions (Miller *et al.*, 2008). Dave Ulmer decided to test the accuracy of new GPS devices. He took a black bucket, filled it with videos, books, a pen and a slingshot and hid it near beaver creek in portland. The GPS coordinates of the location were posted on-line, together with an instruction that encouraged people to replace any item taken from the black bucket. Mike Teague, who found the bucket Ulmer had "hidden", started the Geocaching website in the year 2000. When the website started there were 75 geocaches listed. Today there are >3 million caches hidden in 184 countries. These caches have been found over 241 million times by approximately 3 million geocachers. The amount of geocachers makes geocaching one of the world's largest location-based gaming portals. Geocaching as an activity is only spread through word-of-mouth. Users, upon registering, must promise to uphold the ethical principles

of the game. Examples are: to not endanger any participants or non-participants, respect property rights and laws, minimise environmental damage and play the game with integrity. Game integrity refers to not damaging the cache and not making it publicly known that you are searching for a geocache.

**Geocache types:** The type of caches vary and can depend on the type of terrain where the caches are hidden. A cache can be traditional, meaning a GPS coordinate and clue are given to locate a geocache. Multi-caches involve numerous caches and a second cache's location only becomes known when the first cache is found. Puzzle caches involve puzzles and riddles that must be solved in order to find the location of the final cache. Earth caches are only found in areas associated with unique geological features. Other types of caches are: "Whereigo caches" that combine actual and virtual treasure hunting; caches that involve visiting and finding caches at the Geocaching Head Quarters and experimental "Lab Caches" that are experimental and involve numerous caches linked by themes. Lab caches are temporary and are a form of "event cache". Participants visit tourist attractions and points of interest and are rewarded with a geocache-branded gift that relates to the event. An example is visiting five breweries that have five caches. Upon logging all five caches, the participants receive a Geocache beer mug 2016. A Letterbox hybrid cache is a cache that is hidden inside a public letterbox. Certain caches are only hidden for a specific event. Caches found at an event that attracts >500 participants is called a Mega Event Cache. If the event attracts >5000 people, the cache at the event is called a "Giga Event cache". If the aim of the event is to pick up trash while looking for caches, the event is called a "CITO event" (Cache In, Trash Out).

**The geocaching process:** The type of the geocache is not the only element that differentiates different caches. Geocaches are also categorised according to the location of the cache, the size of the container, the level of difficulty involved in reaching the cache and how difficult the terrain is. Participants decide where to hide caches based on the type of cache or terrain and the location. A location's GPS coordinates are recorded on the website, together with a name for the cache, the size, terrain and clue on where to find the cache.

The information on the caches can only be found on the official geocaching website. To gain access to the caches, participants must register on the website. All geocachers who register on the geocaching website, search for a geocache by following certain steps. The first

is to determine the location. The GPS coordinates, found on the geocaching website, are then entered into a GPS device. The directions on the GPS device are followed to allow a geocacher to come within close proximity of where the geocache is hidden. Clues on the website also help to make it easier to find the cache. Once the cache is found the geocacher fills in the logbook and exchanges trinkets both are found in the cache. The last step is to log the find on the geocaching website.

Geocaches are mostly hidden at locations that people find interesting and unique. This encourages people to travel which, in turn, leads to an increase in Tourism.

**Tourism within south africa:** Travelers travel between two or more places, usually in twenty four hours or less. Holiday travel involves leisure activities (Tourism, 2011). The main reason for travelling in South Africa is for leisure purposes to visit friends and relatives and going on holiday (South Africa, 2011).

The tourism industry of South Africa assists with economic growth through job creation and contributing to the Gross Domestic Product (GDP). Aspects that hinder tourism growth are a lack of motivation for people to travel, too little time to travel, low income and a dislike for travel-related activities. South African tourism role players mention an attitude amongst South Africans of not wanting to explore their own country. Innovation and affordability form part of the mission of the tourism industry which aims to reduce the aspects that hinder internal tourism growth. Another aspect that helps to increase tourism is technology.

Technology influences how tourists obtain information on destinations and connect with fellow travelers. Technology allows for tourists to tailor-make experiences and choose different destinations. Information is obtained by sharing information via mobile devices, social media and also disseminated via e-Marketing. Easy access to technology or networks that can support it is expected by travelers and actively utilised by tourism organisations.

Other characteristics that tourism businesses are encouraged to implement are to be sustainable, responsible and eco-friendly. Affordability and short holidays are also important features of tourism (Tourism, 2011).

Together with the above characteristics, South Africa aims to instill certain values through the tourism industry. The first value is trust in relationships between all who are influenced by the tourism industry. The second value is accountability which involves all parties taking responsibility for objectives and goals. The third value is respect for cultures and heritage. The fourth value is responsible tourism which includes economic, social and

environmental sustainability. The fifth value is transparency and integrity which must be applied by all role players. The sixth value is service excellence which addresses non-tourism companies that play a role in tourism experiences. The seventh value is the constitution which must be adhered to (Tourism, 2011).

**Similarities between geocaching and tourism:** The values and characteristics discussed previously of the tourism industry are similar to those applicable to geocaching. These characteristics are necessary for the success and sustainability of both activities.

The first is environmental consciousness which is important for geocachers and the tourism industry. Geocachers are dissuaded from burying caches, thereby possibly impacting private property or the environment when hiding a cache and from hiding caches in restricted areas.

The second is the role of family. Visiting family and friends during leisure time is one of the main reasons people travel in South Africa. Geocache contents or trinkets should be appropriate for people of all ages. The third is the location of geocaches. Geocaches are hidden at diverse tourist attractions and at locations that are noteworthy. The amount of travelers who participate in tourism and geocaching is increasing. While travelling, for general purposes or to geocache, different locations and attractions are visited (Peters, 2004).

The increase in popularity and participation is the fourth similarity. Both geocaching and tourism have shown continuous growth and can involve events and organised tours (Peanuts and Pretzels, 2016; Tourism, 2011).

Technology is the fifth. Technology is utilised in tourism to communicate and share information. Geocaching also uses technology to communicate information on caches and share information with other geocachers. Information on geocaching is accessible via the geocaching website or cell phone applications. The kind of information available (location, difficulty of terrain, etc.) influences which geocaches geocachers choose to attempt to find.

Geocaching is also a free activity which accords with one of the objectives of the South African tourism industry: affordability. Other similarities between tourism and geocaching relate specifically to the values of South African tourism.

The tourism industry places high value on trust and relationships. Geocachers seek permission from property owners to hide a geocache at a location. Trust is created by, firstly, ensuring that the cache will not cause damage or harm to the property or tourist attraction and, secondly,

that each geocacher who finds a cache will replace the cache after they have found it. Accountability, integrity and responsibility combine to form a second value. It is expected that geocachers be accountable when hiding and finding caches as they are responsible for ensuring that other geocachers are able to find that cache and exchange trinkets even after the geocache has been repeatedly found. Respect for heritage and the environment and individuals that reside or are present in the area must not be negatively influenced by geocaching or tourism. Lastly, similar to the tourism industry, geocaching has rules that should be obeyed.

**Research objectives:** The main research objective was to look at the similarities between geocaching and tourism and: Investigate whether the similarities found through secondary research are confirmed through primary research. Secondary objectives were:

- To determine the extent to which geocaching motivates people to participate in tourism
- To determine whether geocachers participate in geocaching for the same reason that people travel
- To determine whether geocachers practice the same values of responsibility, accountability and integrity
- To determine whether geocaching, like tourism, is beneficial to the natural, business, social and built environment

## **MATERIALS AND METHODS**

To better understand the relationship between geocaching and tourism, primary research was conducted. One study was longitudinal and was conducted in a non-simulated environment. The other study was conducted in a more controlled and simulated environment. The two studies are discussed in detail here.

**Research study A (hiding a geocache):** A geocache was placed at a coffee shop located in an old railway station in Kleinbrak in the Western Cape. The town and coffee shop are greatly influenced by seasonality. The area of the town where the coffee shop is located, is mostly associated with non-permanent residents who have beach houses and only reside in the area during school holidays and long weekends. Peak season is during the December and April school holidays. A small, traditional geocache was hidden outside the railway station behind the sign that gave the railway station's name. The cache was monitored for two years from December 2009 until November 2011. The cache was a photo film canister that contained a log book, small pencil and trinkets (mostly

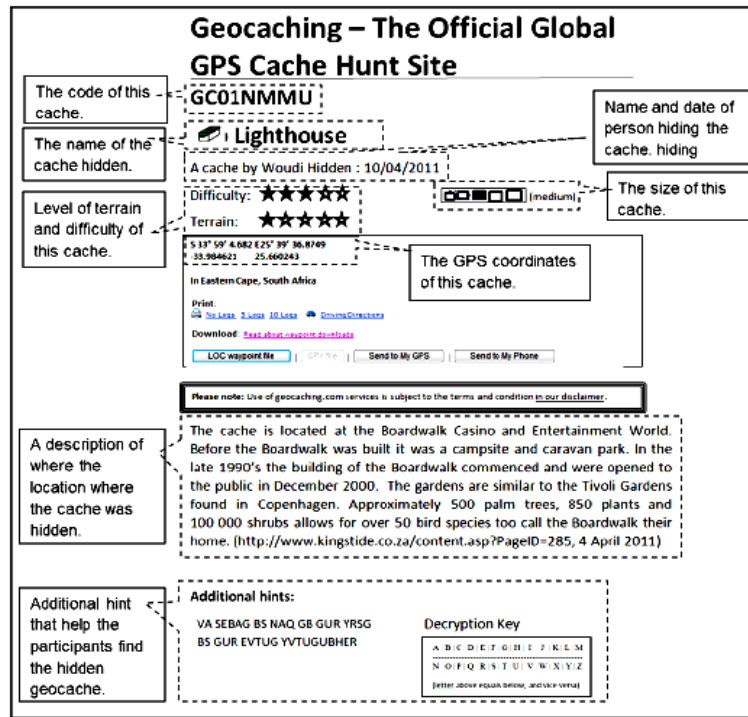


Fig. 1: Example of geocaching clue

found in Christmas crackers). The aim was to determine whether people would be willing to travel to find a geocache in a small and unknown location.

#### Research study B (introducing people to geocaching):

The management team at The Boardwalk Casino and Entertainment Center was approached and asked whether a treasure hunt could be organised on their property. Management agreed and three geocaches were hidden at three different locations. The first was hidden near the putt putt course, the second outside the ten pin bowling building and a third inside the tourist information center. Trinkets, a log book and a pen were placed in each cache. These caches were not registered on the geocache website. They were only for the purposes of the research study and were removed after the research exercise. A clue, similar to those found on the geocaching website, was created. Students from the Nelson Mandela Metropolitan University in Port Elizabeth were informed about geocaching through a lecture. Students were told a time and date they had to be at the Boardwalk; there they were handed a clue to one of the geocaching locations. Students were encouraged to sign the log book, exchange trinkets and use GPS devices if they owned one. Upon finding the cache students were asked to complete a questionnaire. The aim of the questionnaire was to determine the perceptions and experience of new

geocachers. The questionnaire involved 15 questions that relate to the geocaching experience, the physical activity experienced when geocaching and possible reasons for geocaching. In total, 132 students participated. An example of the geocache clue given to students is below: simulates what a real geocache clue may look like. Geocache clues have a code and a name. The date the cache was hidden is provided together with an indication of the size, difficulty and terrain of the geocache. GPS coordinates and the general location are provided. All geocache clues include a general description of the area or tourist location.

## RESULTS AND DISCUSSION

**Research study A (hiding a geocache):** Over the 2 years period, 46 geocachers travelled to the area for the main purpose of finding the cache. Out of the 46 geocachers, 1 geocacher knew about the coffee shop. The log book and posts on the geocaching website were analysed and it was found that 5 geocachers (11%) travelled to other areas on the same date to find more geocaches. The same amount of geocachers indicated that they were motivated to return to the location in future. The location was seen as favorable by 18 geocachers (40%) and 14 geocachers (30%) stayed and enjoyed a meal at the coffee shop. The different times of year geocachers at which found the geocache are indicated.

Table 1: Times geocache was found

Years	December	January	February	March	April	May	June	July	August	September	October	November	Total
2010	5	7	1	5	1	1	0	0	2	0	2	2	26
2011	1	2	2	4	4	0	0	0	4	0	1	2	20

In 2010 and 2011, 26 and 20 geocachers travelled to find the geocache, respectively. The table indicates that the geocache was more popular in the first four months of 2010 with 18 geocachers travelling to look for the cache. The number of geocachers increased slightly during school holiday periods, especially during the December 2010 and March/April holidays. This is also when the area is mostly visited by tourists. June and July are winter months and these saw no geocachers visiting the area.

Throughout the 2 year process, the rules and guidelines of geocaching were followed. As stated in the introduction, the rules and guidelines of geocaching are in line with those of the South African tourism industry. In hiding the cache any impact on the environment was considered. No property or any part of the natural environment was harmed by anyone who found the cache. A relationship was formed with the owner of the coffee shop. The owner, after receiving an explanation as to what geocaching is was excited about the idea of a geocache hidden on his property. Accountability, integrity and responsibility were experienced over the two years. All geocachers replaced the geocache as they had found it, completed the log book and exchanged trinkets. Responsibility was even further demonstrated when a geocacher communicated that excessive rain had caused the geocache to leak.

#### **Research study B (introducing people to geocaching):**

Research study B aimed to gain information on how those newly introduced to geocaching experienced the activity. The location, unlike that of research study A, was well known and regularly visited by 75% of the participants as it is located next to the university. The majority of participants' main reason for travelling was given as "to visit friends and relatives" (90%). Other reasons for travelling were sport (51%), visiting new cities (41%) and scenery and new attractions (35%). In total, 75% of participants stated that geocaching would motivate them to travel. The fact that the activity was free, also influenced 72% to indicate that they would possibly continue to geocache.

### **CONCLUSION**

This study identified similarities in geocaching and tourism that were the basis for the primary research conducted. The primary research consisted of two studies and the methodology of each was explained. The first objective was to determine the extent to which

geocaching motivated people to participate in tourism. Primary research has shown that existing geocachers are motivated to travel to participate in geocaching. The majority of new geocaching participants reported that geocaching would motivate them to travel and geocache. The fact that geocaching was free to participate in was a great motivator.

The second objective was to determine whether geocachers participated in geocaching for the same reasons that people travel. In South Africa the main reason to travel is to spend time with friends and relatives. In research study B, the majority of respondents indicated that visiting friends and relatives was the main reason they travel. Other popular reasons for travelling were to visit interesting places, new cities and sport. These three reasons also relate to geocaching. Geocaches are hidden in cities and places that geocachers are interested in.

The third objective was to determine the presence of responsibility, accountability and integrity. These three characteristics were observed in both research studies. Existing geocachers, over a period of 2 years, displayed the three characteristics by following the rules and guidelines of geocaching. New geocachers, over a short time period, also demonstrated these characteristics. Containers were replaced exactly as found, trinkets were exchanged and log books were filled out. In addition, existing geocachers reported when caches required maintenance.

The fourth objective was to determine sustainability in terms of the natural, business, social and built environments. In both research studies, property managers and owners were excited about having a cache on their property as these would draw additional visitors. All four caches caused no harm to the built environment or buildings and did not hinder other non-geocachers.

All four objectives were reached. To gain further insight it is suggested that different types of geocaches in different locations that vary in both size and difficulty be researched. Qualitative interviews with geocachers may help gain a deeper understanding of the motivation and self-discipline of geocachers. This may uncover further similarities between geocachers and tourists and geocaching and tourism. Further research can also be done on the impact geocaching has on other countries and contexts especially, as geocaching is an international activity. The geocaching community is mainly marketed through word-of-mouth. This makes certain research activities difficult as research must not jeopardise the integrity and secrecy of the game.

South African tourism can learn from the procedures and policies of geocaching. South African tourism should research reasons to travel that are innovative, free and not time consuming similarly to geocaching that encourage travel through free activities. Geocaching implement and inforce rules if members do not act in an accountable or responsible manner. Tourism organisations should not be the only parties responsible for sustainable and responsible tourism. Tourists should be held accountable as well and there should be systems in place that reprimand individuals and organisations that hinder the sustainable growth of tourism.

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