Social media dynamics affecting differences between online and on -site surveys: First findings from a case study in the Tricity Landscape Park, Poland

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Introduction

Managers of parks and forestshave to optimize the allocation of resources to provide new recreational infrastructure and maintain the existing one.In order to successfully managerecreationalareas and to gain realistic view on actual visitation levels as well as visitors' needs and expectations, it is necessary to find reliable and effective tools and methods for visitor data collection and analysis(Kajala et al., 2007;Cessford, Muhar, 2003). In recent years, the use of online surveys in outdoor recreation research as complement to traditional survey methods (on-site, mail and telephone surveys) has been significantly expanded. Comparability of data gathered from traditional paper interviewing and from online surveys is a subject of discourse in many fields of social science research (Namhun, Xiaojuan, Zvi, 2013; Dolnicar, Laesser, Matus, 2009; Yetter, Capaccioli, 2010). Personal interviewson-site survey and online survey may involve respondents with different sociodemographic profiles because of the different mode. Furthermore, both approaches differ in place and time of interviewing. On-site surveys take place during a trip in a forest and the online survey at a random moment while browsing the internet. In this setting other influencing factors may play a significant role. In outdoor recreation research sampling biases and the influence of social media dynamics on participation in online surveys and representativity of results have not yet been sufficiently researched.

Study area

The total area of forests owned by the State Forests of Poland is 7.6 million hectares and covers approx. 24% of the country area. The State Forests plan to develop standardized visitor monitoring procedures to improve current knowledge related to for-

est recreation. The aim of the research project is to test and evaluate various data collection methods in several pilot study areas. The focus of this paper is a comparison of on-site and online interview techniques in the Tricity Landscape Park (TLP) with the focus on differences affected by social media dynamics.The study area is situated in northern Poland in close proximity to the Baltic Sea and the three cities of Gdansk, Gdynia and Sopot, hence the name "Tricity". In 1979the majority of forests administrated by the Gdansk Forest District became a designated protected area Tricity Landscape Park(IUCN Management Category V – Protected Landscape). Currently, the landscape park comprises about20,000hectares and serves as an important destination for outdoor recreation of the inhabitants of the three cities.

Methodology

In order to explore the socio-demographic, psychographic and behavioral profile of forest visitorstwo parallel interviewing techniques have been applied: on-site interview and online survey. For the on-site interviewsthe traditional paper andpencil interview technique has been chosen. At five locations in TLP, during eight sampling days (distributed overone year) interviews based on standardized questionnaires have beenbeingconductedinautumn 2015 among randomly selected visitors. For this paper data fromthe first collection day (Oct 24)has been used for the initial analysis (N = 141).

The online survey has beenprepared usingthe LimeSurvey application.The URL link to the survey has been published viathe Gdansk Forest District homepage, local media and distributed via Facebook groups.While the online survey remained active over many weeks, response activities were always correlated to advertising actions in the media or discussion activities in social media.For this paper 621complete records were used for analysis. Statistical analysis of the collected data (on-site and online) was conducted using IBM SPSS Statistics.

Results and Discussion

Based on the first gathered data the following observations have beenmade.

Difficulties to control samples of respondents resulting from activity
of social networking websites

The URL address of the online survey was published mainly by the Gdansk Forest District (website and Facebook) as well as via local media. However, we observed active sharing of the survey link by members of Facebook groups. The biggest of thesecommunities were local bicyclists and opponents of logging in the Tricity Landscape Park. The phenomenon of sharing information by specific groups causes decrease of the respondent sample's randomness of the online survey.

Differences in respondents' sociodemographic characteristics and opinions

Both groups of respondents differ significantly in terms of gender, age, occupation status and place of residence. In terms of opinions, a lower satisfaction with the recreational infrastructure and forest managementwas observed among participants of the online survey. Particularly, answers related to perception of forest management
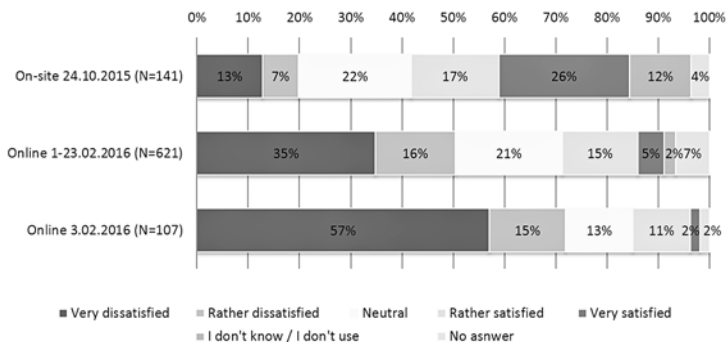
Figure 1. *Level of satisfaction with forest managemnet in theTricity Landscape Park resulting from serveys: on-site; online (all records); online (records from a day with high Facebookactivity)*

from the period of high Facebook activity (survey link sharing) were more frequently negative (Figure 1).

Opinion-forming process on-site and online

Respondents of the on-site survey had a possibility to ask questions or start a discussion on the most controversialissues. A talk with a competent person (often staff of the forest district) could help respondents to form their own opinions and a friendly atmosphere of on-site interview could cause more positive opinions. In terms of the online survey, members of Facebook groups the most interested in the subject often expressed a negative attitude towards forest management in the Tricity Landscape Park what was willingly shared via social media.

No interest in the online survey among people
who do not visit the Tricity Landscape Park

Although a set of questions addressed exclusively to people who donot visit the Tricity Landscape Park was prepared, a very smallnumber of non-visitors to the forest took part in the online survey. The reason can be a high popularity of the Tricity Landscape Park among city inhabitants. It is probable that a large part of them visited the forest at least once in their life. Furthermore, people interested in the subject played an active role in sharing the online survey link via social media, what increased a number of respondents of the online survey who visited the Tricity Landscape Park.

Conclusions

The on-site and online survey techniques are complementary tools that can be used to explore socio-demographic profiles, needs and expectations of forest visitors. Both techniques have a bias related to the mode of conducting interview. Furthermore, publishing the online survey link by local internet media allows respondents to share the information with groups of interest and to create positive or negative view of the content. However, a combination of both the on-site and the online survey brings benefits by targetingvarioussamples, thus allowingto gather a broader

spectrum of information supporting management decisions in recreational areas. When planning openly accessible online surveys it is indispensable to also provide for a monitoring of discussions in social media.

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