Convenience of achieving a software platform leading to increased travel safety for disabled persons

Alina Simona TECĂU[1]

Abstract: *The paper presents the results of a qualitative marketing research, achieved by the focus group method, one of a series of marketing researches proposed with a view to determining the extent to which it is opportune to achieve a software platform containing a database with safe tourist routes and images, accessible for disabled persons, which may tested/ visualized by virtual reality.*

Key-words: *accessible tourism, disabled persons, security in tourism, software platform, virtual reality, focus group*

1. Introduction

This research has as its primary objective to determine the extent to which it is opportune to achieve a software platform meant to help identify safe tourist routes, accessible for disabled persons. These routes would be tested/ visualized by the beneficiaries – persons with various health problems, by means of virtual reality. The designed platform would contain a database with pictures shot from places such as tourist attractions and institutions – information that may contribute to increasing the safety of the tourists with special problems. Having the list of destinations and tourist maps available, the beneficiaries (disabled persons) might test the routes they are interested in, both by using a computer or telephone with internet access, and by virtual reality, resorting to special 3D eyeglasses, such as Samsung Gear VR, edition 2015, or similar ones, along with one of the compatible mobile phone models. They use Oculus technology, or a similar one, specific to video games, managing to transpose the subjects in the virtual reality.

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[1] Transilvania University of Braşov, alina_tecau@unitbv.ro

2. Literature review

The idea of this paper started from the European Union preoccupation regarding the improvement of the disabled persons economic and social situation, by promoting their active inclusion and participation to active life (European Commission, 2016). In 2010 *The European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe* was adopted (European Commission, 2010). In European Union there are more than 80 million of people with disabilities (1 of 6 people suffers from a disability) (European Commission, 2010) and in Romania there are almost 750.000 persons with disability, more than 50% having a serious degree of disability (Autoritatea naţională pentru persoane cu dizabilităţi, 2016).

This strategy is based on the existent preoccupation at the global level and, also, on the Disability Action Plan (2004-2010) (European Commission, 2003). The strategy has 8 key actions – the first one refers to *accessibility* of goods and services and promotion of the market of assistive devices, followed by participation, equality, employment, education and training, social protection, health and external action.

Accessibility is defined as „meaning that people with disabilities have access, on an equal basis with others, to the physical environment, transportation, information and communications technologies and systems (ICT), and other facilities and services" (European Commission, 2010).

For any destination it is recommended to improve the access for people with disabilities for an easier entrance to the touristic attractions and accommodation units (Brătucu, Chiţu and Demeter 2015). For instance, a study made among tourists in one of the important destination from Romania, Brasov County, revealed that there are a significant number of problems regarding accessibility for this category of tourists (Brătucu et al., 2016).

In European Union a series of actions contributes to the improving of the disabled people accessibility, such as: Accessible tourism itineraries (competition for project financing), Studies on accessible tourism, European Awards for Accessible Tourism (European Commission, 2016). At the national level some projects tried to put in practice the theoretical concepts through instruments such as *The accessibility map* (Motivation Foundation Romania, 2016) that comprises data about accessible objective, but without correlating it with the idea of safety.

The concept that this paper is based on is "the accessible tourism", the tourism addressed to disabled persons. This concept is known in the literature. There are a lot of studies that present the theoretical concepts (Darcy and Buhalis, 2011), the connection between access, disability, ageing and tourism (Darcy and Dickson, 2009). In the same time the studies examine the potential of the touristic market for disabled persons (Bowtell, 2015). Informing the disabled persons is considered very important. Studies identify 5 interrelated components that create the premises of a good informing process: information richness and reliability, appropriate sources, communication tools, and customer-oriented services (Eichhorn et al., 2008). The

access to an accurate and reliable information is considered to be one of the 5 dimensions of accessibility to tourism in addition to access to physical features, access to service procedures, ease of access to physical and service features, upkeep of accessible physical and service features (Yeon Woo, Cole and Zhang, 2015).

3. Research design

The research was conducted among marketing specialists, by the focus group method, and it included testing the eyeglasses Samsung Gear VR.

3.1. Objectives:

- To identify the categories of people whom the marketers consider the most likely to face difficulties when making trips.
- To identify the safety issues which the marketers consider that the disabled persons or their attendants might have during a trip.
- To identify the extent to which the marketers consider it advisable to achieve a software platform leading to increased safety in tourism for disabled persons. Pursued aspects: desired features, restrictive factors, exploration and chance of success.
- To propose solutions in order to convince as many people as possible to help create this platform.

In order to conduct this study, the focus group qualitative marketing research method was used, which involved extensive discussions with two groups of students, both consisting of 22 participants.

The sampling was achieved by means of the simple random method, starting from the list of marketing graduates from *Transilvania* University of Brasov, and identifying thus 22 persons willing to participate in the research, out of whom two discussion groups of 10 and, respectively, 12 persons were formed.

The research was conducted in April 2017, in the premises of the Research-Development Institute of *Transilvania* University of Braşov, arranged according to the standard; and the discussion was mediated by a moderator and a co-moderator (co-authors of this paper).

In the framework of the focus-group, projective techniques were resorted to, such as: spontaneous association, imaginative personification, sentence completion, with a view to capturing the subtlest aspects of the researched field.

The synthesis of the information obtained within the focus-group is presented below.

4. Study results

In the framework of the group discussions, in the first phase, the identification of the aspects which the marketers believe that tourists take into account when organizing a trip; being enumerated, in turn, a tourist destination, both in Romania and abroad. According to their opinion, in the trip-planning stage, tourists have in mind: transport, accommodation, tourist spots, tourist attractions, luggage, costs, the need for a tourist guide, booking, purpose of the trip, duration, entourage, optimal period in which the journey could be made. The financial aspects or the need for the visa are mostly enumerated in case of a trip abroad.

Being asked to mention the categories of people whom they could not imagine making a trip to one of the destinations given as an example (Sibiu, Vienna, Washington), the enumerated categories included: people without financial possibilities (an answer mentioned by 14 subjects), disabled persons (11 subjects), elderly people (8 subjects), other categories including people afraid of airplane flights.

Being asked which are the categories of persons whom the persons consider the most vulnerable in terms of safety, or physical or psychical comfort during a trip, most answers mainly referred to disabled people and their attendants, to elderly people, to children, to single women and uninformed persons.

As follows, within the two group discussions, the identification of the safety-related issues which the subjects consider that a tourist might have during a trip was sought, especially from the category of the disabled persons or their attendants. The answer centralization shows that the main fear, for most subjects, is related to transportation, travel (both in terms of transport-means conditions, functioning schedule, and infrastructure; the public lighting, the lack of ramps, of asphalt markings, of street sound signals being given as an example), the lack of accommodation facilities, of access to first-aid points, to various eating places, to shopping points, including to certain tourist attractions.

Furthermore, another problem reported by subjects consists in the lack of information about all these details which should be made available to tourists, with a view to their documenting themselves before travelling to a certain place, so that they might avoid locations with a high risk of injury, lest they should face difficulties related to the accommodation unit or to other tourist attractions that disabled person might set out to visit. Some of the subjects exposed as a problem, from their experience, the fact that the accommodation offer does not meet the expectations and does not correspond to the information available on the internet, in the sense that the latter (even the photographs) do not always reflect the reality on the ground, and might mislead the potential tourists. Finally, the lack of specialized staff, trained to provide support to disabled persons (consisting in physical help, and also information, orientation adapted to their purposes) was one of the fears expressed by subjects.

In order to identify the extent to which the subjects consider that the disabled persons' problems related to travel safety can be intuited and avoided, by means of a software product, they came up with the idea of achieving a software platform for web and mobile devices, proposing safe tourist routes, accessible for the disabled persons, which may be tested/ viewed by virtual reality.

The concept was appreciated by the subjects, who believe that in the design stage of this product, as many entities from various fields should be involved, such as: NGOs, ministries, administrative-territorial units, educational establishments, accommodation units and restaurants, and who emphasize the importance of involving as many volunteers who should help create the image database.

In order to determine how young people would react to the platform, the sentence completion test was used within the focus group, which requires the subjects to complete a number of unfinished sentence with the first word or phrase that comes to their mind.

The interpretation of the results obtained in this exercise showed that the subjects expressed their desire to get involved, as well as to propose to their friends and acquaintance to willingly contribute in creating this platform; most of the participants in the discussion being convinced that the persons whom they would advance this proposal to, would be, in their turn, delighted with the idea and would accept to get involved and, moreover, they would make available for the project their financial, material resources, as well as their knowledge, time, work. In their statements, many subjects refer to the usefulness of this software product, highlighting the benefit they will bring to society by their involvement, as well as the high number of persons they will make happier.

The mode of expression itself used by the subjects in completing the sentences conveys their enthusiasm of getting involved in such actions, especially because some of them express themselves as if they were members of the team who achieves this platform, for instance: „we will definitely convince together other persons that we can do good to these people", „we should contribute together", "we should get in touch with as many disabled persons, in order to create the closest possible product to their needs".

Furthermore, one of the subjects directly expressed his interest in getting involved, leaving his phone number so as to be contacted when the platform will be achieved.

The answers received include two statements made by less confident subjects as regards their friends' willingness to get involved in such a project.

The solutions proposed by the participants in order to convince as many people as possible to contribute in creating this platform include: to make an information campaign in which the problems faced by the disabled persons while travelling should be highlighted, and thus people should be sensitized and determined to get involved. To become aware that this product is, in fact, „a

necessity for the disabled persons", „and to join forces so that everything might lead to a better and easier future for the persons with problems".

Put in the position to imagine this platform in 10 years, the subjects see it already achieved and functional, with an impressive database which persons all over the world will have access to; they see it as a real support for disabled persons; it will be accessible to whosoever in technological terms; it will be really successful; and to conclude the above, one of the subjects stated that "the number of disabled people who travel might increase in the future".

In order to find out the subjects' other interests in or unclarities about this project proposal, the role-playing technique was used, which supposed one of the subjects to play the „mayor", and the others to ask the mayor various questions, within the press conference in which this product is launched by a non-governmental organization.

Put in this position, the participants were interested in finding out how the platform would affect the people's life, and especially the disabled people's life, what influence it would have on tourism, how elaborate the database-creation process was, how the disabled persons would be notified thereof, how the platform would be promoted, to what extent the platform would help people with special needs to live o normal life.

Being asked what the initiators of this project should do, in order to convince as many people as possible to participate in creating the platform, the subjects generated numerous proposals, among which: to achieve several disabled persons' testimonials, to conduct public information campaigns, to conduct a social experiment on the issues faced by disabled persons, which might subsequently lead, among others, to a social-sensitizing spot that should be disseminated via the internet by viral marketing, to motivate the travellers to contribute with videos to the platform database, to provide incentives such as discount vouchers to certain accommodation units, to involve public figures in the promotion campaign, to organize a flash-mob attended both by volunteers and by disabled people, to make posters, leaflets, to resort to online promotion, especially via social networks.

Being asked to express in percentages their opinion on the chance of success of this project proposal, the answers received vary between 30-40% and 72%, their average being of approx. 61%. Although, from the above, the subjects provide clear signs of optimism as regards the achievement of this platform, as well as willingness to get involved, on the basis of this result, the information can be inferred that their enthusiasm is overshadowed by a certain reluctance stemmed, according to their answers in justifying the percentage granted, from the many people's lack of availability, from the lack of a legislative framework favourable for disabled people, from the selfishness characteristic of many people in today's society, who are not concerned with the common good, but with the individual good, but also from the fact that, in Romania, of our days, most disabled persons cannot afford to travel because their living standards are low.

5. Conclusions

The subjects are of the opinion that the disabled persons want to make trips and even need more than the others such experiences. They consider the platform would be helpful both in their encouragement to travel, and in their daily life, being a useful instrument to the wheelchair users, as well as to those with reduced mobility, either temporary or age-induced, in presenting the spaces accessible to them in safe conditions.

The role of testing a route in virtual reality is considered extremely important in order to verify the accessibility level and measure the safety of the proposed tourist route, insomuch as each disabled person has specific needs. In this context, they will be able to eliminate those destinations which are either inaccessible, or which might endanger a tourist with special needs. In virtual reality, (s)he may follow step by step the proposed tourist route and may assess the risk (s)he takes after his/her departure. Thus, (s)he will be able to choose the route that should not endanger his/her health, and that gives him/her the certainty of his/her safety.

The contributors to this platform could be: public institutions, travel agencies, tourist guides, tour operators, transport operators, medical units, non-profit organizations, tourists, residents etc.

The subjects understand the disabled persons' need for safety, as well as for physical and psychical safety, insomuch as they experimented, in their turn, during their travels, difficulties, inconveniences or inconsistencies between their expectations and reality. Accordingly, they consider such a software platform that should support the people with special needs from everywhere to be opportune, manifesting their desire and availability to get involved as volunteers in achieving the platform, and to attract volunteers from their friends, acquaintance, and so forth, which should contribute to the development of the database.

6. References

Autoritatea naţională pentru persoane cu dizabilităţi (National Authority for Disable Persons), 2016, [online]. Available at: <http://anpd.gov. ro/web/ statistici/ renph/> [Accesed 17 June 2016].

Bowtell, J., 2015. Assessing the value and market attractiveness of the accessible tourism industry in Europe: a focus on major travel and leisure companies. *Journal of Tourism Futures*, 1(3), pp. 203 – 222.

Brătucu, G., Chiţu, I.B. and Demeter, T., 2015. Adapting the European tourism indicators system to Braşov – tourist destination. *Bulletin of the Transilvania University of Braşov*, Vol. 8(57), Series V, No. 2, pp.157-162.

Brătucu, G., Chiţu, I.B., Dincă, G. and Ştefan, M.: Opinions of tourists regarding the accessibility for people with disabilities in the area of Braşov County.

Bulletin of the Transilvania University of Braşov, Vol. 9 (58), Series V, No. 1, pp. 73-82.

Darcy, S. and Buhalis, D., 2011. Introduction: from disabled tourists to accessible tourism. *Accessible Tourism: Concepts and Issues*, pp. 1-20.

Darcy, S. and Dickson, T., 2009. A whole-of-life approach to tourism: the case for accessible tourism experiences. *Journal of Hospitality and Tourism Management*, 16 (1), pp. 32-44.

Eichhorn, V., Miller, G., Michopoulou, E. and Buhalis, D., 2008. Enabling access to tourism through information schemes? *Annals of Tourism Research*, 35 (1), pp. 189–210.

European Commission, (2010) *European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe*, [online]. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.   do?uri=COM:2010:0636:FIN:en:PDF> [Accesed 17 June 2016].

European Commission, 2003. *Equal opportunities for people with disabilities: a European action plan (2004-2010).* Available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV:c11414> [Accesed 14 June 2016].

European Commission, 2016. *Accessible tourism,* 2016, [online]. Available at: <http://ec.europa.eu/growth/sectors/tourism/offer/accessible/index_en.htm> [Accesed 10 June 2016].

European Commission, 2016. *Persons with disabilities,* [online]. Available at: <http://ec.europa.eu/social/main.jsp?catId=1137&langId=en> [Accessed 14 June 2016].

Fundația Motivation Romania (Motivation Foundation Romania), 2016. Harta accesibilității (The accessibility map), [online]. Available at <http://www.accesibil.org/> [Accesed 10 June 2016].

Yeon Woo, P., Shu, C. and Ye, Z., 2015. Accessibility of Travel and Hospitality Services as Perceived by Travelers with Mobility Impairments. *Tourism Review International*, 19(1-2), pp. 31-42.