

INFORMATION TECHNOLOGY AND CONSUMER BEHAVIOUR IN TOURISM: STUDENT TRAVEL PLANNING BY USING THE INTERNET

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Abstract. *The increasing competitiveness in the global tourism market and the use of ubiquitous mobile connection to the Internet by young customers encourage tourism operators to invest more in e-promotion and e-resources, in order to increase their business. Accordingly, it is useful to analyse students' expectations to understand their preferences as a potential customer group. This paper presents the first step of an ongoing investigation that focuses on the tourist preferences of university students. We report and discuss the result of a survey conducted involving the students of Sport and Tourism management at the Akademii Wychowania Fizycznego im. Jerzego Kukuczki in Katowice.*

For our survey, we used "Google form tool" and "Statistica 13" software suite. The χ^2 test was used for data analysis. From our research, it emerged that the preferred means of communicating is email for female students whilst telephone for male students; for both Booking.com resulted to be the most popular tourism platform.

Keywords: *Consumer behaviour, higher education, Internet, tourism, travel agency.*

Introduction

Planning a trip does not require any more to purchase expensive guides, magazines, tourism dedicated books or maps in a bookstore. The Internet allows us to access useful applications and tools, thanks to which we can plan our stay at in the world (Alexiadis & Refanidis, 2016). Indeed, we can find more tourist proposals a travel agency can offer us. The emerging innovative online travel websites are the principal source of information for young tourists (Bhatiasevi & Yoopetch, 2015; Pabel & Prideaux, 2016).

How can the internet affect the tourist choices of young people? Indeed, the youth tourism market is growing, backpackers in particular, and, accordingly, the investigation of their travel patterns and attitudes became a research crucial point (Han, Kim, & Kiatkawsin, 2017).

To understand the tourist preferences of university students and the role of the Internet on planning a trip, it was decided to conduct a survey involving students of Sport and Tourism management at the Akademii Wychowania Fizycznego im. Jerzego Kukuczki in Katowice. The better understanding of their virtual behaviour in their search for information for tourism destinations will encourage tourism operators to invest in a proper way in e-promotion and e-resources, in order to increase their business (Schiopu, Padurean, Tala, & Nica, 2016).

An inherent element of every trip is the planning process. In the era of new media, our journey does not have to involve chaotic preparation, additional expenses and the proverbial “brick” in the backpack. With the help of a traveller come the travel website’s mobile apps (E-commerce w Polsce, 2017). Android, Apple and Windows Phone apps are common. These mobile tools can be used to search for and book travel deals and view the itinerary of upcoming or past trips. This is a fairly important category because it allows tourists to make and change travel itineraries on the way (Pesonen & Pasanen, 2017).

Six travel sites can be considered the best places to start the travel planning and customers should be able to search for a vacation by theme and also all types of accommodation. The lists below may be a good place to begin for travellers interested in a specific service.

Table 1 **Travel Sites** (own source)

	Name	Best for	Home page
1	Booking.com	Best Overall	https://www.booking.com
2	Priceline	Last-Minute Travel Deals	https://www.priceline.com/
3	Hotels.com	Lodging	https://www.hotels.com/
4	CheapTickets	Car Rentals	https://www.cheaptickets.com
5	CheapAir	Airfare	https://www.cheapair.com/
6	Expedia	Vacation Packages	https://www.expedia.com/

In recent years, the greatest successes relate to services that enable planning a trip, effective booking or the management of the image of tourism-related infrastructure in social media (Ibanez et al., 2016; Kim et al., 2015). More and more Poles are choosing to holiday in the country. According to data prepared by Travelist.pl (Nowinski, 2018), nearly 40 % of tourists choose Baltic holiday, which every year tempts by more and more innovative attractions. The Mountains are close behind (almost 30 %), and only then are the cities and forests. The most popular seaside resorts are primarily: Kołobrzeg, Międzyzdroje, Ustka and

Jastrzębia Góra. However, the most popular cities in the Polish mountains are not necessarily Zakopane, but also Krynica Zdrój, Ustrzyki Dolne, Szczyrk and Szklarska Poręba.

The e-podróżnik.pl website is one of the most used for planning domestic and foreign travel (Soroczyński, 2012) in Poland. The search engine started its functioning in March 2008 and presents data from road and railway carriers. The e-podróżnik.pl website runs a nationwide bus ticket sales system. This search engine has been integrated with an app that can be used off line. The last update was done on 19 December 2017 and the Current Version, on 8 January 2018, is 1.2 and requires minimum Android 2.3. The app is offered by Teroplan S. A.

In the beginning of January 2018, up to 15,373 people had downloaded the application that is compatible with all mobile devices (Soroczyński, 2012). The official mobile app of the e-podroznik.pl website can be downloaded from google play. The App offers the possibility to search through the connections of over 600 Polish carriers [Trains, coaches and city public transport]. Find the best way to travel and buy tickets.

The following features and functions can be found in this application:

- Search for door-to-door connections [from address to address].
- Integrates long-distance and local public transport.
- Offers tickets for selected connections, including combined tickets.
- Use the navigation on the go.
- Plan journeys by public transport in the Czech Republic and Germany.

The main characteristics can be summarised:

- It is completely free.
- It has all the features of the web version of e-podroznik.pl.
- It saves recent searches and favourite routes.
- Integration of the account in the application with the account in the web version of e-podroznik.pl.
- Support for the sale of tickets without an identity document.
- Support for the promotional ticket fares.

Methodology

The study involved 90 female and 64 male students - Management Faculty students at the Academy of Physical Education. J. Kukuczka in Katowice. Average age: 23.5; standard deviation: 3.16. The research was conducted at the turn of May and June 2017 using Google forms. Statistica 13.1 package from Dell Inc. was used for statistical analysis.

The research sample consisted of 16 % of rural population, 32 % of small towns' inhabitants of and more than half of inhabitants living in towns with more than a 100 thousand population.

For the survey purposes, the Google form tool was used to create an online questionnaire, and then an online survey was conducted by means of hyperlinks. The results available through the Google sheets have been transferred to Statistica 13 of StatSoft, Inc.. Single-choice closed questions and hierarchical questions were used in the questionnaire. For data analysis, descriptive statistics and quantitative techniques (Little 2013) were used. To verify the hypothesis that two qualitative features in a population are independent, the χ^2 test was used to compare the observed frequencies with the expected frequencies.

$$\chi^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E_i} \quad (1)$$

where:

O_i = the number of observations of type i

E_i = the expected number of observations of type i

Also, the test U-Manna-Whitney was used, which is a non-parametric equivalent of Student's t-tests:

$$Z = \frac{R_1 - R_2 - (n_1 - n_2)(n+1)/2}{\sqrt{n_1 n_2 (n+1)/3}} \quad (2)$$

where:

R_1 means the sum of the rankings awarded to the values of the first sample.

R_2 is the sum of the ranks given to the values of the second sample.

n means the total number of observations ($n = n_1 + n_2$).

Research results

From our research, it emerged that the Internet is not only useful in planning a trip but also during and after the trip. In addition, to tracking news, receiving e-mails and notifications from Facebook, access to the web is useful for acquiring information necessary for travel and access to information on cloud computing and later to add new private information on social media. Tourists are able to check the weather forecast, timetables, look at services with maps. Having access to the Internet while traveling, tourists can change their accommodation reservations, buy rides, and keep in touch with their parents or friends. Connecting via Skype is cheaper than a phone, and on the Internet you cannot just send

e-mails, but also update the blog or Facebook, and in their way to report on the journey.

To understand better the role of the Internet while planning a trip by students, it was decided to find out the time the target group spent on the Internet outside of work or school per week. The aim is to have a better understanding of their virtual behaviour in their free time. Only 5 % of the researched group indicated that spent less than one hour. The largest number of respondents (42 %) used the Internet for at least 6 hours. This shows how important the Internet has become in recent years for our students.

In the question about the usefulness of the Internet for searching information about trip planning, searching for interesting tourist services [scale from 1 to 5 where 1 is not useful at all and 5 is very useful], - 98 % of the respondents indicated this usefulness, and the majority of them (68 %) pointed the highest degree. Such results are not surprising at all. The travel industry has very quickly begun to use the opportunities connected with the global network, and several dozen percent of e-commerce value relates to the tourism.

More diverse results we obtained in relation to the question about the specific behaviour of the respondents. In the question "Please rate how much you use the Internet to find interesting travel services," where 1 meant - "I do not use it at all", and 5 - "I use only the Internet ", 2 % of the respondents showed themselves as those who (using contemporary language) ostentatiously did not want to use the capabilities of the global network. In contrast, 37 % of the respondents used only the Internet for these purposes. The largest group (40 %) also appreciated the Internet's ability to find the interesting tourist services.

The results of the question about the need for using the Internet in a travel company, in comparison with the previous responses, should not be surprising. Nearly three quarters of the respondents (74 %) rated this need the highest, another 24 % indicated 4. Only 2 % chose option 3 on a five-point scale.

In the next points, the survey focused on the popularity of particular communication channels between the customer and the tourist company.

Although e-mail as a communication option is not the one of the fastest, it is still a very popular channel. Probably because just the electronic letter gives some sense of security that something is written "black on white". 83 % of the respondents stated that e-mail was needed or very needed. More than half of the respondents, 57 % rated this channel the highest.

However, less useful, in the respondents' opinion, is the discussion group on the company's website. Only 17 % indicated it as very important; 27 % as important and the largest – 37 % group - recognized that it was neither very important nor useless at all. To some extent, it is a shame because the discussion group could be something like FAQ or a dynamically growing knowledge base connected with company activities.

Chat on the company website was similarly evaluated. In this case, 17 % also thought that this channel was very important, 26 % rated its importance at 4 and 34 % at 3 on a scale from 1 to 5. It should be added that serious players in the banking market often use this communication channel with their customers.

The so-called social media has a great impact on the contemporary youth. Because the company's fanpage on the social portal was rated as a very important communication channel between the company and customer. Nearly half of the respondents (47 %) evaluated the fanpage at 5, another 31 % at 4. Only 3 % believed that the fanpage was not needed in the travel company.

On this occasion, it should be noted that the fanpage rating differed statistically the most from all the channels depending on gender ($Z = 2.914$ at $p=0.0036$): 56.7 % women and 33.3 % men described this means of communication as very important.

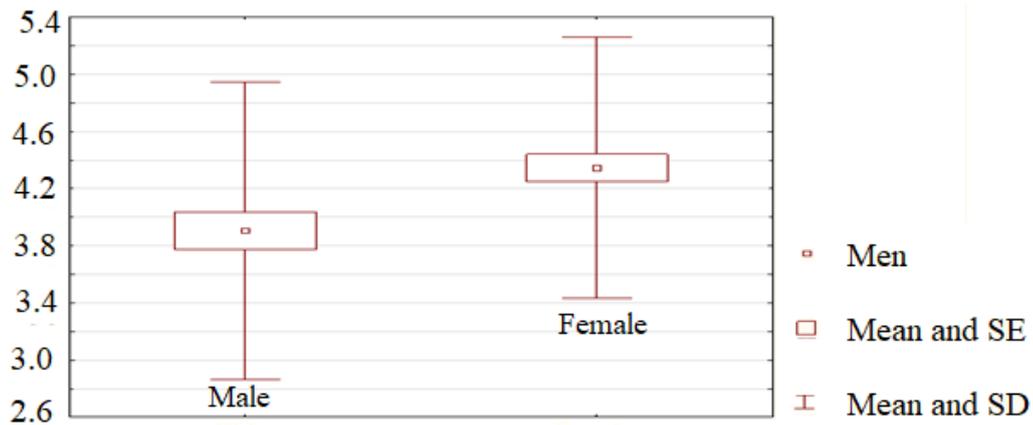


Figure 1. **Gender fanpage rating** (own source)

Figure 1 shows the average obtained from the answers of women and men [central point] and the average \pm standard error [box] and the average \pm standard deviation [whiskers]. Interestingly – differences in the assessment of the usefulness of social media can also be seen in terms of age. Dividing the studied population into two groups: younger [up to 22 years old] and older [at least 23 years old], statistically significant differences can also be noticed [$Z = 1.95$ $p = 0.05$]. The younger group appreciated the role of a fanpage in a company and client communication.



Figure 2. Age fanpage rating (own source)

Figure 2 shows the average obtained from the answers of younger and older respondents [central point] and the average \pm standard error [box] and the average \pm standard deviation [whiskers].

The fact that e-mail communication is not interactive communication does not mean that customers do not expect a quick response. More than half of the respondents stated that they should receive the answer for their questions within 12 hours. Another 40 % expected answers up to 24 hours. So only a few percent did not pay attention to the speed of communication.

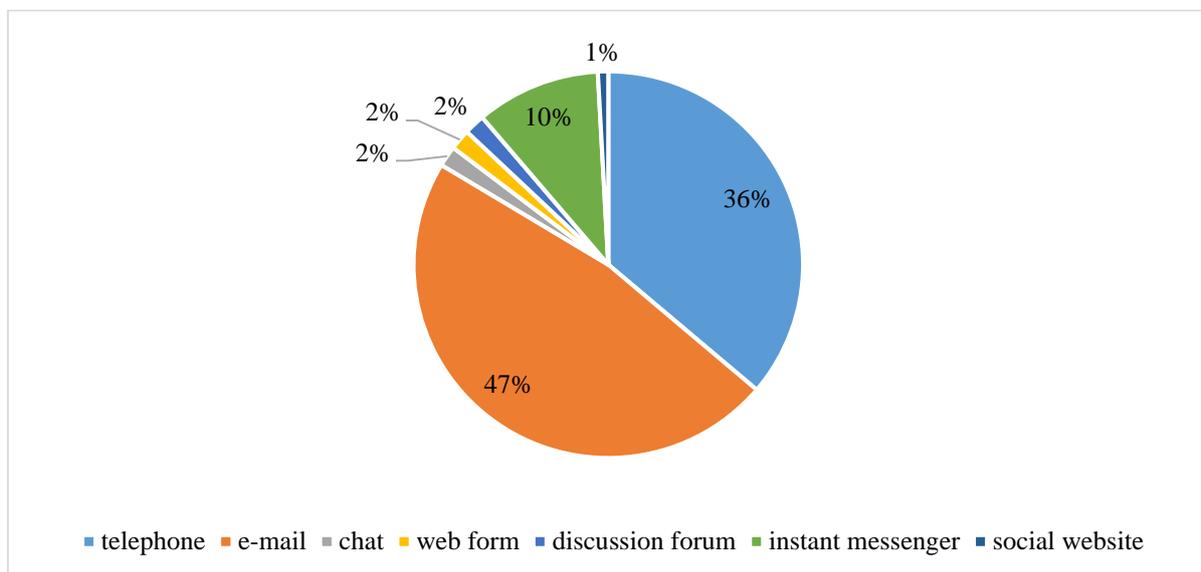


Figure 3. Interactive communication, % (own source)

The answers to the question about the favourite communication channel brought very interesting data.

“Specify, taking into account such a communication channels as: e-mail, telephone, a web form, instant messaging, a shop discussion forum; what would be your favourite way of communicating with your company?” Nearly half of the respondents (47 %) identified email as their favourite communication channel with the company. Over one third (36 %) chose the phone, and 10 % chose an instant messenger.

For years, email marketing has also related to the electronic mail. Many people have defined it simply as a spam. Despite the legal restrictions that come down to the fact that it is not permissible to send the unsolicited information electronically, anyway the customers still receive the advertising. Reality, however, is not so bad. The answers to the question about the frequency of receiving tourist advertising were as follows. The largest group (42 %) stated that they received such mails every few days. Almost one third (32 %) was of the opinion that every few weeks, 14 % said that at least 1 advertisement per day, while 12 % indicated that they did not get any.

Although many people treat all marketing activities as spam and throw them off without reading the content (54 %), however, there is a quite large group of respondents (38 %) who were interested in the content and 5 % were engaged enough to search on the Internet the advertised tourist service. Of the surveyed people, 3 % read selected emails if they were coming in the period when they made the travel decisions.

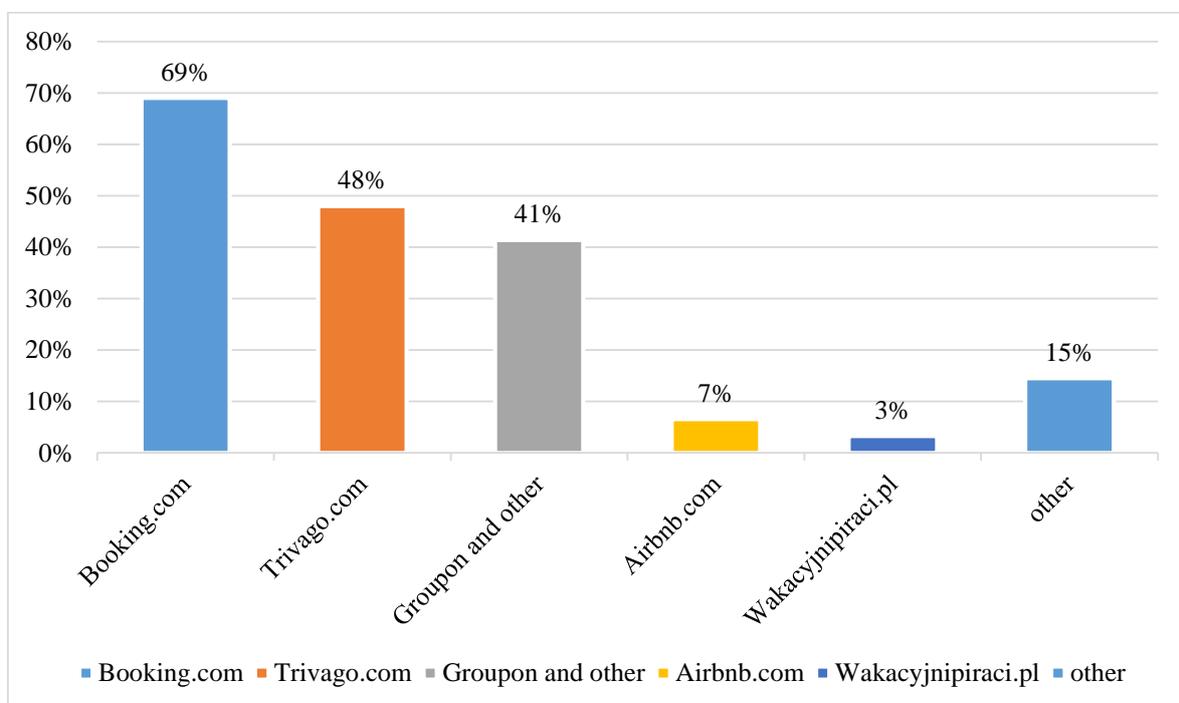


Figure 4. **Travel metasearch engine, %** (own source)

Obviously, the interesting issue is also the questions of the popularity of particular tourist portals. In the question of multiple choice “Which Internet services do you use to select the tourist services?”, there was the possibility to choose such options as Trivago.com, Booking.com, Groupon and the other group shopping, and another. It turned out that the most popular service during the survey period was Booking.com, which was indicated by 69 % of the respondents, 48 % of the surveyed chose Trivago.com, while less than 41 % indicated Groupon and similar. Much less popular (7 %), but only entering the Polish market, is Airbnb and Holidaypattern.pl (3 %). The other portals that already had only single indications included HRS, Itaka, Travelplanet, e-lodging, Fly4free, Esky, or Tripadvisor.

Conclusion

Taking into account the answers broken down by gender, we can notice a similar structure of these in assessing the suitability of such communication channels on the client's line and a tourist company as a discussion group and chat. However, there are important differences in the case of e-mail and fanpage ratings. Almost 1/5 more women than men defined e-mail as a very important means of communication, and in the case of the fanpage, the difference was even greater [56.7 % female and 33.3 % male]. Statistically significant differences between the sexes were confirmed by the test U Manna-Whitney – for email $Z = 2.797$ at $p = 0.0051$, and for the fanpage $Z = 2.914$ at $p=0.0036$. There were also differences between a group of older and younger people. Younger respondents paid much more attention to social media.

Generally speaking, e-mail is a favourite means of communicating with a tourist company for women. More than half (54 %) the respondents identified it first. For a change, men were equally fond of the above method of communicating via the phone (39.5 %).

The popularity of websites for women and men is similar. The most popular service among women and men is booking.com. However, this portal was chosen by 57 % men and up to 77 % women. The other website is trivago.com: 47 % men and 48 % women.

Differences in the perception of websites are also visible in other studies. As to the question about the names of websites (spontaneous knowledge of up to 3 websites) related to online shopping, the first two websites had a similar number of responses: Allegro was mentioned by 73 % female and 69 % men.

Intensive changes in consumers' behaviour regarding tourism make us closely watch trends related to what should also be reflected in future research related to this subject.

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