Environmental Education of Tourists for Sustainable Tourism Development

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Abstract
In line with the concept of sustainable development, the paper deals with the issue of environmental education and training to increase the awareness of tourism participants of their own responsibility for the practical implementation of sustainable tourism. The aim is to map the behavior of tourism participants and to propose some sustainable behavior principles in the form of a miniguide. The motto of the miniguide is not to simply see travel as just fun, or passive source of information, but as an incentive to learn about nature, culture and customs of local people, to promote and deepen language and other skills, including active protection of the environment. The miniguide might also be an incentive to sustainable tourism development. An important aspect of putting the principles of sustainability into practice is to publish and disseminate these principles so that they become freely available to the general public. That may be through information materials, educational signs, social networks, etc. Spreading awareness of the need to protect nature and the countryside will help to make people aware of their own responsibility for our common future.

Keywords
environmental education, environmental protection, sustainable development, sustainable tourism

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Introduction

Society orientation towards sustainable development (SD) and a knowledge-based economy results in increased demand on a systemic approach to environmental issues. See, for example, projects of the European Environment Agency (EEA). Environmental care along with planned and targeted environmental protection have been a major part of many strategies. It has also been one of the basic conditions for the development of a sustainable economy (Miškolci, 2013). In the context of sustainable development strategies, the issue of protection of the environment, individual ecosystems, and biodiversity has been among the main priorities and objectives of national strategic documents (see e.g. Ministry of the Environment, 2021; Government of the Czech Republic, 2010). These constantly emphasize that additional development of society is closely linked to the ability to maintain the environment in a state that will ensure needs of future generations.

In order to ensure sustainability, the role of education is growing. That is evidenced by incorporation of sustainability education in the UN Sustainable Development Goals (SDGs). The SDGs represent a global agenda to promote sustainable development for the presence and coming years (2015-2030). Its 4th goal is to ensure quality of education and promote lifelong learning for all (UN, 2015).

The paper thus reacts to the current trend where issues of sustainability and education are applied to tourism. Sustainable development, sustainable behavior and sustainable actions appear in many forms of sustainable tourism. Education and training in economic, socio-cultural and especially environmental responsibility is a necessity because nature and the environment are important components of tourism and also represent prerequisites for further development of tourism.

Theoretical basis

As mentioned in the introduction, the process of ensuring sustainable development is closely related to the state of environmental awareness and education of the human population. It is also related to environmental behavior and action. Thus, environmental education, training and awareness is one of the highest priorities of the Czech Government (Ministry of the Environment, 2015). Additionally, the Czech National Agency for International Education and Research, under the name of the House of Foreign Cooperation (Dům zahraniční spolupráce, DZS), considers education as one of the basic tools to ensure sustainable development (DZS, 2021a).

The same is true for education and training in tourism, where the issue of environmental protection in travel and leisure is becoming increasingly important and may be perceived as current trend. This has led to the emergence of the concept of sustainable tourism (ST), which combines travel with nature conservation, biodiversity preservation, respect for local conditions and residents. The demand for sustainability in tourism also requires changes in business strategies of many companies. While in the past the main objective was economic benefit, currently the emphasis is on the balance at all three pillars of sustainable development, i.e. stable economic growth (economic sustainability), social development of society (socio-cultural sustainability) and environment protection (environmental sustainability) - see e.g.

Boado (2023), Dodds and Holmes (2023); Leaders international (2023), Pásková (2014), UNEP and UNWTO (2005), Závodná (2015), Zelenka et al. (2013).

When we talk on the society focus on sustainable development, tourism is expected to help protect natural heritage and make optimal use of environmental resources as a prerequisite for tourism development. It is also expected to respect local communities, preservation of their cultural heritage, traditional values and lifestyle. At the same time, it is about ensuring that economic benefits are fairly distributed among tourism actors (Ryglová et al., 2011). This indicates that all activities related to tourism should be carried out to promote its positive impacts and minimize negative ones in terms of long-term sustainability. Application of sustainable tourism is emphasized particularly in protected areas where the main focus of tourism development is to optimize its impacts in relation to economic benefits, protect natural and cultural heritage and improve the quality of life of local people, including visitors´ experience quality (Zelenka et al., 2013).

According to Závodná (2015), the sustainability of tourism development should involve all stakeholders, i.e. tourism entrepreneurs, institutions, destination managers, visitors, and local residents. Summarizing the above, it can be concluded that if tourism is to contribute to the sustainable development of society, it should mainly meet the following sustainability requirements expressed in terms of benefits (see Table 1).

Besides sustainable tourism there is increased public interest in social responsibility, which relates to the concept of sustainable development. Corporate Social Responsibility (CSR) integrates social and environmental issues into daily corporate processes and interaction with stakeholders (see e.g. de Grosbois, 2012; Font et al., 2012; Lund-Durlacher, 2015; Thi et al., 2023). Interrelation between sustainability and social responsibility in tourism can be found, for example, in the work of Pásková and Zelenka (2018). The authors claim that the concept of sustainable tourism is focused on tourism impacts and appropriate procedures to optimize them, while the concept of social responsibility in tourism focuses on the attitudes and behaviors of individual actors in tourism.

According to Pásková and Zelenka (2018, p. 64), the three primary dimensions of social responsibility (i.e. economic, socio-cultural and environmental) are also relevant and in applied in tourism. As the authors state, *"if social responsibility is not sufficiently applied in tourism, many undesirable effects may occur in tourism destinations"*, in particular, environmental degradation leading to the reduction in the attractiveness of the destination and demand for it. At the same time a negative multiplier effect to other sectors operating in the destination is manifested. Ryglová et al. (2011) also talk about the interconnection between sustainable tourism and social responsibility, especially with regard to the application of similar principles.

According to Pásková and Zelenka (2018), dealing with responsibility in tourism is similar to other sectors, while in practice the emphasis is laid mainly on the environmental issues. Such environmental dimension of social responsibility is predominantly examined in relation to tourism service providers and visitors, as these play a significant role in optimizing the impacts of tourism on

the environment (see, for example, research of Aman et al., 2021; Han et al., 2016; Huang et al., 2014; Chen, 2015; Lee et al., 2013; Porto et al., 2022; Ting et al., 2019).

Table 1 Specifics of tourism benefits in relation to sustainable development (SD) (Source: authors´ own compilation using Zelenka et al., 2013)

Pillar of SD	Type of tourism benefits	Examples
Economic	Prosperous local economy	Ensuring the economic prosperity of the locality (tax revenue, inflow of the foreign capital, development of the international relations) Employment, increase of income and living standards of residents Better use of local resources and products Stimulating of the crafts development, contributing to the production of local products and services Reducing the economic and social vulnerability (through the diversification of economic activities or multifunctional agriculture in the case of agritourism) Availability of education, learning new skills Inflow of funds for destination management
Social	Quality of life	Quality of housing Safety (an important aspect for residents and visitors) Improving the appearance of municipalities, improving the public infrastructure (e.g. transport accessibility, public transport – efforts to reduce the burden on the environment in the locality) Increasing the level of public services Increasing the level of residents and visitors´ education Development of culture, arts and crafts (revival of folklore, local traditions, extension of the social and cultural contacts) Loyalty and pride on belonging to the locality and community
Environmental	Responsible attitude towards the environment	Effective use of the natural, cultural and historical potential of the locality Investment to the protection of the natural and cultural heritage Support of science and research Application of "good practice" Support of environmental education of visitors, residents and other actors Maintaining the quality of the environment in connection with the so-called critical number of visitors (carrying capacity of the territory) Conversation of biodiversity, genius loci, etc.

Note: Three pillars of sustainable development (SD) are: economic sustainable development (prosperity, well-being, employment, productivity etc.); social sustainable development (quality of life, learning, social nets, safety, self-government, health, justice etc.); environmental sustainable protection (environment stability and biodiversity).

As for visitors, there is the term 'green' customer used in literature. It first appeared in the late 1980s and early 1990s when environmental issues became a significant social and political issue (e.g.

Elkington et al., 1990; Charter, 1992). According to Závodná (2015), green or also responsible tourists behave sustainably and require this behavior also from companies offering tourism services. Any tourism participant can become a green tourist, however, he or she should not be forced to behave responsibly, but instead should feel a sense of satisfaction from such behavior. Horner and Swarbrooke (2003) talk about shades of green customers who take different attitudes towards environmental issues. At one extreme there are 'dark green' customers for whom sustainability is a lifestyle and they are willing to pay even higher prices for so-called green products. On the other hand, 'light green' customers are only interested in certain sustainability issues, and often only as long as these brings certain benefits in return.

However, some research focusing on the environmental behavior of tourism participants show discrepancy between tourism participants' positive attitudes towards sustainable tourism (i.e. their environmental orientation and intended environmental commitment) and actual behavior associated with environmentally responsible travel (e.g. Budeanu, 2007; Gonda & Ratz, 2023; Han, 2015). For this reason, it is recommended to raise awareness and promote motivation and responsibility of tourism participants to implement sustainable tourism into practice (see e.g. Constantin et al., 2013; Damijanič et al., 2023; D´Souza et al. 2020; Gordi & Roig, 2023; Chen & Peng, 2012).

In this respect we may mention the book "Education for Sustainability in Tourism: A handbook of Processes, Resources, and Strategies" by Moscardo and Benckendorff (2015), in which tourism is considered an important tool supporting public education in sustainability. For the application of the principles of sustainability, which according to the authors is a dominant topic in practice in tourism, more and more education is necessary for all tourism stakeholders. The book is therefore dedicated to systematic sustainability education, not only from the scientific point of view, but also from the pedagogical one. The book is divided into four parts, in which the authors deal with knowledge issues, ethics, social responsibility, education in non-institutional environment, including community and visitor learning in destinations. As the conclusion, the authors illustrate the use of different approaches to the evaluation of sustainability education in tourism. This is the first book by leading scholars to cover all aspects of sustainable education.

We can also mention the international conference entitled "What does sustainability mean for universities", which took place in September 2005 at the Charles University in Prague. The conference was particularly intended to contribute to the launch of the *UN Decade of Education for Sustainable Development* at Czech universities with the aim of emphasizing the role of universities in the application of the topic of sustainability in teaching, research and cooperation in practice. The proceeding of the conference is entitled "Sustainability at universities in the Czech Republic: What are the possibilities"(Dlouhý & Dlouhá, 2005). It contains about 30 papers in which educational programs and research trends at Czech as well as some other foreign universities are described.

Managing of universities towards sustainability is also outlined, with an emphasis on environmental education and research.

The issue of education is also closely linked to competencies. Competencies in tourism, their development and models can be found in publicly available literature, for example, in Agut and Grau (2002), Bharwani and Talib (2017), Cerovic and Stanisic (2018), Cizel et al. (2007), Chen et al. (2022), Kay and Rusette (2000), Muizu and Yudomartono (2016), Temizkan and Yabanci (2017), Watson et al. (2004), Wedad et al. (2021) etc.

Methodology

The authors performed tourist sustainability research to propose principles of sustainable behavior. The research was carried out as an analysis of available information sources, and also questionnaire survey. The research methodology was based on the procedure of Peffers et al. (2007). It consisted of the following six steps:

1. Problem identification.
2. Definition of the objectives to be addressed in theoretical level.
3. Design and development.
4. Demonstration.
5. Evaluation.
6. Communication.

Due to the complexity of developing coherent principles of sustainable travel behavior that would have practical application in the tourism industry, the first four steps described above are covered in this paper:

Ad1) Problem identification

As mentioned, the concept of social responsibility addresses attitudes and behavior of individual actors to ensure the sustainability in tourism. Environmental responsibility of visitors is the most common research topic (e.g. Han & Yoon, 2015; Han et al., 2011; Chen & Tung, 2014; Mehta & Karia, 2020; Wang et al., 2023; Yu & Liu, 2021). Some research also shows that there is often a discrepancy between the plan and actual behavior of tourism participants (e.g. Budeanu, 2007). Based on these findings, our research problem was set: Do tourism participants identify themselves with sustainability principles and put them into practice in their travel?

Ad2) Goals setting

The main goal of the research was to map sustainability-related behavior of tourism participants and propose a set of recommendations for responsible travel behavior, i.e. provide a sort

of a sustainable/green travel mini-guide. Additionally, the research should assess whether respondents studying tourism are more responsible when travel than respondents studying another field of study.

Ad3) Proposal and development

The research was carried out at the beginning of 2023 on the analysis of available information sources and also a questionnaire survey. The following research questions have been laid:

- To what extent respondents gain knowledge about the destination?
- How do respondents choose their transport to and from the destination?
- How do respondents select services provided at the destination (accommodation, catering, guiding, leisure services, etc.)?
- Are respondents responsible towards the natural and cultural heritage in the destination?
- Is sustainability in travel most often associated with environmental issues?

Literature on tourism sustainability has been studied prior to mini-guide design. These were sources mentioned above, or literature on leading sustainability into practice, so-called "good practice", such as DZS, 2021b; MAS český sever, 2021; Sedláček, 2018 etc.

The primary data was also obtained through questionnaire survey among university students from the Faculty of Education, University of Hradec Králové (FE, UHK). The first group of respondents were bachelor´s students of tourism, the second group of respondents were students of master´s studies in social fields. A total of 51 respondents was targeted, of which 20 respondents were tourism students. This group of respondents was selected due to easy availability (the survey took place during classes at FE, UHK). Also, the researchers aimed to compare, whether students in the field of tourism can practically implement sustainability principles which they know from their classes, in their travel. Since the questionnaires were handed out in person as hard copies, the return rate and also the evaluability was 100%.

The questionnaire, which took about 15 minutes to complete, contained a total of 12 questions, including person identification questions. The questionnaire mapped the respondents' behavior before, during and after the trip. In line with the primary principles of sustainability, questions focused on economic, social and environmental issues in line with the research questions. The questionnaire included questions such as: whether the respondent familiarizes himself/herself with the destination before the trip and if so, then how, whether he/she acquires new equipment before each trip, by which means of transport he/she travels most often, what type of accommodation he/she uses most often, whether he/she uses services or products offered by local people, whether he/she takes away "souvenirs" in the form of natural resources, whether he/she learns foreign languages or the language of the residents. In addition to these questions, respondents were asked to

express themselves on what other 'sustainable' activities they undertake as part of their travel and why they consider themselves to be a 'sustainable traveler', if any.

In order to measure statistical dependence of variables measured in the questionnaire and to determine a "more sustainable" attitude towards travel, Pearson's correlation coefficient (r) has been used. The coefficient measures the strength of the relationship between two variables, such as 'very weak' (r = 0.00-0.19), 'weak' (r = 0.20-0.39), 'moderate' (r = 0.40-0.59), 'strong' (r = 0.60-0.79) and 'very strong' (r = 0.80-1.00). The coefficient also measures the type of relationship between the two variables (positive or negative). Positive correlations mean that the two variables move in the same direction (direct dependence). Negative correlations mean that one variable increases, and the other decreases (indirect dependence). Zero means that there is no correlation (independence of the two variables).

Based on the results of the questionnaire survey and literature analysis, a mini-guide to sustainable travel was created. It contains the principles of sustainable behavior of the tourism participants, specifically how participants should behave properly before the trip, during the trip and after returning.

Ad4-6) Practical use of the proposed principles, its evaluation and communication

These stages of the research work will be focused on the verification of proposed principles in practice. It seems the most appropriate to carry out further extensive survey focused on participants in different types of tourism destinations (e.g. urban destinations, mountains, rural, but may also involve coastal areas, etc.). Further useful information will be obtained by interviewing tourism subjects, e.g. operators of accommodation, catering, cultural and educational, sports, entertainment and other facilities. The survey will therefore cover not only demand for services but also target services offered.

Results

The results of research conducted through a questionnaire survey of 51 university students, showed that the vast majority (92%) of respondents had travelled in previous two years. Some 96% of respondents prepare themselves about the selected destination before travel, most often by looking up information such as geographic information, places to visit, culture, etc. (64%), learn local language or favorite phrases (16%), buy maps (8%), guidebooks or other sources (7%) - see Table 2.

Table 2 Methods of familiarization respondents with the tourism destination (Source: questionnaire research results)

No.	Item	number	%
1.	Finding information about destination	33	64,4
2.	Learning languages	8	16,4
3.	Obtaining a map	4	8,2
4.	Purchase bedecker (guidebook)	3	6,8
5.	Finding prices	2	2,7
6.	Video viewing	1	1,5
	Total	**51**	**100**

The most frequent means of transport used by respondents is a car (53%), followed by a plane (26%). Only 21% of respondents travel by public transport, such as train, or bus. When asked what type of accommodation respondents used when travel, the most frequently mentioned was a hotel (39%), followed by a guesthouse (31%) and Airbnb (16%). Campsites, hostels, caravans and private accommodation are used in only a few percent of cases. The vast majority of respondents (67%) do not purchase new equipment (e.g. swimwear, camping gear, etc.) before travel. The most respondents prefer to eat at the destination (72%) and use services offered (71%). In contrast, only 22% of respondents want to speak the language of the local people when travel. But also 29% collect and take away souvenirs of natural resources (pebbles, sand, plants, etc.). When asked if they would describe themselves as a "sustainable traveler", 94% of respondents answered "yes" or "rather yes". Sustainable activities that respondents undertake before, during or after returning from a trip include waste recycling, travel by public transport, minimizing food waste, using disposable packaging, walking, etc. (Figure 1).

Statistical calculations using Person's correlation coefficient showed (Table 3) that people having lower level of education self-identify as travel more sustainably ($r = - 0.16$). There is a very weak negative correlation, where the first variable (education) tends to decrease, while the second variable (more environmentally friendly when travel) increases. The correlation between the age and environmentally friendly traveler classification is also very weak ($r = 0.11$), meaning that there is minimal correlation between higher age and more sustainable travelers. Surprisingly, the correlation between education level and attitude towards sustainable travel is only slightly negative. The lower the respondent education, the stronger there is his/her attitude towards sustainable travel ($r = - 0.18$). This indicates that tourism students who are studying bachelor´s degree behave more responsibly when travel. This was also confirmed when the relationship between the field of study and attitudes towards sustainable travel was investigated, which showed that respondents studying tourism are more sustainable with a very weak positive correlation ($r = 0.14$). The strongest correlation is between age and attitudes towards sustainable travel where there is a negative correlation coefficient ($r = - 0.19$). This means that the younger the respondent, the more sustainable attitude is towards travel.

Figure 1 Activities contributing to sustainable travel behavior
(Source: questionnaire research results)

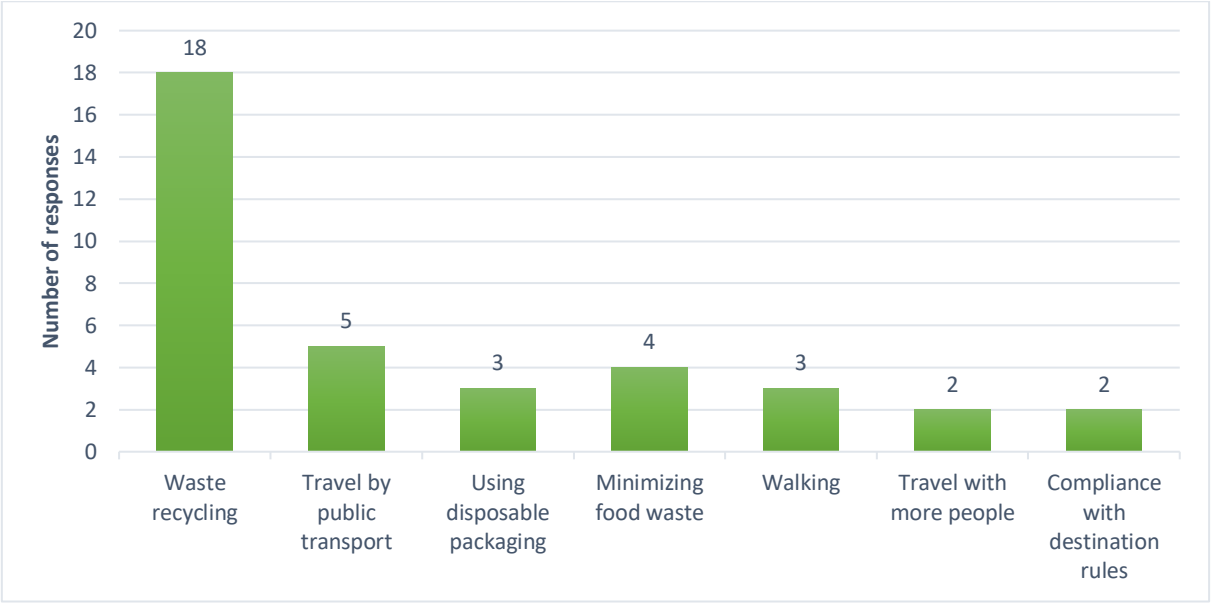


Table 3 Results of statistical analysis
(Source: questionnaire research results)

No.	Issue	Correlation coefficient (r)
1.	Correlation between respondent´s education level and environmentally friendly traveler classification	- 0.16
2.	Correlation between the respondent´s age and environmentally friendly traveler classification	0.11
3.	Correlation between respondent´s education level and their attitude towards sustainable travel	- 0.18
4.	Correlation between the field of study and attitudes towards sustainable travel	0.14
5.	Correlation between respondent´s age and attitudes towards sustainable travel	- 0.19

When comparing both groups of students, it was found that students studying tourism are slightly more responsible when travel than students from other fields of study. Greater responsibility was manifested especially when using a means of transport when travel (more frequent use of public transport) and when getting to know the destination (finding information about the destination, buying maps, bedeckers, trying to learn the language of the destination and watching videos available on the Internet, e.g. travel experiences of people who have spent some time in a given destination). The reason is that the necessity of behaving sustainably is emphasized to students of tourism, also the

topic of sustainable tourism is the content of the subjects of their field of study, and students know sustainable travel principles.

Based on the analysis of available literature, own experience and results of the questionnaire survey, a set of sustainable behavior recommendations was composed in the form of a mini-guide to sustainable/green travel (see Table 4).

Table 4 Sustainable/Green Travel Mini-Guide
(Source: questionnaire research results using DZS, 2021b; MAS Český sever, 2021)

Sustainable behavior in travel	
Before travel	act responsibly when choosing a destination
	prefer low-carbon flights or public transport
	prefer low-cost tariffs
	use digital tickets
	travel “light" (carry few things when travel)
	educate yourself linguistically
	get as much information about the destination as possible (e.g. geographic data, cultural attractions, tip for trips, etc.)
	use your existing equipment (e.g. camping items, clothing, sport equipment, etc.)
At a destination	use public transport on arrival at the destination
	use services offered by residents (esp. accommodation, cultural or guide services, prefer to local gastronomy, souvenirs etc.)
	prefer sustainable forms of tourism, i.e. tourism with a low degree of undesirable influence (e.g. geotourism, ecotourism)
	use energy and waste sustainably (i.e. save energy, water, avoid or minimize plastic packaging and unnecessary waste, sort waste, don´t waste food, etc.)
	eat local food and use local produce
	get involved in local communities (learn about traditions, customs, rituals, way of life, make new friends)
	learn the 'indigenous' language
	discover new places and get much information as possible about the visited place
	feel the landscape
	respect all local restrictions (obey laws, codes, visiting rules)
	do not damage what is protected
	take an active part in the protection of local nature and landscape (e.g. garbage collection etc.)
After travel	inform your family, friends, public about new findings from the trips
	publish in media, on the Internet (blogs, podcasts)
	share newly acquired knowledge and insights (e.g. on social networks)
	organize or participate in lectures, seminars, workshops

Discussion

The proposed mini-guide to sustainable or green travel (Table 4) gives examples of how tourism participants should behave before, during and after their trips to ensure that their behavior is responsible and in line with sustainability principles.

The mini-guide proposes to a responsible tourism visitor to start with carrefour selection of the destination, i.e. before departure. An example might be a selection of a destination formerly affected by a natural disaster, such as a hurricane, typhoon, earthquake, etc. (e.g. the High Tatras in Slovakia in 2004 affected by a storm, see e.g. Vancura, 2004). Visiting such a destination and spending money there can financially support the local economy (e.g. Lompech, 2018). After selecting a specific destination, the responsible visitor should obtain as much information as possible in advance in order to learn about local customs and culture, and to avoid wrong or even illegal behavior (e.g. importing illegal food). Sources of information may include various guidebooks, maps, catalogues, travel websites, operators' websites, destination websites, etc. (e.g. Skatturinn, 2023).

Another responsible behavior of a visitor is the use of transport to and from a destination, or a kind of accommodation and activities used during the trip (e.g. preference for service providers having (eco)certification, e.g. Karlsson & Dolnicar, 2015; Ryglová, 2007). Responsible behavior in a destination is also related to obtaining information about places visited, learning about traditions, customs, rituals, way of life of the local community, learning languages, and actively participating in nature and landscape conservation (e.g. Burger, 2000). It is also important not to waste non-renewable resources and food.

Sustainable behavior after returning from a trip is related to sharing information on places visited. New knowledge, experiences and skills should be shared with family members and friends. Some may also share newly acquired information with the public, e.g. by publishing in magazines, on the Internet, social networks, giving lectures, organizing or participating in seminars and workshops (e.g. Esteves et al., 2022).

The available literature and the responses of the survey show that responsible travel is most often associated with the environmental dimension of social responsibility. The survey also showed that respondents did not describe an ideal situation but talked about their experiences in practice (anonymity of the questionnaire, different questions, etc.). Another finding is that there are numerous gaps in responsible behavior in travel, both in relation to the local community and in the environmental field. For this reason, emphasis is placed on raising awareness, promoting motivation, as well as promoting the environmental awareness of tourism participants. Therefore, education, training and awareness raising is recommended to increase tourism participants' awareness of own their responsibility in the practical implementation of sustainable tourism (e.g. Aman et al., 2021; Budeanu, 2007; Leung, 2022; Mazhenova et al., 2016).

Intensive support of sustainable tourism, including its basic principles and practical advice, is also provided on the web portal www.masceskysever.cz (MAS český sever, 2021). It says that tourist

materials in the info centers consist mainly of materials of a tourist nature (e.g. tourist routes, destinations, leisure activities or topics focused on nature protection, protection of endangered species of plants and animals, etc.). Additionally, the topic of sustainability and sustainable tourism is either completely absent or only marginally mentioned, according to www.masceskysever.cz. Insufficient awareness and promotion of sustainable tourism as a fundamental tool for nature and landscape conservation is a problem not only in tourist destinations, but especially in protected areas. As a result, there are still conflicts and misunderstandings between visitors, residents and businesses in tourism destinations (e.g. Zelenka et al., 2013).

As a response to this problem there is, for example, comics "Rozumovi on the Road - 10 rules for sustainable tourism for visitors in the Bohemian Switzerland National Park", which was produced within the project MAS český sever (MAS český sever, 2021). The primary objective of the project was to create educational material with environmental themes with the intention to protect the natural and cultural wealth of the Bohemian Switzerland National Park. The basic principles of sustainable tourism are explained in a simple and entertaining way, utilizing modern teaching methods. The printed version of these products also enriched the information centers with material on a topic that has not been adequately treated and promoted so far.

Another product that contains practical advice and suggestions on sustainable travel is the guide "How to travel eco-logically" by the aforementioned House of Foreign Cooperation (DZS, 2021b). This guide encourages travelling to experience new locations, culture and customs. The knowledge gained can be passed on by visitors to motivate others to change their current behavior and contribute to environmental protection.

It is also worth mentioning the initiative called #**nejsemprase**, which in a simple way explains how to behave in nature. On its website, the initiative presents "ten rules of cool travelers", where it encourages responsible behavior towards nature when travel. It also provides a list of litter that is commonly found in nature, including the time it takes for it to decompose (Sedláček, 2018).

Conclusion

The paper focused on sustainability education in tourism. Both, tourism as well as sustainability, are hot issues in current highly volatile and uncertain times, also considering that the increasing level of responsibility of individual tourism actors is the basis for the practical implementation of sustainable tourism (e.g. Caruana & Crane, 2008; Nguyen & Thuong, 2023). The paper pointed to the fact sustainable tourism requires not only educated professionals (destination managers, managers of travel service providers) but also educated, informed and motivated other actors - namely travel participants. The aim of the paper was to map the behavior of tourism participants in relation to sustainability and to propose a set of recommendations for responsible travel behavior of visitors.

Recommendations are presented as a sustainability travel (green travel) mini-guide. The mini-guide provides examples on how to behave sustainably in the context of travel, i.e. before, during and

after a trip. In practice, this represents rules on how to move sustainably to a destination without unnecessary ecological burden, how to eat sustainably (preferring local and seasonal products), how to manage waste during the trip and at the destination, how to make new friends and get involved in local communities. It is also on how to acquire new knowledge and skills and use them in professional and personal life (see e.g. Šimková and Hoffmannová, 2022).

The idea behind the making a mini-guide was not to see travel as a simple, funny activity, or passive reception of the information, but as an incentive to learn about nature, culture and customs of local people, during travel one may learn or increase his/her language skills. All that while active participation in the protection of the environment (see also e.g. DZS, 2021b). The knowledge and experience gained from travelling can then be disseminated and inspire others to behave sustainably. This means to act in a way that contributes to the protection of the environment and improvement of local life. Through education, it is also possible to manage number of visitors, which is seen as an effective tool for preventing negative impacts of tourism in a destination especially in protected areas (see e.g. Bahamonde-Rodtíguez et al., 2022).

As the attitudes of tourism participants towards sustainable tourism and their willingness to respect the principles of sustainability and apply them in practice are not always aligned, it is recommended to raise awareness of tourism participants, educate them and thus promote their interest and awareness of their responsibility towards sustainable tourism.

An important aspect of putting sustainability principles into practice is to disseminate and publish them as often as possible so that these become known to the general public. The authors recommend that principles of sustainable behavior should be freely shared, for example, at information centers in the form of info materials or mini-guides, on information boards in national parks or other protected sites. Various educational signs placed along trails, rest areas or other tourist attractions represent another suitable and effective tool. Sustainability principles may also be disseminated on the Internet (e.g. websites, social networks, blogs, etc.). Educational material should be provided in a user-friendly format. This means, for example, text may be accompanied with images (photos, drawings), preferably in the form of a story, a fairy tale, or comics.

Another recommendation is to integrate sustainable principles and practices into education programs at all levels of education. The aim of these educational programs should be to provide the necessary competences to enable participants to understand the socially responsible and environmental dimension of development not only in the context of travel but also in everyday life. The authors thus believe that spreading awareness of the need to protect nature, the landscape, and preserve local traditions and customs will help to make people aware of their own responsibility for future generations.

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References

Agut, S., & Grau, R. (2002). Managerial competency needs and training requests: The case of Spanish tourist industry. *Human Resource Development Quarterly*, 13(1), 31-51. DOI: 10.1002/hrdq.1012.

Aman, S., Hassan, N.M., Khattak, M.N., Moustafa, M.A., Fakhri, M., & Ahmad, Z. (2021). Impact of tourist´s environmental awareness on pro-environmental behavior with the mediating effect of tourist´s environmental concern and moderating effect of tourist´s environmental attachment. *Sustainability MDPI*, 13(23). Retrieved from https://www.mdpi.com/2071-1050/13/23/12998.

Bahamonde-Rodríguez, M., García-Delgado, F.J., Šadeikaite, G. (2022). Sustainability and Tourist Activities in Protected Natural Areas: The Case of Three Natural Parks of Andalusia (Spain). *Land 2022*, 11(11), DOI: 10.3390/land11112015.

Bharwani, S., & Talib, P. (2017). Competencies of hotel general managers: A conceptual framework. *Journal of Contemporary Hospitality Management*, 29(1), 393–418. DOI: 10.1108/IJCHM-09-2015-0448.

Boado, K.M. (2023). *7 Benefits of Sustainable Tourism & How to Travel Responsibly.* Retrieved from https://www.gooverseas.com/blog/benefits-of-sustainable-tourism.

Budeanu, A.A. (2007). Sustainable tourist behaviour – a discussion of opportunities for change. *International Journal of Consumer Studies*, 31(5), 499-508. DOI: 10.1111/j.1470-6431.2007.00606.x.

Burger, J. (2000). Landscapes, tourism, and conservation. *Science of The Total Environment*, 249(1-3), 39-49. DOI:10.1016/S0048-9697(99)00509-4.

Caruana, R., & Crane, A. (2008). Constructing Consumer Responsibility: Exploring the Role of Corporate Communications. *Organization Studies*, 29(12), 1495-1519. DOI: 10.1177/0170840607096387.

Cerovic, S., & Stanisic, N. (2018). Competency Model and Multi-Criteria Decision Making in Tourism and Hotel Industry in Serbia. *Serbia. Tourism Hospit Ope Acc: THOA-113*. DOI: 10.29011/THOA-113. 100013.

Cizel, B., Anafarta, N., & Sarvan, F. (2007). An analysis of managerial competency needs in the tourism sector: the case of Turkey. *Tourism Review*, 62(2), 14-22.

Constantin, C.P., Ispas, A. & Candrea, A.N. (2013). Identifying Tourists Interested in Eco-Certified Accommodation Units from Brasov, Romania. *Management Dynamics in the Knowledge Economy,* 1(3), 521-542.

Damijanič, A.T., Pičuljan, M., & Ban, S.G. (2023). The Role of Pro-Environmental Behavior, Environmental Knowledge, and Eco-Labeling Perception in Relation to Travel Intention in the Hotel Industry. *Sustainability*, 15(13). DOI: 10.3390/su151310103.

de Grosbois, D. (2012). Corporate Social Responsibility Reporting by the Global Hotel Industry: Commitment, Initiatives and Performance. *International Journal of Hospitality Management,* 31(3), 896-905. DOI: 10.1016/j.ijhm.2011.10.008.

Dlouhý, J., & Dlouhá, J. (eds.) (2005). *Co znamená udržitelnost pro univerzity? Sustainability at universities in the Czech Republic: What are the possibilities?* Retrieved from https://www.czp.cuni.cz/knihovna/konf0509/sbornik.pdf.

Dodds, R., & Holmes, M.R. (2023). Seasoned travelers are more sustainable: modelling the tourism experience life cycle. *Current Issues in Tourism*. DOI: 10.1080/13683500.2023.2213882.

D´Souza, C., Apaolaza, V., Hartmann, P., Brouwer, A.R. (2020). Marketing for sustainability: Travellers´ intentions to stay in green hotels. *Journal of Vacation Marketing*, 27(2). DOI: 10.1177/1356766720975063.

DZS, Dům zahraniční spolupráce (2021a). *Strategie udržitelnosti. Společensky odpovědný přístup Domu zahraniční spolupráce.* Retrieved from https://www.dzs.cz/sites/default/files/2021-02/DZS_Strategie_udrzitelnosti_2021_A4_final.pdf.

DZS, Dům zahraniční spolupráce (2021b). *Jak na cesty eko-logicky (Průvodce udržitelným cestováním nejen za vzděláváním).* Praha: Dům zahraniční spolupráce.

EEA, European Environment Agency. *Projects and cooperation agreements.* Retrieved from https://www.eea.europa.eu/en/about/who-we-are/projects-and-cooperation-agreements.

Elkington, J., Hailes, J., & Makower (1990). *The Green Consumer*. Penguin Books.

Esteves, S., Morais, E.P., & Azeredo, S. (2022). The Influence of the Internet and Social Networks on the Choice of the Tourist Destination Serra a Estrela. *Journal of Internet Social Networking & Virtual Communities.* DOI: 10.5171/2022.719520. Retrieved from https://ibimapublishing.com/articles/JISNVC/2022/719520/.

Font, X., Walmsley, A., Cogotti, S., McCombes, L., & Häusler, N. (2012). Corporate Social Responsibility: The Disclosure-Performance Gap. *Tourism Management,* 33(6), 1544-1553. DOI: 10.1016/j.tourman.2012.02.012.

Gonda, T., & Ratz, T. (2023). Attitudes and actions in responsible tourism – an analysis of generational differences. *Geojournal of Tourism and Geosites*, 46(1), 234-242. DOI: 10.30892/gtg.46126-1020.

Gordi, M.V., & Roig, E.M. (2023). The Role of Graphic Design Semiotics in Environmental Awareness Campaigns. *International Journal of Environmental Research and Public Health*, 20(5), DOI: 10.3390/ijerph20054299.

Government of the Czech Republic (2010). *Strategie udržitelného rozvoje ČR*. Retrieved from https://www.businessinfo.cz/navody/strategie-udrzitelneho-rozvoje-ceske/.

Han, H. (2015). Travellers´ pro-environmental behavior in a green lodging context: Converging value-belief-norm theory and the theory of planned behavior. *Tourism Management*, 47, 164-177. DOI: 10.1016/j.tourman.2014.09.014.

Han, H., Hsu, L.T.J., Lee, J.S., & Sheu, Ch. (2011). Are lodging customers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions. *International Journal of Hospitality Management,* 30(2), 345-355.

Han, J.H., Lee, M.J., & Hwang, Y.S. (2016). Tourists´ environmentally responsible behavior in response to climate change and tourist experiences in nature-based tourism. *Sustainability* 8(7), 1-14.

Han, H., & Yoon, H.J. (2015). Hotel customers´ environmentally responsible behavioral intention: Impact of key constructs on decision in green consumerism. *International Journal of Hospitality Management*, 45, 22-33.

Horner, S., & Swarbrooke, J. (2003). *Cestovní ruch, ubytování a stravování, využití volného času (Aplikovaný marketing služeb).* Praha: Grada Publishing.

Huang, H.Ch., Lin, T.H., Lai, M.Ch., & Lin, T.L. (2014). Environmental consciousness and green customer behavior: An examination of motivation crowding effect. *International Journal of Hospitality Management,* 40, 139-149. DOI: 10.1016/j.ijhm.2014.04.006.

Charter, M. (ed.) 1992). *Greener Marketing (A Responsible Approach to Business).* London: Routledge.

Chen, R.J.C. (2015). From sustainability to customer loyalty: A case of full service hotels´ guests. *Journal of Retailing and Consumer Services*, 22(C), 261-265. DOI: 10.1016/j.jretconser.2014.08.007.

Chen, A. & Peng, N. (2012). Green hotel knowledge and tourists´ staying behavior. *Annals of Tourism Research,* 39(4), 2211-2216. DOI: 10.1016/j.annals.2012.07.003.

Chen, M., Pei, T., Jeronen, E., Wang, Z., & Xu, L. (2022). Teaching and Learning Methods for Promoting Sustainability in Tourism Education. *Sustainability 2022*, 14(21), 14592. DOI: 10.3390/su142114592.

Chen, M. F. & Tung, P.J. (2014). Developing an extended Theory of Planned Behavior model to predict consumers´ intention to visit green hotels. *International Journal of Hospitality Management,* 36, 221-230.

Karlsson, L. & Dolnicar, S. (2015). Does eco certification sell tourism services? Evidence from a quasi-experimental observation study in Iceland. *Journal of Sustainable Tourism*, 24(5), 1-21. DOI: 10.1080/09669582.2015.1088859.

Kay, C., & Russette, J. (2000). Hospitality-management competencies: identifying managers´ essential skills. *Cornell Hospitality Quarterly*, 41(2), 52-63. DOI: 10.1177/001088040004100217.

Leaders international (2023). *How can tourism contribute to sustainable development?* Retrieved from https://leadersinternational.org/results-insights/how-can-tourism-contribute-to-sustainable-development/.

Lee, T.H., Jan, F.H., & Yang, Ch.Ch. (2013). Conceptualizing and measuring environmentally responsible behaviors from the perspective of community-based tourists. *Tourism Management*, 36, 454-468. DOI: 10.1016/j.tourman.2012.09.012.

Leung, R. (2022). Development of Information and Communication Technology: From e-Tourism to Smart Tourism. *Handbook of e-Tourism*. 1-33.

Lompech, M. (2018). Disenchantment in the Tatras. The Vulnerability of the "Pocket Alps" (Slovakia). *Journal of Alpine Research*. 106-3. DOI : https://doi.org/10.4000/rga.4990.

Lund-Durlacher, D. (2015). Corporate Social Responsibility and Tourism. In P. Moscardo, G. Benckendorff, G, *Education for Sustainability in Tourism - A Handbook of Processes, Resources, and Strategies* (59-73). Berlin: Springer. DOI: 10.1007/978-3-662-47470-9.

MAS Český sever (2021). *Desatero udržitelného cestovního ruchu v NPČŠ*. Retrieved from https://www.masceskysever.cz/projekty-mas/udrzitelny-cr-desatero-komiks/.

Mazhenova, S., Choi, J., & Chung, J. (2016): International tourists' awareness and attitude about environmental responsibility and sustainable practices. *Global Business & Finance Review*, 21(2), 132-146. DOI: 10.17549/gbfr.2016.21.2.132.

Mehta, R. & Karia, N. (2020). A study to understand customer awareness and willingness about green practices in hotel industry. *International journal for innovative research in multidisciplinary field,* 6(7), 195-202.

Miškolci, S. (2013). *Ekonomika a řízení životního prostředí a přírodních zdrojů.* Brno: Mendelova univerzita v Brně.

Ministry of the Environment (2015). *Státní program environmentálního vzdělávání, výchovy a osvěty a environmentálního poradenství na léta 2016–2025*. Retrieved from https://www.mzp.cz/C1257458002F0DC7/cz/statni_program_evvo_ep_2016_2025/$FILE/OFDN-SP_EVVO_EP_%202016_2025-20160725.pdf.

Ministry of the Environment (2021). *Státní politika životního prostředí České republiky 2030 s výhledem do 2050.* Retrieved from https://www.mzp.cz/C1257458002F0DC7/cz/statni_politika_zivotniho_prostredi/$FILE/OPZPUR-statni_politika_zp_2030_s_vyhledem_2050-20220615.pdf.

Moscardo, P., & Benckendorff, G. (eds.) (2015). *Education for Sustainability in Tourism - A Handbook of Processes, Resources, and Strategies.* Berlin: Springer. DOI: 10.1007/978-3-662-47470-9.

Muizu, W.O.Z., & Yudomartono, H. (2016). Competency development of culinary creative industries. *Academy of Strategic Management Journal*, 15(3), 67–72.

Nguyen, N., & Thuong, T. (2023). Relationship between Destination Image and Tourists' Responsible behaviors in Hanoi. *International Journal of Research Publication and Reviews,* 4(6), 2905-2916. DOI: 10.55248/gengpi.4.623.29052916.

Pásková, M. (2014). *Udržitelnost cestovního ruchu*. Hradec Králové: Gaudeamus.

Pásková, M., & Zelenka, J. (2018). *Společensky odpovědný cestovní ruch.* Praha: Idea servis.

Peffers, K., Tuunanen, T., Rothenberger, M.A., & Chatterjee, S. (2007). A design science research methodology for information systems research. *Journal of Management Information Systems,* 24(3), 45-77. DOI: 10.2753/MIS0742-1222240302.

Porto, N., Pitetti, D.A., & Ciaschi, M. (2022). A worldwide tourism-extended Environmental Kuznets Curve. New approaches in a comparative analysis. *Journal of Sustainable Tourism.* DOI: 10.1080/09669582.2021.2023165.

Ryglová, K. (2007). Eco-certification as a tool of sustainable tourism. *Agric. Econ.,* 53(3), 138-143. . Retrieved from https://www.agriculturejournals.cz/pdfs/age/2007/03/05.pdf.

Ryglová, K., Burian, M, & Vajčnerová, I. (2011). *Cestovní ruch – podnikatelské principy a příležitosti v praxi.* Praha: Grada Publishing.

Sedláček, Š. (2018). *O co jde?* Retrieved from http://nejsemprase.cz/.

Skatturinn (2023). Duty free imports. Retrieved from https://www.skatturinn.is/english/individuals/customs-matters/travelling-to-iceland/duty-free-imports/.

Šimková, E., & Hoffmannová, M. (2022). Znalostní management v cestovním ruchu. Knowledge Management in Tourism. Wissensmanagement im Tourismus. Pavel Mervart: Červený Kostelec.

Temizkan, R., & Yabanci, O. (2017). An Exploration of Hospitality Management Competencies in Turkey through Content Analysis of the Job Ads. *Journal of Business Research Turk,* 9(4), 215-227. DOI: 10.20491/isarder.2017.328.

Thi, N., Nguyen, N.T.T., Tuan, T.H., Thi, L. et al. (2023). How Responsible Tourism Behavioral Intentions Influence Tour Choices: Effects of Economic, Socio-Cultural, and Environmental Responsibility. *International Journal of Hospitality and Tourism Administration*. DOI: 10.1080/15256480.2023.2219252.

Ting, CH.T., Hsieh, Ch.M., Chang, H.P., & Chen, H.S. (2019). Environmental consciousness and green customer behavior: The moderating roles of incentive mechanisms. *Sustainability 2019*, 11(3). DOI: 10.3390/su11030819.

UN (2015). *17 Goals to transform our world*. Retrieved from https://www.un.org/sustainabledevelopment/.

UNEP and UNWTO (2005). *Making tourism more sustainable: A guide for policy maker.* Retrieved from https://wedocs.unep.org/bitstream/handle/20.500.11822/8741/-Making%20Tourism%20More%20Sustainable_%20A%20Guide%20for%20Policy%20Makers-2005445.pdf?sequence=3&isAllowed=y.

Vancura, V. (2004). *Tatra swept by powerful windstorm*. Retrieved from https://wwf.panda.org/wwf_news/?19133/Tatra-swept-by-powerful-windstorm.

Wang, C.P., Zhang, Q., Wong, P.P.W., & Wang, L. (2023). Consumers´ green purchase intention to visit green hotels: A value-belief-norm theory perspective. *Frontiers in Psychology,* 14. DOI: 10.3389/fpsyg.2023.1139116.

Watson, S., McCracken, M.G., & Hughes, M. (2004). Scottish visitor attractions: managerial competence requirement. *Journal of European Industrial Training*, 28(1), 39-66. DOI: 10.1108/03090590410513884.

Wedad, O., Neveen, G.E., & Anter, M. (2021). The Essential Managerial Competencies for Tourism and Hospitality Graduates: From the Perspective of Tourism and Hospitality Experts in Egypt. *Minia Journal of Tourism and Hospitality Research,* 11(1), 16 p. DOI: 10.21608/mjthr.2021.82406.1009

Yu, Ch.Ch., & Liu, Ch.Ch. (2021). Applying Fuzzy AHP to Evaluate the Key Selection Criteria for Green Hotel Operation Managers. *Journal of Business and Management Sciences,* 9(1), 12-16. DOI: 10.12691/jbms-9-1-2.

Závodná, L.S. (2015). Udržitelný cestovní ruch (principy, certifikace a měření. Olomouc: UP v Olomouci.

Zelenka, J., Těšitel, J., Pásková, M., & Kušová, D. (2013). *Udržitelný cestovní ruch. Management cestovního ruchu v chráněných územích.* Hradec Králové: Gaudeamus.