Chapter 8
An Empirical Investigation of the Accessibility of Official European Tourism Websites

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ABSTRACT

This chapter presents an investigation into the accessibility of official tourism websites of 26 EU member states. It is divided into two main parts. The first part is focused on the theoretical background of web accessibility, where the definition of accessibility, accessibility laws, accessibility recommendations, accessibility automatic tools, and related research are presented. The second part includes an empirical investigation with the main focus being on evaluating the compliance of tourism websites with web content accessibility guidelines 2.1 (WCAG 2.1) and the identification of the most commonly violated WCAG 2.1 success criteria. The results, which are based on automatic tool multiguideline accessibility usability validation environment (MAUVE), show that all investigated websites included at least one error. The most frequently identified errors were related to success criteria (1) reflow; (2) name, role, value; (3) link purpose (in context); and (4) purpose identification. Based on the acquired knowledge, the recommendations for improving web accessibility are presented.

INTRODUCTION

The media on the Internet have become the most common channels for acquiring information (Domínguez Vila, Alén González, & Darcy, 2018) for all people, including people with disabilities, who represent about 15% of the world's population (World Health Organization, 2018). In the European Union (hereinafter referred to as EU), the percentage of people with disabilities is slightly lower and includes approximately

10% of the population (European Network for Accessible Tourism, 2008). Across EU member states, the percentage of people with long-term disabilities varies between 12% and 41% (Eurostat, 2018). The lowest proportions of self-perceived long-standing disabilities were reported in Malta (12%) and Sweden (13%), whereas the highest were reported in Latvia (41%), Slovenia (36%), and Estonia (35%) (Eurostat, 2018). In 2020, the EU is expected to have 120 million people with disabilities (European Commission, 2018; Rajšp, Kous, Kuhar, Šumak, & Šorgo, 2019). Additionally, the population in Europe is aging. When the elderly (aged 65 or above) are added, the number of people who live with some form of disability additionally increases.

In light of this, accessibility is presented as a significant segment of website quality characteristics in terms of ensuring equal opportunities in accessing online information. All websites should be accessible for all users, regardless of their characteristics or needs. This means that websites, as well as tools and technologies, should be designed and developed so that all people (including people with visual, auditory, physical, speech, cognitive, and neurological disabilities) can use them effectively. Many recommendations, guidelines, standards, and concepts have been published to ensure web accessibility (e.g., WCAG, ISO/IEC 40500:2019, EN 301 549, Section 508, Design for all, etc.) (Kous, Kuhar, Pušnik, & Šumak, 2019; Kous & Polančič, 2019). Although many guidelines and standards describe development principles and how to design an accessible website, websites still demonstrate a relatively low degree of accessibility. The existing research among the most commonly researched domains (e.g. education, and government) (Nunez, Moquillaza, & Paz, 2019) reports that many websites include a large number of accessibility-related problems and, usually, the investigated websites are inconsistent with the guidelines presented in the related standards (Acosta, Acosta-Vargas, & Lujan-Mora, 2018; Ahmi & Mohamad, 2015; Al-Khalifa, Baazeem, & Alamer, 2017; Espadinha, Pereira, Da Silva, & Lopes, 2011; Ismail & Kuppusamy, 2016). Our previous research, which was performed in governmental (Kous & Pavlinek, 2017) and educational domains (Kous et al., 2019), also reported similar results. Between 2013 and 2017, we investigated the web accessibility of 189 Slovenian municipalities' websites, where only one website demonstrating full compliance with WCAG 2.0 in 2013 and 2014 (Kous & Pavlinek, 2017). However, in more recent years, all websites included at least one case of noncompliance with the same guidelines (Kous & Pavlinek, 2017). The second study was focused on a web accessibility investigation of the faculties' websites at the University of Maribor between 2018 and 2019 (Kous et al., 2019). The results, based on an automatic evaluation, indicated that none of the investigated web pages satisfied all WCAG 2.0 recommendations (Kous et al., 2019). Nevertheless, when comparing 2018 to 2019, the number of violated success criteria decreased among 59% of web pages. For 12% of web pages, the number of violated success criteria remained unchanged, and the number of violated success criteria increased in 29% of web pages (Kous et al., 2019). To summarize, although awareness of web accessibility on a theoretical level is very high, when it comes to the practical level, web accessibility is still a challenge and largely depends on web designers and implementers. Therefore, many websites are still inaccessible for certain groups of the population, especially for people with disabilities (Kous et al., 2019) and the elderly.

The websites have also become one of the significant sources of getting information in the tourism domain, since users get information about the destination, including details about activities, accommodation, transport and other attractions that they may wish to access (Domínguez Vila et al., 2018; Teixeira, Eusébio, & Silveiro, 2019). This has also contributed to the use of mobile devices that provide real-time access to information, which is also essential for the domain. Therefore, official tourism websites are important not only in persuading people to choose a specific destination and to find the searched-for

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