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Information Accessibility of Restaurant Companies in Moravian-Silesian Region

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Abstract

The literature agrees that the most affected sector during the COVID 19 pandemic was tourism. The period of pandemics associated with social distance has completely transformed the hotel and catering business. Covid 19 has launched new trends in the provision of catering services. Many restaurants have changed their product offerings, focusing on fast food. The stone establishments became online establishments with the virtual operation of the restaurant. Information accessibility has become one of the key success factors and competitive advantages of companies in the restaurant equipment segments. The article deals with the analysis and evaluation of the current state of information accessibility of restaurant facilities in the Moravian-Silesian Region in the context of specific groups. Within this analysis, persons with visual problems, which include not only the visually impaired but also the elderly, were found for a specific group. The analysis was based on the observation of 276 restaurant facilities in the Moravian-Silesian Region and the subsequent classification of individual entities based on clustering into classes. The selection of information accessibility factors was based on a search of literature and sources. From the point of view of a specific group, it is the contrast of fonts, alternative texts and other elements of barriers, etc. In conclusion, it can be assessed that restaurants in the region use web applications, but there are still barriers for a specific group.

Like many other industries, the tourism segments had been affected by information technology. Today, customers commonly use the Internet to search for destinations and to book accommodation services. Portals for import services (pizza delivery, etc.) are now also used in gastronomic services. The time of covid strengthened this trend even more. As a result of the complete closure of restaurants and restaurants in hotel facilities, companies have had to launch new approaches to service delivery, in particular focusing on their product import services, which are, however, based on the Internet applications. At present, the key factor in purchasing decisions is the accessibility of the company's website, *i.e.* Web presentation for all specific groups. In covid times, web tools have become an element from the point of view of restaurant-customer interaction. The individual tools applied to the creation of corporate websites offer shopping for people with special needs without the presence of assistants, which increases the personal self-sufficiency of these people. According to Castiglioni and Gaj (2020), it is necessary for people (and businesses) to radically change their approach to life and adapt to security conditions after the outbreak of Covid 19 in many countries, services that would otherwise be unattainable at the time of the lockdown. Websites of tourism enterprises (accommodation and catering services, cultural heritage goals)

significantly belong to the competitiveness of the destination (Kourtesopoulou, *et al.*, 2020; Luna-Nevarez, Hyman, 2012), which is a means of transport to the destination and improve the quality of life of the population.

Keywords: gastronomy; Moravian-Silesian region; informational; web; accessibility; specific groups.

JEL Classification: C15, D89, L83, Z32.

Introduction

Tourism is one of the dynamically developing industries. It consists of a set of services, including accommodation, transport and catering services, which are provided by independent gastronomic entities or gastronomic entities within hotel facilities. Although gastronomy is not (López-Guzmán 2011) the main motive for visiting the destination, it must be considered one of the determinants of attractiveness. The market potential of accessible tourism affects the entire tourism chain from arrival, accommodation, meals, activities in destinations to the departure process (Rahmiati 2019). By this chain are meant subjects of restaurants, accommodation, leisure activities, etc. According to Daries and colleagues (2018), restaurants are a key asset in the economies of many countries and are often considered to be tourist attractions.

According to Kostková and Pellešová (2021), the willingness of tourism participants to visit a specific restaurant influences the professional conduct of employees, speed of service, excellent language skills, design, cleanliness and order, silence, air cleanliness and primarily the ability to provide complete information. Information unavailability causes the business to be ignored by the consumer (Rosalin *et al.* 2016). Like many other industries, the tourism segments had been affected by information technology. Today, customers commonly use the Internet to search for destinations and to book accommodation services. Portals for import services (pizza delivery, etc.) are now also used in gastronomic services. The time of covid strengthened this trend even more. As a result of the complete closure of the restaurant and gastronomic operations in hotel facilities, companies had to start new approaches to the provision of services, especially to focus on their own delivery services, which are, however, built primarily on the Internet applications. At present, the key factor in purchasing decisions is the accessibility of the company's website, *i.e.* Web presentation for all specific groups. In covid times, web tools have become an element from the point of view of restaurant-customer interaction. The individual tools applied to the creation of corporate websites offer shopping for people with special needs without the presence of assistants, which increases the personal self-sufficiency of these people. According to Castiglioni and Gaj (2020), it is necessary for people (and businesses) to radically change their approach to life and adapt to security conditions after the outbreak of Covid 19 in many countries, services that would otherwise be unattainable at the time of the lockdown. Websites of tourism enterprises (accommodation and catering services, cultural heritage goals) significantly belong to the competitiveness of the destination (Kourtesopoulou *et al.* 2020; Luna Nevarez, Hyman 2012), which is a means of transport to the destination and improve the quality of life of the population.

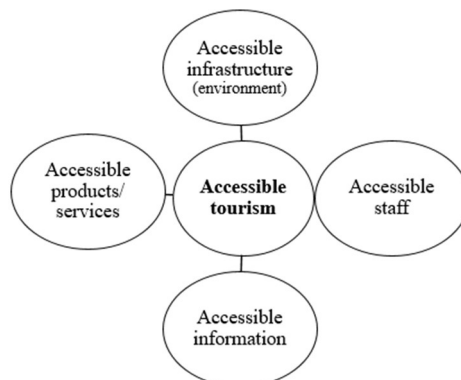
1. Literature Review

Accessible tourism is a priority for the sustainability of the European Union. The European System of Sustainable Tourism Indicators (hereinafter referred to as CR, Ministry for Regional Development, 2012) calls for equal access to CR for all, including people with special needs. These specific needs mean needs in terms of limitations due to mental or physical disability, as well as age, literacy or ethnic origin (Patra and Dash 2017). In general, barrier-free tourism can be considered tourism in which tourism services can be used by all persons without the need for outside help (Šenková *et al.* 2020). Accessible tourism is considered to be tourism that is accessible from the point of view of employees, product, infrastructure and information (see Table 1). Unlike usability, accessibility does not focus primarily on user comfort, but on his ability to communicate (use the service), despite disability, lack of knowledge, experience, or imaging capabilities (w3.org, 2011).

Accessibility of information is a way of publishing and operating information so that information and services can be handled based on equal access to information by all users, including users with special needs (NAP, National Information Portal, 2021). The information can be both printed and verbal, written or in electronic form. There is a lot of literature dealing with the quality of information availability of companies. There are some studies on the information accessibility of websites, including a selected series of indicators. The first mentions in the WoS scientific database appear when entering the keywords "Information available on the web" since 1996. The authors used many factors for the evaluation. They agree that there is still no uniform methodology (Baggio *et al.* 2011; Fernández-Cavia *et al.* 2014; Law, *et al.* 2010). Turková, Maraková (2021), chose the topicality of the website as a factor of accessibility, the pages updated a maximum of 6 months ago are considered accessible

information. In the analysis of Mystery Shopping, Dluhošová, *et al.* (2014) assess information accessibility from the point of view of a sufficient materialized informative text (boards on operating hours, services provided, menu information, etc.). Daries and *et al.* (2018) researched accessibility at 980 Michelin-starred restaurants in France, Italy and Spain. He sees the website as an important tool in consumer decision-making and attaches it to it as the primary source of restaurant-quality assessment.

Figure 1. Basic pillars of accessible tourism



Source: *Athéna na cestách*, 2011, Adopted

For the evaluation, Daries *et al.* (2018) used a model that combines and integrates WCA and eMICA, integrated individual analyzes using the main components. In particular, he focused on the content of individual restaurants' websites, such as restaurant descriptions, menu information, contact links, review links, certification holdings, etc. The study (Kearney-Volpe and Hurst 2021) contains a very comprehensive search of the literature, focusing on the analysis of the readability of the content of web pages from different perspectives. To identify the factors, it approached the study of the work by addressing 12 blind programmers; the identified factors are similar to the elements recommended by w3.org. In addition to these factors, however, the authors identified five categories of problems: visual information without an available equivalent, orientation, navigation, lack of support, and ignorance (and non-use) of assistive technologies. In addition to these factors, however, the authors identified five categories of problems: visual information without an available equivalent, orientation, navigation, lack of support, and ignorance (and non-use) of assistive technologies. In contrast, Jeon and Jeong (2016) used factor analysis to determine functionality and customer experiences, they divided factors into those ease of use, privacy/security, aesthetics/design, customization/personalization and accessibility. A large group of authors divided accessibility into four main areas: technical, business, content, and design (Chiou *et al.* 2010; Cristobal-Fransi 2006; Fernández-Cavia, *et al.* 2014; González – López, *et al.* 2013). Fernández-Cavia *et al.* 2014 considers the homepage, website position, the possibility of implementation on a mobile application, etc. to be important. New accessibility assessment methods and tools are currently emerging, such as scientific tools (Brocke *et al.* 2013), which include a set of techniques from eye tracking, facial reading, skin galvanic conductivity, electro-signals encephalogram (EEG), positron emission tomography (PET), functional magnetic resonance imaging (fMRI) is used for evaluation to monitor responses to various aspects in the tourism sector (Bigné *et al.* 2016). However, these techniques are unavailable to many businesses.

The issue of accessibility for various specific groups is regulated and programmed in many countries. Alsaeedi (2020) mentions the law in the United States (Law 508), and the "Yesser" program in Saudi Arabia. The Czech National Information System (NAP, Národní informační portál, 2021) lists the Act on Website Accessibility (Act No. 99/2019 Coll.). Information accessibility of websites and mobile applications of public sector entities is based on the basic accessibility standards WCAG (Web Content Accessibility Guidelines, w3.org), which are basic standards developed by the Wide Web Consortium (W3C), which includes a methodology for creating websites for the visually, physically and hearing-impaired and accessibility measures files (MAAP). The accessibility analysis contains a catalogue of violations of standards at the level of www codes segregated according to severity level, level A, level AA and level AAA. No standards are governing the accessibility of websites for business entities in the Czech Republic. Today, there are already many accessibility methodologies (WAI, Blind Friendly Web, etc.). There are many website testing tools, such as the WAVE Evaluation Tool, NVDA or JAWS readout programs, which cannot be used for commercial purposes, as well as Color Contrast Analyzer, the authors recommend the use of the SiteImprove 2020).

Another tool is WCAG Accessibility Audit, which evaluates 28 characteristics of the web portal. Individual violations are divided into 3 levels: erroneous rules, permeable rules and rules that do not interfere with the audit. The first level represents those elements that have not been audited and their existence significantly impairs accessibility, the next group contains elements that may have failed but have passed the accessibility audit. The last group includes such factors that do not limit accessibility in any way. The individual levels are further divided into the categories "serious violation of the rule" and "revision warning". The research is focused on the distribution of factors according to the rules and the evaluation of failure rules.

Just as no person always belongs to an individual group (for example, only a senior, a person with a mental disability, a physical disability, mothers with children), it cannot be assumed that there is a well-defined set of information accessibility elements for each group in isolation. However, there are some guidelines that website developers should follow. A wide group are people with visual impairments, which include people with severe visual impairment, but also people with mild visual impairments (blindness, night blindness, color perception disorder, etc.). Sahasrabudhe (2020) points out that the blind and visually impaired have significant accessibility issues when interacting with the web. For these groups, the site must be set up to eliminate barriers to reading the site. It is difficult for people with visual impairments to find their way around the site or its structure. The main barrier to accessibility for the visually impaired is the font size and insufficiently contrasting background of the page to the text. Although site visitors typically use screen readers, the images are invisible as such. If possible, it is better to avoid "picture text". If companies use it, then website clients must use placeholder texts describing images. Otherwise, people with visual impairment cannot understand the essence of the text for the visually impaired. For people with mental disorders, a flashing text and a combination of contrasting graphic elements is a serious problem. Pages should have a logical layout and header tables, as with people with autism, focus on layout and content.

2. Methodology

The article aims to analyze and subsequently create clusters of selected elements (Table 1), which disrupted the audit of information accessibility of tourism companies in the segment of restaurant facilities in the Moravian-Silesian Region based on testing their home websites. The aim was to analyze selected elements of accessibility-related to the target group of the visually impaired. The site was tested using WGAC Accessibility Audit. 276 websites of restaurant facilities in the districts of the Moravian-Silesian Region were tested, i.e. in the districts of Bruntál, Frýdek-Místek (F-M), Karviná, Nový Jičín (NJ), Opava and Ostrava - město (hereinafter Ostrava). Individual websites were selected as a quota selection from the portal www.restu.cz/moravskoslezskykraj.cz, the only condition was the existence of a direct link to the restaurant. The sample is representative in terms of the number of restaurants in the MSK districts. According to the calculation, the sample size is sufficient, corresponding to a 5% error rate and 95% reliability.

Restaurants were segmented into individual groups based on cluster. The literature speaks of cluster analysis as the gradual joining of objects and their clusters into further and larger clusters (Meloun, 2007). There are two approaches, one hierarchical and the other clustering by decomposition. Clustering is performed using a non-hierarchical method (k-mean) or hierarchical method. The connection is realized based on the highest distances (divisional) or the smallest distances (agglomerative clustering). The first approach is a gradual grouping according to the chosen criterion (distance). The second approach uses, for example, k-means. Euclidean or Manhattan metrics are most often used to measure the distance of objects (subjects), the distance methods are then listed in Table 4, using SPSS. Asterisked methods are not used for Manhattan metrics. In the research, the method of hierarchical clustering was chosen. The correctness of the classification of individual variables into clusters was verified based on the cophenetic correlation coefficient CC (1) and the values delta (0.5) and delta (1.0), (2). The optimal case is when the coefficient CC takes values close to 1, on the contrary, the delta values approach 0. If the coefficient takes values in the interval less than 0.5, then the clusters are formed incorrectly. Distance calculations were performed in NCSS and SPSS.

$$CC = \frac{\sum_{i < j} [x(i, j) - \bar{x}] [t(i, j) - \bar{t}]}{\sum_{i < j} [x(i, j) - \bar{x}]^2 [t(i, j) - \bar{t}]^2} \quad 2.1$$

where: $x(i, j) = |X_i - X_j|$ Euclidean distance between i -th and j -th observations, $t(i, j)$ dendrogram distance between model points,

$$\Delta_A = \left[\frac{\sum_{j < k} |d(x_j, x_k) - d^*(x_j, x_k)|^{\frac{1}{A}}}{\sum_{j < k} (d^*(x_j, x_k))^{\frac{1}{A}}} \right]^A \quad 2.2$$

where: $A = 0.5; 1$, the actual distances $d(x_i, x_j)$, predicted by the similarity tree $d^*(x_i, x_j)$,

The analysis of clusters of companies according to selected elements of the barrier to the adoption of the "web portal accessibility audit" of catering facilities in MSK was performed using all available methods (see Table 4). The correctness of clusters will also be validated on the basis of the silhouette value, where silhouette values less than 0.51 indicate a poor distribution of objects into clusters. A value in the range of 0.51 - 0.28 indicates a cluster bias. Selected elements of restaurant accessibility in MSK are elements that represent barriers to navigating the website. The elements were selected on the basis of the evaluated WCAG audit elements (Table 1).

Table 1. Indicator website accessibility

Factory	Cod
Text elements should have a reasonable contrast ratio	Q1
Images should have a text alternative or presentation role	Q2
Controls and media elements should have labels	Q3
Tables should have matching headers	Q4
Meaningful images should not be used in the background of elements	Q5
These elements are focusable, but either invisible or obscured by another element	Q6

Source: own proceeding

3. Results

In the MSK region, there are 7 corporate sites out of the 276 sites analyzed without any error at a level that would affect the accessibility audit. Of these 7 companies, 3 are from the Opava district, 2 companies from the Ostrava district and one each from Bruntál and Nový Jičín. The most problematic issue for restaurants in all MSK regions is the insufficient contrast ratio of the text elements concerning the background (Q1 253 cases, 91.67%). The highest share of these barriers for the visually impaired was in enterprises in the district of Karviná (95.8%; 46 out of 48 cases). This problem is most common in the Bruntál district (56.00%) and the Karviná district (45.00 %). Low error rates for sites when placing images in the background, with only 56 businesses (20.29%) having images in the background, overall in MSK districts ranging from 12.00% to 25%. The companies Bruntál (12%) and Karviná (16.70%) had the lowest error rate. The violation of this element was most pronounced on the websites of companies in Ostrava restaurants. The second most numerous barrier on the website of MSK tourism facilities was blurred elements or elements invisible or covered by another element (164 cases out of 276; 59.42%). The existence of poorly visible or obscured objects by other elements was relatively large (interval 50-66% of enterprises in each of the districts), which makes it impossible for the visually impaired to find their way around (Table 2).

Table 2. Occurrence of errors preventing the acceptance of the accessibility audit

	Q1	Q2	Q3	Q4	Q5	Q6	Total
Bruntál	88,0	56,0	24,0	8,0	12,0	52,0	100
F-M	84,3	31,4	15,7	33,3	19,6	62,7	100
Karviná	95,8	45,8	20,8	14,6	16,7	56,3	100
NJ	91,7	33,3	13,9	25,0	19,4	55,6	100
Opava	91,7	30,6	2,8	25,0	22,2	55,6	100
Ostrava	95,0	37,5	18,8	28,8	25,0	65,0	100

Source: own proceeding

Elements Q3 and Q4, i.e. problems with table headings and controls, posed serious problems. Visually impaired people have to deal the least with missing labels on controls and media. Only 45 companies (16.30%) in MSK had this problem. The most errors were detected as a percentage of the number of enterprises in the district of Bruntál (6 cases out of 25; 24.00%) and 10 cases (20.83%) in the district of Karviná, followed by 18.75% in the district of Ostrava. in absolute values. Enterprises in the Opava district perform best in this element (1 case out of 36 enterprises, 2.78%). Only two websites (in the districts of Ostrava and Karviná) contained such accessibility violations, which it is recommended to revise. The results of occurrence according to the severity and the share of the total occurrence of errors are specified in Table 3. For clarity, it is necessary to apply headers for tables. In total, MSK violated this audit rule in 67 companies (24.28%). The companies of the Bruntál and Karviná districts pay attention to this rule of the table header when creating the website.

Table 3. Indicator website accessibility

	Q3				Q4			
	recommendation		serious		recommendation		serious	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Bruntál			6	13,95			2	3,13
F-M			8	16,60			17	26,56
Karviná	1	50	9	20,93			7	10,94
NJ			5	11,63			9	14,06
Opava			1	2,33	2	66,67	7	10,94
Ostrava	1	50	14	32,56	1	33,33	22	34,38
Total	2		43		3		64	

Source: own proceeding

The analysis of clusters of companies according to selected elements of the barrier to the adoption of the "web portal accessibility audit" of catering facilities in MSK was performed using all available methods (see Table 4).

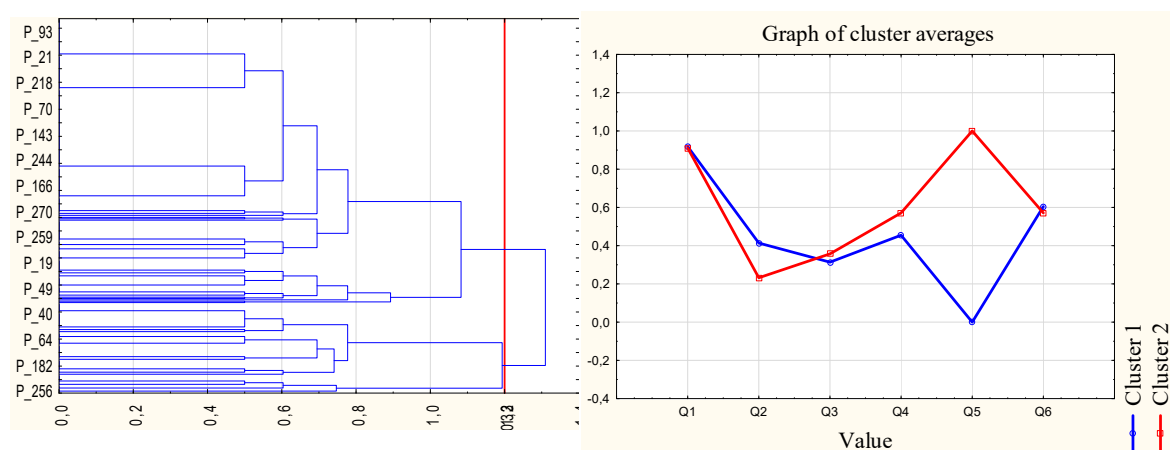
Table 4. Calculation of Cofenetic Coefficient CC and delta (0.5; 1)

	Centroid*	Median*	Group Average	Simple Average	Complete Linkage	Single Linkage	Ward's*
Manhattan							
CC			0,81	0,80	0,80	0,60	
Delta (0,5)			0,25	0,24	0,46	1,67	
Delta (1,0)			0,32	0,30	0,51	2,0	
Cluster			1	1	2	1	
Euclidean							
CC	0,88	0,86	0,93	0,92	0,92	0,69	0,83
Delta (0,5)	0,50	0,70	0,12	0,13	0,24	0,83	0,97
Delta (1,0)	0,60	0,85	0,16	0,16	0,28	1,05	0,98
Cluster	1	1	2	2	4	1	2

Source: own proceeding

Restaurant objects can be divided into clusters based on a table. Based on the calculation, the distribution that showed the highest CC value and the lowest delta values was selected. The distribution of distributions based on Euclidean metrics and the use of the Group Average method, which divides the file into 2 clusters, seem to be the best. In Figure 2 (left), the dendrogram is generated based on the result of the "Metric Euclidean Distance" and "Method Group Average" calculations.

Figure 2. Graph of cluster averages and dendrogram analysis



Source: own proceeding

Figure 2 (right) shows a lower error rate for cluster 1 "Meaningful images should not be used in the background of elements" and "Tables should have appropriate headers" Images should have a text alternative or presentation role. Cluster 2 can be considered entities with less competitive sites in terms of accessibility. This group included (cluster number 2) 66 restaurants, of which 2 from the district of Bruntál (8%), 7 companies from

the district of Karviná (14.6%), from the district of Opava and Nový Jičín it was after 9 companies (24.8%). The second group also included 22 companies from the Ostrava district (27.5%) and district Frýdek-Místek (33,3 %, 17 restaurants).

The correctness of clusters will also be validated based on the Silhouette value, where Silhouette values less than 0.51 indicate a poor distribution of objects into clusters. A value in the range of 0.51 - 0.28 indicates a cluster bias. Validation of the number of clusters using the value shows that the specified file cannot be divided into individual clusters. Therefore, we cannot consider the division into two clusters to be relevant (table 5).

Table 5. Silhouette value

No. cluster	2	4	20
Silhouette	0.28	0.27	-0.93

Source: own proceeding

4. Discussion and Conclusion

Table no. 6 shows that the most errors in absolute values were reported by websites in the district of Ostrava (180 errors recommended and 36 serious), the least errors were reflected in web presentations in the district Bruntál (93 recommended and 8 serious errors). After recalculating the total amount per sample examined in the district, it is clear that the worst competitive districts Frýdek-Místek (0.49 errors per sample examined in F-M district) and Ostrava (0.45 errors on the examined sample in the district of Ostrava). Businesses in the Opava District are doing their best. From the point of view of serious errors at the level of errors, which are a barrier to accepting the audit, the companies in the Ostrava and Bruntál districts and the lowest show the highest error rate by the websites of catering companies in the Frýdek-Místek district. From the point of view of the share of selected elements in audit errors, Bruntál and subsequently the Opava district can be considered as regions where there are higher barriers to accessibility for the visually impaired. The district of Ostrava and Frýdek-Místek can be considered a better-quality internet space for the visually impaired based on selected elements.

Table 6. Summary of error rate of selected elements in MSK restaurant facilities

	Level 1 errors	Proportion of level 1 elements in%	Serious errors (A)	Error notification (B)	A/Σ enterprises in region %	B /Σ enterprises in region %
Bruntál	93	2,15	8	52	0,32	2,08
F-M	207	0,97	25	101	0,49	1,98
Karviná	196	1,02	16	104	0,33	2,17
NJ	142	1,41	14	72	0,39	2,00
Opava	126	1,59	8	74	0,22	2,06
OV	325	0,92	36	180	0,45	2,25

Source: own proceeding

The results of the research can be summarized in the conclusion that based on cluster analysis it was not possible to identify acceptable clusters of companies in the regions, depending on the examined error rate in the site (see Table 6), which was confirmed to state in the discussion that the conclusions obtained by the error analysis correspond to the conclusions of other researches, especially the Můček's research (2021), which analyzed information accessibility of web portals of 10 business corporations through the blind (E-shop accessibility testing methodology). As in our research, where out of 276 restaurant web portals, there was only a small percentage of companies that did not notice any mistakes that disrupted the accessibility audit (7 companies), so in Můček's research, there was no website that would get the full number of points (max. 50 points) based on which the convenience of the purchase was assessed. Most of the sites in Můček (2021) research were in the range of 30 - 40 points, two companies received 45.6 and 45.5 (91%) points. Although the situation of inaccessibility is not so bad, Harper and Chen's (2012) claims that accessibility recommendations are still ignored. Al-Khalifa (2010) noted a high level of error in the use of textual alternatives as early as 2010, stating that one of the three most common accessibility errors he encountered on government homepages was that they did not add a textual alternative to non-textual elements, thereby violating the guarantee of inclusion of people with special needs and the rate of acceptance of the recommendation was about 10% at that time. On the contrary, Asakawi (2005) concludes that this availability criterion is growing in the US Internet space, given the rapid development of Internet and web technologies, interactivity and multimedia of websites, but these conclusions can be questioned today. However, Asakawa's (2005) recommendations remain that, when creating a website, the developer or site designer should identify the barriers of each specific group based on the personal

knowledge of people with specific disabilities, which would help to create a truly error-free website in terms of information accessibility. Given that gastronomic services, as one of the elements of tourism, including foreign tourists, have considerable potential, (it is necessary to realize that in the Czech Republic, there are approximately 83 thousand inhabitants with severe visual impairments (0.78%) and more than one billion people living with some disability in the world), more attention needs to be paid to the creation of the company's website, both for the inclusion of these people and for the ability to reach a wide range of potential customers. Today, sophisticated content creation knowledge is required, due to the complexity of creating pages whose content has moved from static to dynamic content over the years. According to the survey, among the catering companies located in MSK, there are 2% of companies that do not have a website but use only social networks for their promotion and 0.4% do not interact on the Internet at all and do not use any of the social network platforms (Facebook, Instagram). Therefore, it is indisputable that times have moved forward, and clients today no longer have to find it difficult to find all the information they need. Still, most companies already consider information technology as commonplace, which strengthens competitiveness and allows demand and supply to be flexibly matched.

The enumeration and evaluation of interaction tools are not final in this article. Most authors are looking for tools to increase the comfort of web browsing. Non-visual interactions with the web, such as a screen reader, are a primary interaction tool. The problem is this narrowed to the specification of factors increasing readability and orientation in the text. However, a relatively large set of studies point to a combination of factors to improve readability, informational content, and technical means of interaction between the visually impaired and the website. Some empirical studies show the possibilities of tactile interaction, (Maurel *et al.* 2020) evaluate the performance of sighted and blind people in distinguishing website structures using vibrotactile feedback, when the visual structure is converted websites on tactile landscapes that can be explored on any touch screen mobile device. Comprehensive research (Kearney-Volpe and Hurst 2021) signals future directions for developing accessible web-based curricula and support tools, including solutions that leverage artificial intelligence, tactile graphics, and supporting online practice communities. Other authors (Pina *et al.* 2021) even talk about the emerging web interaction paradigm, which allows blind and visually impaired users and regular users to access website content and functions and emphasize the need for a cognitive approach and heuristic conversation agents.

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References

- [1] Al-Khalifa, H.S. 2010. Exploring the accessibility of Saudi Arabia e-government websites: A preliminary results. (paper presented at 4-th International Conference on Theory and Practice of Electronic Governance ICEGOV '10. Cairo, Egypt, December 1–4, 2008). DOI: [10.1145/1930321.1930378](https://doi.org/10.1145/1930321.1930378)
- [2] Alsaeedi, A. 2020. Comparing Web Accessibility Evaluation Tools and Evaluating the Accessibility of Webpages: Proposed Frameworks. *Information*, 11(1): 1-40. DOI: <https://doi.org/10.3390/info11010040>
- [3] Asakawa, Ch. 2005. What's the web like if you can't see it? (paper presented at International Cross-Disciplinary Workshop on Web Accessibility (W4A), Chiba, Japan, May 10, 2005). DOI: <https://doi.org/10.1145/1061811.1061813>
- [4] Baggio, R. and Corigliano, A.M. 2011. Technological aspects of public tourism communication in Italy. *Journal of Hospitality and Tourism Technology*, 2(2): 105-119. DOI: [10.1108/17579881111154227](https://doi.org/10.1108/17579881111154227)
- [5] Bigné, E., *et al.* 2016. Elapsed time on first buying triggers brand choices within a category: A virtual reality-based study. *Journal of Business Research*, 69(4): 1423-1427. DOI: [10.1016/j.jbusres.2015.10.119](https://doi.org/10.1016/j.jbusres.2015.10.119)
- [6] Brocke, J.V., Riedl, R. and Léger, P.M. 2013. Application strategies for neuroscience in information systems design science research. *Journal Computer Information System*, 53(3): 1– 13. DOI: <https://doi.org/10.1080/08874417.2013.11645627>
- [7] Castiglioni, M. and Gaj, N. 2020. Fostering the Reconstruction of Meaning among the General Population During the COVID- 19 Pandemic. *Frontiers in Psychology*, 11: 1 -13. DOI: [10.3389/fpsyg.2020.567419](https://doi.org/10.3389/fpsyg.2020.567419)

- [8] Chiou, W.CH., *et al.* 2010. A strategic framework for website evaluation based on a review of the literature from 1995–2006. *Information & Management*, 47(5):282-290. DOI: <https://doi.org/10.1016/j.im.2010.06.002>
- [9] Cristobal-Fransi, E., *et al.* 2017. Implementation of Web 2.0 in the snow tourism industry: Analysis of the online presence and e-commerce of ski resorts. *Spanish Journal of Marketing – ESIC*, 21(2): 117-130. DOI:<https://doi.org/10.1016/j.sjme.2017.06.002>
- [10] Daries, N., *et al.* 2018. Maturity and development of high-quality restaurant websites: A comparison of Michelin-starred restaurants in France, Italy and Spain. *International Journal of Hospitality Management*, 73: 125-137. DOI: <https://doi.org/10.1016/j.ijhm.2018.02.007>
- [11] Dluhošová, R., Burda, A., Vavrečková, E. and Stuchlíková, J. 2011. *Mystery Shopping*. Prolegomena, Opava.
- [12] Fernández-Cavia, J., *et al.* 2014. Web Quality Index (WQI) for official tourist destination websites. Proposal for an assessment system. *Tourism Management Perspectives*, 9: 5-13. DOI:<https://doi.org/10.1016/j.tmp.2013.10.003>
- [13] González – López, O.R., *et al.* 2013. El índice cuantitativo de calidad web como instrumento objetivo de medición de la calidad de sitios web corporativos Quantitative Web Quality Index: An objective approach to website quality assessment. *Investigaciones Europeas de Dirección y Economía de la Empresa*, 19(1): 16-30. DOI: <https://doi.org/10.1016/j.iedee.2012.07.004>
- [14] Harper, S. and Chen, A.O. 2012. Web accessibility guidelines. *World Wide Web*, 15: 61-88. DOI:<https://doi.org/10.1007/s11280-011-0130-8>
- [15] Jeon, M.M. and Jeong, M. 2016. Influence of Website Quality on Customer Perceived Service Quality of a Lodging Website. *Journal of Quality Assurance in Hospitality & Tourism*, 17 (4): 453-470. DOI:[10.1080/1528008X.2015.1127193](https://doi.org/10.1080/1528008X.2015.1127193)
- [16] Kearney-Volpe, C. and Hurst, A. 2021. Accessible Web Development: Opportunities to Improve the Education and Practice of web Development with a Screen Reader. *ACM Transactions on Accessible Computing*, 14(2): 1-32. DOI: [10.1145/3458024](https://doi.org/10.1145/3458024)
- [17] Kostková, M. and Pellešová, P. 2021. Global Aspects of the Gastronomic Trends and Innovations. (paper presented at 20th International Scientific Conference Globalization and its Socio-Economic Consequences 2020. Žilina, Slovakia, October 13-14, 2021). DOI: [10.1051/shsconf/20219204014](https://doi.org/10.1051/shsconf/20219204014)
- [18] Kourtesopoulou, A., *et al.* 2020. Evaluating Quality in Tourism Destination Websites of Peloponnese. Cultural and Tourism Innovation in the Digital Era. (paper presented at Sixth International IACuDiT Conference, Athens, Greece, 12 February 2020). DOI: [10.1007/978-3-030-36342-0_24](https://doi.org/10.1007/978-3-030-36342-0_24)
- [19] Law, Ch.M., Jaeger, P.T. and McKay, E. 2010. User-centered design in universal design resources? *Universal Access in the Information Society*, 9(4): 327-335. DOI: <https://doi.org/10.1007/s10209-009-0182-z>
- [20] López-Guzman, T., Rodríguez-García, J., Sanchez, S. and Luján-García, M.J. 2011. The development of wine tourism in Spain. *International Journal of Wine Business Research*, 23: 374-386. DOI:[10.1108/17511061111186523](https://doi.org/10.1108/17511061111186523)
- [21] Luna-Nevarez, C. and Hyman, M.R. 2012. Common practices in destination website design. *Journal of Destination Marketing & Management*, 1: 94 – 106. DOI: <http://dx.doi.org/10.1016/j.jdmm.2012.08.002>
- [22] Maurel, F., Dias, G., Safi, W., Routoure, J.M. and Beust, P. 2020. Layout Transposition for Non-Visual Navigation of Web Pages by Tactile Feedback on Mobile Devices. *Micromachines*, 11(4): 1-18. DOI:<https://doi.org/10.3390/mi11040376>
- [23] Meloun, M. 2007. Statistické zpracování vodohospodářských dat. Vodní vodohospodářství. Available at: <https://meloun.upce.cz/docs/publication/189.pdf> (in Czech)
- [24] Můčka, Jan. 2021. Nevidomí otestovali přístupnost českých e-shopů: kde se jim nakupovalo nejlépe? MasterDC. Available at: <https://www.master.cz/blog/nevidomi-otestovali-pristupnost-ceskych-e-shopu/>
- [25] NAP. Národní informační portál. Přístupnost informací. Architektura eGovernmentu ČR 2021. Available at: <https://archi.gov.cz/nap:pristupnost-informaci> (in Czech)

- [26] Patra M.R. and Dash, A.R. 2017. Accessibility Analysis of some Indian Educational Web Portals. *International Journal of Computer Science, Engineering and Applications (IJCSEA)*, 7(3/4): 41 -55. DOI:[10.5121/ijcsea.2017.7404](https://doi.org/10.5121/ijcsea.2017.7404)
- [27] Pina, A, Baez, M. and Daniel, F. 2020. Bringing Cognitive Augmentation to Web Browsing Accessibility. (paper presented at 18th International Conference on Service-Oriented Computing (ICSOC). 2021. Dubai, virtual, December 14-17, 2020). DOI: [10.1007/978-3-030-76352-7_37](https://doi.org/10.1007/978-3-030-76352-7_37)
- [28] Rahmianti, F., *et al.* 2019. Tourism Value Chain Activities Model for Competitive Advantage Measurement. (paper presented at International Conference on Trade 2019 (ICOT 2019)., Porto, Braga, Portugal, June 26-29, 2019). DOI: <https://doi.org/10.2991/icot-19.2019.10>
- [29] Rosalin, G., Poulston, J. and Goodsir, W. 2016 Strategy Communication in Family-Owned Restaurants: Ad Hoc and Ad-Lib. *International Journal of Hospitality & Tourism Administration*, 17(2): 101-122. DOI: <https://doi.org/10.1080/15256480.2015.1126798>
- [30] Sahasrabudhe, S. and Singh, R. 2020. Interaction Strategies of Blind Web Users - A Qualitative Study. (paper presented at Conference of the Association-for-Information-Systems (AMCIS). 2020. Virtual, August 9-13, 2021).
- [31] Šenková, A., *et al.* 2020. Gender Differences in Perception on Sustainable Tourism – Case Study Applied to the Pu in Prešov. *GeoJournal of Tourism and Geosites*, 32(4): 1216–1221. DOI:<https://doi.org/10.30892/gtg.32404-560>
- [32] Turková, L. and Maráková, V. 2021. Hodnotenie kvality webových stránok manažérskych organizácií cestovného ruchu. (paper presented at 9-th International Conference: Current Trends in Tourism. Karviná, Czechia, May 26, 2021).
- [33] Athéna na cestách. Přístupný cestovní ruch & Informační systémy. Kauzist metodika přístupnosti 2011. Available at: <http://www.kauzist.cz/download-9062ac5057/> (in Czech)
- [34] E-shop accessibility testing methodology. *MaterDC*, 2021. Available at: https://docs.google.com/document/d/1Qnfy8unkpq_ScUFwz_F8ScPHFAZpNBuT/edit
- [35] Ministry for Regional Development. Evropský systém ukazatelů v oblasti cestovního ruchu: Soubor nástrojů pro udržitelné destinace. Available at: <https://www.mmr.cz/getmedia/ed4ea4de-1cf2-4323-a2a2-e96113b96691/Evropsky-system-ukazatelu-v-oblasti-cestovniho-ruchu.pdf>
- [36] w3.org. Web Content Accessibility Guidelines (WCAG) Overview Web Accessibility Initiative, 2021. Available at: <http://www.w3.org/WAI/intro/wcag.php>