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ONLINE DICTIONARIES AND ACCESSIBILITY FOR PEOPLE WITH VISUAL IMPAIRMENTS

Keywords Accessibility; online dictionaries; visual impairments

At its core, much lexicographic research is concerned with the accessibility of dictionaries. In general, this interest is apparent in research on look-up patterns (Laufer/Kimmel 1997), signposting (DeCesaris 2012), and other elements of microstructure. As regards digital dictionaries, concern for accessibility is evident in the use of novel methods, for example, eye-tracking (Lew/Grzelak/Leszkowicz 2013) and the investigation of phenomena such as the effect of advertisements in online dictionaries on users (Dziemianko 2020). For many users, this has led to improvements in accessibility. There is, however, a significant minority of users for whom accessing dictionaries still poses a significant problem.

Globally, there are an estimated 285-million people with visual impairments. This group is particularly at risk of social exclusion (WHO no date). This is evident in high rates of unemployment and underemployment among this cohort (National Federation of the Blind no date). Recent years have brought greater emphasis on making websites more accessible for this group (Barreto/Hollier 2019). It is against this backdrop that this study evaluates three popular online dictionary websites in terms of their accessibility for people with visual impairments. This is undertaken with the aim of highlighting good practice and offering suggestions for improvement. The goal of making online dictionaries more accessible for people with visual impairments needs no further justification. However, its importance is clearer still when one considers that in addition to their role in recording language and resolving doubts, dictionaries also play a role in marking out socio-cultural identities (Lew 2014). From this perspective, accessible dictionaries may play a role in promoting the social inclusion of this oft-marginalised group.

The dictionary websites evaluated are the *collinsdictionary.com* portal (CDP); *dle.rae.es*, the online version of the *Real Academic Española: Diccionario de la lengua Española* (DLE); and the *merriam-webster.com Dictionary* (MWD). These dictionaries frequently rank among the most visited dictionary websites.

	Language	**Location**	**Type**	**Multimedia**
CPD	English	UK/USA	General, bilingual*, MLD, specialist	Audio, photographs, video
DLE	Spanish	Spain	General	None
MWD	English	USA	General	Audio

Table 1: Characteristics of the dictionary websites sampled
(* The bilingual functions are not included in the evaluation)

As Table 1 shows, the sample covers several monolingual dictionary types and contains dictionary websites with features which may influence accessibility. The relatively high rate of employment and standard of living of people with visual impairments in Spain (Suther-

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land-Meier 2015) and the inclusion of a Spanish dictionary published by the *Real Academic Española*, an organisation supported by the Spanish state, permits speculation about how differences in website accessibility might relate to the degree of social inclusion of people with visual impairments. Websites with a range of multimedia enhancements are included as these features may influence website accessibility.

In an attempt to replicate the way users typically navigate dictionary websites, this study evaluates a structured sample of webpages. For each website the sample includes the landing page, pages pertaining to a short monosemic entry, a long polysemic entry, an entry with an image, and an entry with a video. In line with common practice in website accessibility evaluations, a two-stage method is employed. First, the extent to which the websites comply with the *Web Content Accessibility Guidelines* (W3C no date) is evaluated using three automatic tools (Abascal/Arrue/Valencia 2019). This gives a quantitative summary of those guidelines which have been met and those which have not. The second manual analysis stage involves navigating through the dictionary website as a user might. This is done three times, once without assistive technologies, once with screen reading software which reads the screen using a computer synthesised voice, and once with magnifying software.

The websites examined present accessibility challenges for people with visual impairments. Many of these challenges are not related to the core lexicographic data, but ancillary elements such as word-of-the-day features, mailing list sign-up forms, advertisements, and other promotional materials which lack labels for screen readers and other assistive technologies. As far as the dictionary entries are concerned, a lack of contrast between foreground and background colours is noted for microstructural elements such as usage and world class labels. Fortunately, many of these issues can be easily remedied.

It is hoped that these findings will not only help people with visual impairments gain improved access to online dictionaries, but also provide developers of digital dictionaries with practical advice for making resources more accessible to people with visual impairments.

References

Abascal, J./Arrue, M./Valencia, X. (2019): Tools for web accessibility evaluation. In: Yesilada, Y./Harper, S. (eds.): Web accessibility: a foundation for research. 2nd edition. London, pp. 479–503.

Barreto, A./Hollier, S. (2019): Visual disabilities. In: Yesilada, Y./Harper, S. (eds.): Web accessibility: a foundation for research. 2nd edition. London, pp. 3–17.

DeCesaris, J. (2012): On the nature of signposts. In: Fjeld, R. V./Torjusen, J. M. (eds.): Proceedings of the 15th EURALEX International Congress. Oslo, pp. 532–540.

Dziemianko, A. (2020): Smart advertising and online dictionary usefulness. In: International Journal of Lexicography 33 (4), pp. 377–403.

Laufer, B./Kimmel, M. (1997): Bilingualised dictionaries: how learners really use them. In: System 25 (3), pp. 361–369.

Lew, R. (2014): Dictionaries and their users. In: Hanks, P./de Schryver, G.-M. (eds.): International handbook of modern lexis and lexicography. Berlin/Heidelberg, pp. 1–9.

Lew, R./Grzelak, M./Leszkowicz, M. (2013): How dictionary users choose senses in bilingual dictionary entries: An eye-tracking study. In: Lexikos 23 (1), pp. 228–254.

National Federation of the Blind (no date): Blindness statistics. National Federation of the Blind. https://nfb.org/resources/blindness-statistics (last access: 25-03-2022).

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Sutherland-Meier, M. (2015): Toward a history of the blind in Spain. In: Disability Studies Quarterly 35 (4).

W3C (no date): Web content accessibility guidelines (WCAG) overview. Web Accessibility Initiative (WAI). https://www.w3.org/WAI/standards-guidelines/wcag/ (last access: 15-11-2021).

WHO (no date): WHO | 10 facts about blindness and visual impairment. https://www.who.int/features/factfiles/blindness/blindness_facts/en/ (last access: 15-11-2021).

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