CONFORMANCE ASSESSMENT WITH THE WEB CONTENT ACCESSIBILITY GUIDELINES (WCAG): EXPERTISE OF THE EVALUATOR AND ITS RELATIONSHIP WITH INSPECTION TECHNIQUES

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1. Context

This short paper must present a bit of the research using from 800 until 1500 words of the complete paper, including the following topics: introduction/ research context, methodology, results and conclusion, as suggested on this template.

Around the world, there are more than one billion people with some form of disability, or 15% of the world's population, according to the World Health Organization (WHO, 2016). In Brazil, more than 45 million people (or 23.9% of the Brazilian population) reported having a disability in the last Brazilian IBGE Census (2010).

Data from an Internet Management Committee (CGI.br) study revealed that only 5% of .gov.br sites were accessible in 2012, when, at that time, all direct and indirect government administration websites should already be accessible by force of Brazilian Federal Decree 5.296, of December 2, 2004.

In contrast with this, Tim Berners-Lee, W3C Director and inventor of the World Wide Web, said that "the power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect".

This article aims to present steps of a research that studied the relationship between an accessibility assessment technique – the verification of website compliance with WCAG 2.0 – with the characteristics of the profile of the evaluator.

2. Method

The following steps and their techniques have defined the following scope to be presented in this article:
• literature review and documentary research: state of the art regarding accessibility assessment, with emphasis on the verification technique of compliance with WCAG 2.0. We have considered in the scope books, periodicals and reference portals like the W3C website.
• first exploratory study: observation of inspection evaluations by volunteer evaluators with different training profiles and knowledge related to accessibility;
• second exploratory study: remote observation evaluation by volunteer with expertise in accessibility and related knowledge; and
• evaluation by experienced volunteer evaluators (specialists) with road-based accessibility knowledge and steps of evaluation defined by WCAG-EM 1.0.

3. Results

According to the proposed method, two exploratory studies of accessibility conformance verification were preliminarily carried out were conducted with the volunteer participation.

First, volunteers with different profiles of expertise and predetermined script of evaluation based on the scanning of WCAG violations in a defined website.

Second, a volunteer with high level of expertise and free script was invited to describe the steps that he will follow to evaluate the conformance of a defined website, without define the steps of the evaluation.

The studies indicated the confirmation that there is high relation between evaluator profile (knowledge about accessibility and web technologies) and results of the evaluation, according to Yesilada *et al.* (2009).

Thus, the second exploratory study indicates the possibility of misinterpretations of the application of the conformance evaluation without presetting all the steps to be followed. The volunteer have suggested steps that was not part of conformance evaluation scope.

From this, a third study was done with a predefined itinerary based on the document Website Conformance Accessibility Guidelines Evaluation Methodology (WCAG-EM 1.0), only with volunteers evaluators with adequate level of knowledge and experience related to accessibility, recruited through an online questionnaire published in specialized discussion lists on digital accessibility and human-computer interaction.

There were 83 respondents, with 62 valid answers and 25 fulfilled the criteria to be considered fit for the accessibility evaluation stage. Among these, nine volunteers performed individual evaluations by the technique studied according to the predefined itinerary, and the results were compared to each other. The steps of evaluation could be registered by the evaluators in an online form, with the same description texts of each considered step of WCAG-EM 1.0 document.

Significant differences were observed in the comparison of the answers proposed by the expert volunteers. The results allowed to understand that there is a great difference in the understanding between the evaluators in relation to the sub-steps based on WCAG-EM 1.0.

One of the evaluators had a significantly higher self-assessment profile for all cut-off criteria (knowledge and accessibility assessment techniques). It was observed to be clear the correlation of the experience and knowledge of this profile with the corresponding results found by the evaluator.

In the responses to step 2 of the evaluation, in the responses to list common pages (2.a), essential functionalities (2.b), variety of page types of the evaluated site (2.c) and other relevant pages (2.e) of the evaluated website, there was a huge discrepancy in the understanding shown by the volunteers' responses, both in the number of responses and in their content.

4. Conclusion

The results confirmed the importance of the evaluator profile for the effectiveness of the conformance verification technique.

In addition, it is important too better describe the terms used in WCAG-EM 1.0. This is necessary to allow equal or at least very similar understandings of the concepts proposed in the evaluation methodology, to better guide the assessment process.

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