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Evaluating Science Gateways for Accessible Design

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Abstract

Accessibility is a key feature of usability. Providing web accessibility ensures that prospective users, particularly in science gateways are able to access advance resources for science research, educators, and students. The resources should be easily accessible in any site regardless of having a disability or not. Creating and implementing accessibility practices improves usability of sites for all users. The purpose of this study is to evaluate the Science Gateways for Accessible design. Previous research has been examined from selected science gateway sites (SGCI). In which results showed that none of these sites were fully compliant with W3C, WCAG 2.0 standards. We obtained quantitative data by creating a questionnaire and sent it to gateway organizations through an SGCI newsletter in order to examine their level of knowledge and interest in web accessibility. Our findings indicate that many of these organizations do have a strong interest in obtaining more knowledge on accessibility requirements and should dedicate more time to test for usability.

Introduction

As designers it is crucial that we begin to design with accessibility. It is important that when we build digital content that it can be used by a wide range of users including those with visual, motor, auditory, speech, or cognitive disabilities. Not only must we design responsibly for all users to access science gateways for the resources they may need but, science organizations should begin to realize that lawsuits pertaining to accessibility requirements are on the rise. According to Usablenet's data and their research team, law suits pertaining to accessibility have increased by 23% from 2019 to 2020. Providing support for people with disabilities should be a key task as well as creating interesting and engaging learning environments. As the world becomes more technological it must also become more accessible for everyone.

Methods

For this study I've taken the opportunity to use a web based form for quantitative data collection purposes. The data gathered was from a questionnaire that was sent to organizations from Sciencegateways.org to test their comprehension and inquisitiveness for accessibility on their institutions site. We received answers from 9 participants, we then created a follow up questionnaire for the participants that allowed us to contact them after the survey. The follow up questions were relevant to the first questionnaire and for them to connect each answer to the questions, and ask about the implementation of each answer.

How would you rate your organization's website accessibility right now?

How would you rate your knowledge about web content accessibility requirements?

Legend: Very Poor, Poor, Neutral/ I'm not sure, Somewhat good, Very good

Results

Survey Results

- 89% of participants said they felt Neutral/Not sure about their organization being accessible to people with disabilities.
- 22% of participants said they agree that their gateway site has people responsible for ensuring accessibility.
- 55.6% of participants said they have not received training in WCAG 2.0 AA.
- 44.4% of participants have received training in WCAG 2.0 AA.
- 66.7% said they would like their staff to take online training on accessibility guidelines
- 44.4% of participants are interested in learning about website accessibility.
- 44.4% of participants believe addressing accessibility is urgent at their organization.

More Findings

- We found that participants feel that an accessibility checklist would be a helpful feature to help implement accessibility practices in their sites.
- According to Usablenet's data and research team 2020 saw a total of 3,550 ADA-related cases.
- Lawsuits increased by 23% from the 2,890 cases in 2019.
- This data is equal to nearly 10 lawsuits filed daily in federal and California courts.
- Retailers face these lawsuits frequently due to lack of accessibility when customers are shopping online during the check out processes.

Conclusion

As designers we need to recognize that we have an enormous impact in how we design. A huge part of design's responsibility is to implement accessibility practices so that it can allow us to focus on enabling users with and without disabilities to navigate and interact with the services a site may have to offer and that they can contribute their research equally without drawbacks.

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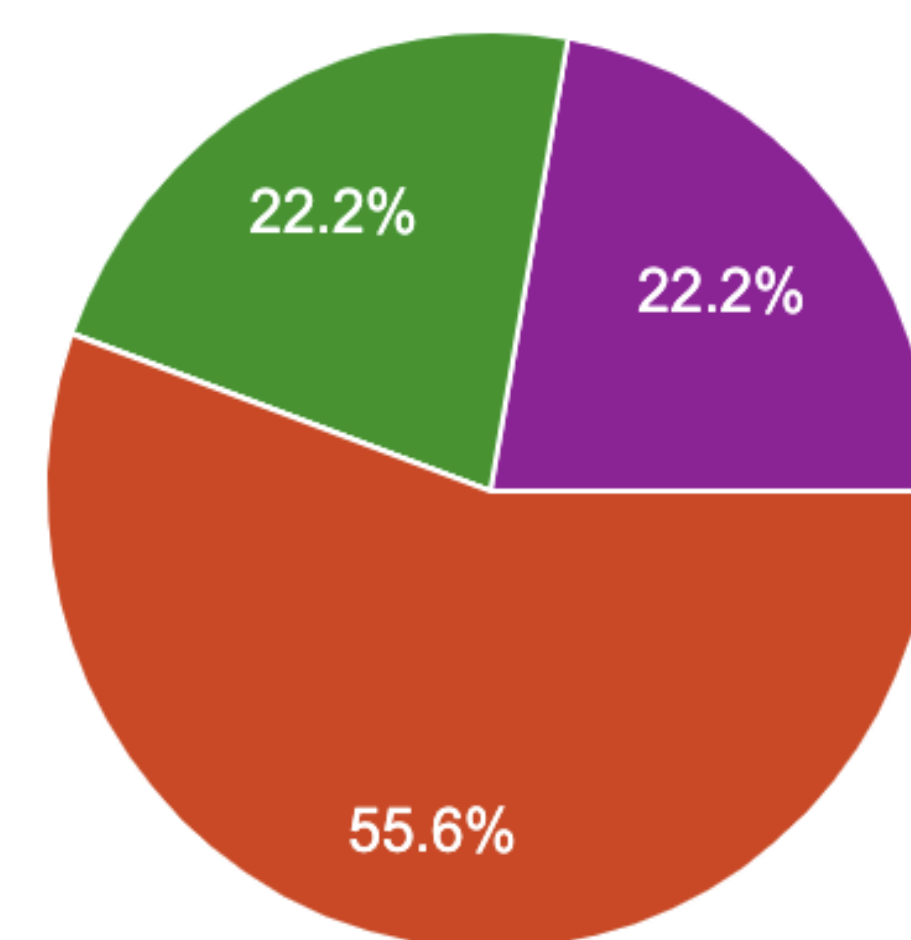Sims, G. (2018, June 6). WCAG 2.1: What is Next for Accessibility Guidelines. Retrieved from https://www.deque.com/blog/wcag-2-1-what-is-next-for accessibility-guidelines/

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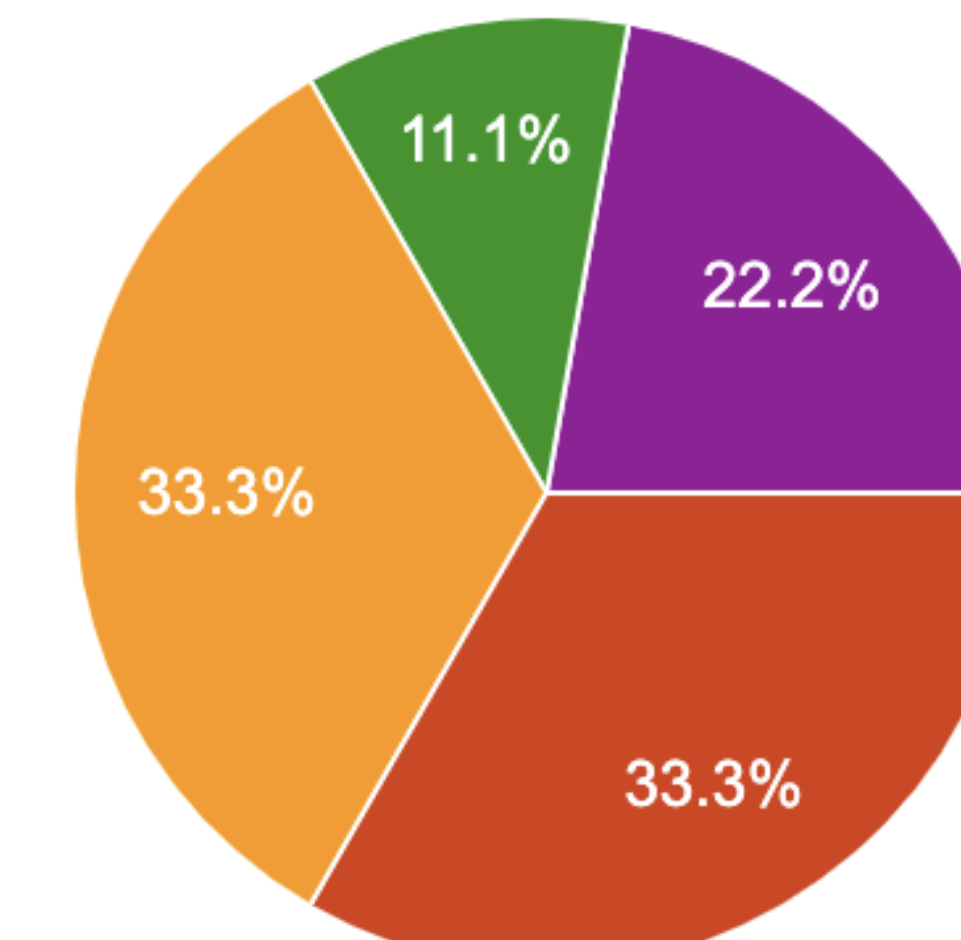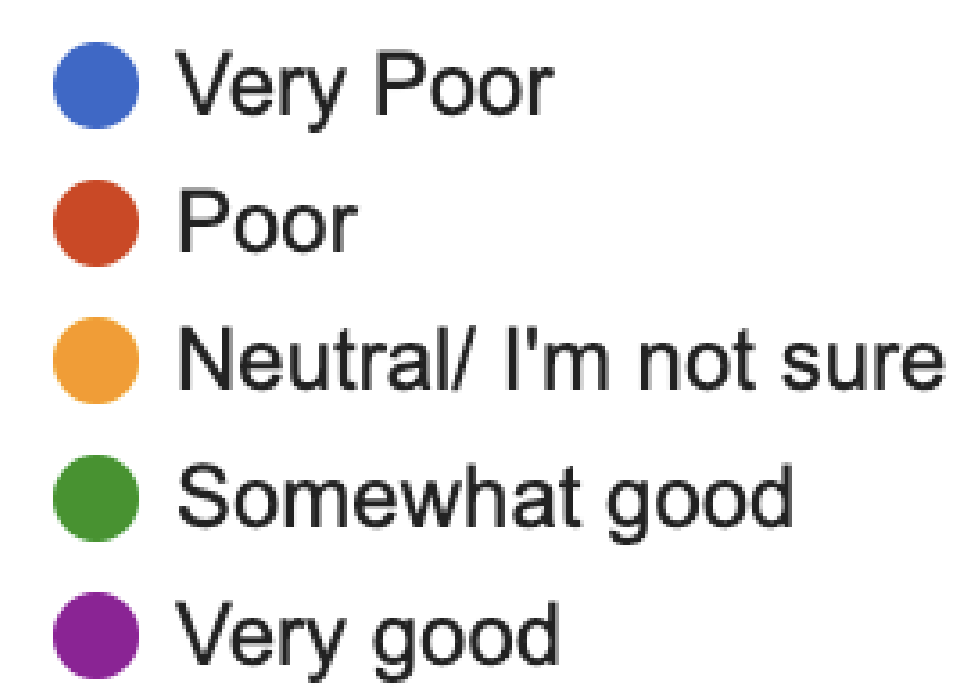
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Acknowledgements