

Educational Institutes Website Accessibility

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Abstract:

The paper focuses on the key issues lies with accessibility of website, Websites is checked through AChecker to get the problems with the institutional websites.

Keywords: website accessibility, AChecker, WCAG, W3C

I. INTRODUCTION

1.1 Accesibility of Website

Accessibility is defined as a measure of the extent to which a product or service can be used by a person with a disability as effectively as it can be used by a person without that disability. The Web Content Accessibility Guidelines (WCAG) 5 2.0 formulated by the World Wide Web Consortium (W3C) is the universally accepted standard. Governments around the world, including India have based their accessibility policies on this standard.

1.2 Web Content Accessibility Guidelines (WCAG)

Web Content Accessibility Guidelines (WCAG) is developed through the W3C process in cooperation with individuals and organizations around the world, with a goal of proving a single shared standard for web content accessibility that meets the needs of individuals, organizations, and governments internationally. Web Content Accessibility Guidelines (WCAG) [1] 5 2.0 formulated by the World Wide Web Consortium (W3C) is the universally accepted standard. Governments around the world, including India have based their accessibility policies on this standard.

The Key accessibility principles of WCAG 2.0[2] are given below:

1.2.1 Perceivable

All content, including information in text, multimedia, video and audio must be presented to users in ways they can perceive. This includes giving textual description for non-text objects (image, audio, etc), separating structure and information from presentation, ensuring that there is sufficient colour contrast between foreground and background and having synchronized alternatives (such as captions for videos) for multimedia.

1.2.2 Operable

User interface components and navigation must be operable, i.e., all functionality must be accessible with the mouse as well as the keyboard and there must be standard mechanisms in place such as marking various subsections with HTML headings (h1...h6) to aid users to find and work with content.

1.2.3 Understandable

Information and the operation of user interface must be understandable. i.e., pages should be simple and predictable, with help for clarification.

1.2.4 Robustness

Content must be robust enough to enable it to be interpreted reliably by a wide variety of user agents, including assistive technologies. i.e., web content should be properly marked up and there should be no HTML and CSS validation errors.

II. RESEARCH METHODOLOGY

Educational Institutes websites has been tested using AChecker, which offers the facility to review accessibility of web pages based on variety of international accessibility guidelines.

AChecker - AChecker is used to evaluate HTML content for accessibility problems by entering the location of a web page, uploading an html file, or by pasting the complete HTML source code from a web page. AChecker produces a report of all accessibility problems for your selected guidelines. AChecker identifies 3 types of problems:

2.1 Known problems

These are problems that have been identified with certainty as accessibility barriers. You must modify your page to fix these problems;

2.2 Likely problems

These are problems that have been identified as probable barriers, but require a human to make a decision. You will likely need to modify your page to fix these problems;

2.3 Potential problems

These are problems that AChecker cannot identify, that require a human decision. You may have to modify your page for these problems, but in many cases you will just need to confirm that the problem described is not present. Following are the result of various e-Governance websites check for accessibility using Acheker.

Websites check for accessibility using Acheker website [3].

Website URL	Known Problems	Likely Problems	Potential Problems
http://www.vnsgu.ac.in	14	1	595
http://www.gujaratuniversity.ac.in	31	0	376
http://www.gtu.ac.in	17	0	757
http://www.ngu.ac.in/	95	8	350
http://www.saurashtrauniversity.edu	539	2	1138

(a)

[Fig 1 (a): Analysis of various educational institutes websites check for accessibility using Acheker.]

III. CONCLUSION

It is analyze that majority websites are with potential problems. Two websites have more than fifty known problems.

REFERENCES

- [1] <http://www.w3.org/TR/WCAG/>
- [2] <http://www.w3.org/WAI/WCAG20/glance/>
- [3] <https://achecker.ca/checker/index.php>