



Save the Children

**COMMUNITY BASED SERVICES
FOR CHILDREN WITH DISABILITIES
IN UNA SANA CANTON**

INCLUSIVE WEB DESIGN

**Making the web page of
Centres for development
of inclusive practices
accessible to all**

May, 2017

Prepared by:

Lamija Landžo, Education Programme Officer, Save the Children in North West Balkans

Šejla Dizdarević, Communications Officer, Save the Children in North West Balkans

Savethechildren.org.uk

Registered charity England and Wales (213890) Scotland (SC039570)

Report

LIST OF ABBREVIATIONS:

CSS- Cascading Style Sheets

HTML- Hypertext Markup Language

SCiNWB- Save the Children in North West Balkans

W3C- World Wide Web Consortium

WAI- World Accessibility Initiative

TABLE OF CONTENTS

Introduction.....	3
Community based services for children with disabilities in Una Sana Canton.....	3
What is inclusive web design and why do we need it?.....	4
Definitively not quantum physics.....	4
We are all cyborgs now	4
How to make your web page inclusive?	5
The process of developing web page of Centres for development of inclusive practices	5
How do we know that our web page is accessible?.....	7
Nothing for us without us	7
Did it cost more?.....	8
Cooperation with International University of Sarajevo	8
Join us.....	9

INTRODUCTION

Hello, world!¹ The purpose of this report is to provide insights into the process of development of inclusive web page of Centres for development of inclusive practices, completed under the project Community Based Services for Children with Disabilities in Una Sana Canton. In the following chapters one can find information about the purpose of inclusive web development, its standards and means of implementation, and its importance in all future web development endeavours of Save the Children, partner organizations, and practically- everyone.

But before we geek ourselves into inclusive web development, let's find out more about the Project and its Centres for development of inclusive practices.

Community based services for children with disabilities in Una Sana Canton

SCiNWB has had extensive cooperation with Una Sana Canton in Bosnia and Herzegovina regarding improvements in inclusive education practices and policies. In 2014 and 2015 it supported development of the *Strategy for inclusion of children with disabilities in education in Una Sana Canton with 7-year action plan*, which was adopted in 2015 by the Una Sana Canton government. This comprehensive document specifies different means for improvement of support to children with disabilities, including establishment of comprehensive, contemporary and high quality support services. As a step towards implementation of the Strategy, in 2016 SCiNWB joined the regional 3- year project *Community Based Services for Children with Disabilities*, which is besides Bosnia and Herzegovina implemented in Albania, Armenia, Kosovo (1244) and Georgia.

The Project's overall goals are the following:

1. Provide high quality community based multi-disciplinary rehabilitation services for children with disabilities and enable their inclusion in school and community life;
2. Strengthen families through providing constant support and training;
3. Increase capacity of Una Sana Canton to address the gaps faced by children with disabilities through facilitating coordination and collaboration among different state actors as well as through advocacy and public awareness.

To reach the listed goals, in November 2016 SCiNWB established two *Centres for development of inclusive practices* in the cities of Bihać and Cazin, which provide high quality multi- disciplinary support to children with disabilities, their families, and professionals from health, education and social welfare sectors.

The Project is implemented in cooperation with the Ministry of Education, Science, Culture and Sports in Una Sana Canton, Ministry of Health, Labour and Social Policy in Una Sana Canton, Health Insurance Fund in Una Sana Canton, cities of Bihać and Cazin and municipalities Bužim, Velika Kladuša, Bosanski Petrovac, Bosanska Krupa, Sanski Most and Ključ.

One of the Project activities in 2017 was development of the web page of the Centres, with the purpose to provide relevant information about its services to potential beneficiaries (parents, children, and professionals), overview of events and activities organized by the Centres, and their contact information.

One of the main principles of the Centres is that they are accessible to all, meaning there are no communications or architectural barriers for children and adults with or without disabilities. Consequently, the web page of the Centres followed the same accessibility mind set- so without further ado, let's explore inclusive web design.

¹ The phrase is a reference for the birth of computer programing, being one of the first programming sentences.

WHAT IS INCLUSIVE WEB DESIGN AND WHY DO WE NEED IT?

Definitively not quantum physics

According to Web Accessibility Initiative, *inclusive design, design for all, digital inclusion, universal usability, and similar efforts address a broad range of issues in making technology available and usable to all people whatever their abilities, age, economic situation, education, geographic location, language, etc. Accessibility focuses on people with disabilities- people with auditory, cognitive, neurological, physical, speech, and visual impairments*². In sum, it means that all people are able to explore all the web page parts, without any obstacles.

The World Wide Web Consortium (W3C) started with the Web Accessibility Initiative (WAI) in 1997, recognising that many people with disabilities do not have adequate access to web content, while accessibility is guaranteed by numerous legislative frameworks, including international conventions and protocols. The WAI consists of several working groups and special interest groups which produce recommendations for inclusive web design, formulated in the WAI guidelines which are most frequently used internationally as a point of reference for inclusive web design.

Although WAI might seem too technical for non-developers, its instructions are very much straight forward and implemented easily when designing one's web page. It implies slight adjustments in the web page's code, design and content which basically allow people with disabilities its usage without obstacles. Inclusive web design is more a continuum than a set of fixed criteria- it continues to expand as we learn more about different abilities, as we engage more and more people in the conversation, and as we follow ICT trends and developments. It can be continually improved and adjusted. It is definitively not complicated as quantum physics or reserved only for small groups of experts, moreover it is an open discussion where all of us can contribute.

But before we accommodate our web pages, we need to accommodate our mindset and understand the value and importance of inclusive web design.

We are all cyborgs now³

In 21st century it is very hard to imagine our daily lives without internet. We use emails, social media communication, online news resources, and online materials on every day basis. Undoubtedly, the world is digital and we are immersed in its digital revolution. Unfortunately, many web pages are not accessible to us all, which is a major obstacle in accessing adequate information and interaction relevant to many segments of our lives, including education, employment, trade, advertising and more. Therefore, the importance of inclusive web design is self- understandable- the richness and benefits of internet should be available to all.

With increased accessibility of web pages we are ensuring that all people, including people with disabilities, can use and create the web content and therefore proactively participate in the society.

The need for inclusion of all people in online world is recognized by many international documents, such as UN convention on rights of people with disabilities, Universal declaration on human rights, European convention on human rights, and similar. Therefore, inclusive web design is not just a gesture of good will, it is societies' moral obligation and for many countries legal obligation as well.

It is important to note that accessibility is often discussed as something only designed for users with disabilities, when actually accessibility is relevant to anyone. It benefits to us all with any kind of functional or situational limitations (such as poor lightning, distractions, noise, no mouse available, etc.) and accessible design can become essential to us any time.

² <https://www.w3.org/WAI/users/>

³ Quote by Sherry Turkle, Abby Rockefeller Mauzé Professor of the Social Studies of Science and Technology at the Massachusetts Institute of Technology

HOW TO MAKE YOUR WEB PAGE INCLUSIVE?

The process of developing web page of Centres for development of inclusive practices

In this section we are going to present some of the main aspects of inclusiveness of the developed web page, which can be used to inform other web design projects. It cannot be understood as a definite set of principles, but more like an overview which can be enriched with additional examples of good practices (remember, inclusive design continues to grow!). As well, keep in mind that web pages with different structure and purpose might have additional accessibility requirements. The design follows inclusion principles of WAI standards, so let's start.

a) All the photos on our web page have alternative texts

Alternative text represents textual description of the photo content. It is especially useful for people with visual impairments who use screen reader devices to access the web page content. When uploading photo content, the photographs are saved with appropriate description which provides adequate explanations to persons who are not able to see it. For example, the photograph represented below can have the following alternative text: "Children in Cazin preparing to march through the city centre to mark World Down Syndrome Day".



Children in Cazin preparing to march through the city centre to mark World Down Syndrome Day

b) All the uploaded content on the web page is accessible

The web page provides the user with resources developed by Centres for development of inclusive practices, such as leaflets, brochures, and publications. In many cases the uploaded documents are not accessible to all, such as people with visual impairments. For instance, if one uploads scanned document or non-accessible PDF file, a person with screen reader cannot access its content. Therefore, we paid special attention that all the uploaded documents can be accessed with different screen readers.

c) The users can skip the web page elements which are not relevant to them or repetitive and can easily move by using TAB key

By using proper heading structure in the web page content, we enable the user to move easily through its main parts and skip the content they do not find to be relevant. All parts of the web page are accessible with

TAB key, which is very useful for people who are using keyboards instead of computer mouse (e.g. some people with physical disabilities or visual impairments). The TAB key and proper heading structure of the web page allow the user to move easily throughout the whole page and to skip parts they do not find relevant.

d) Colour is not used to signify the meaning

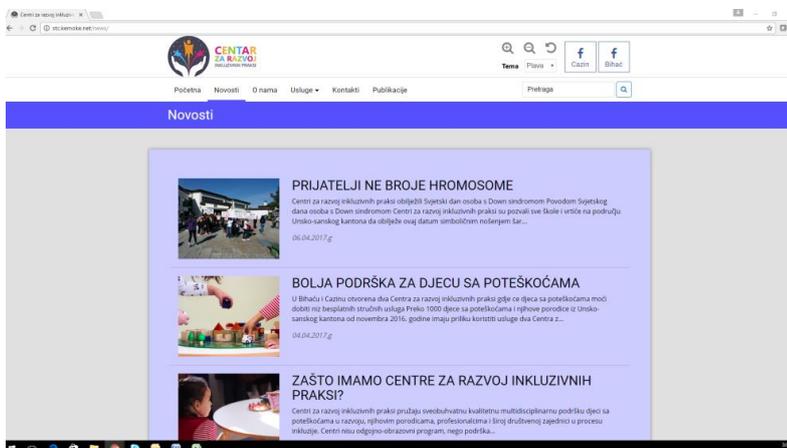
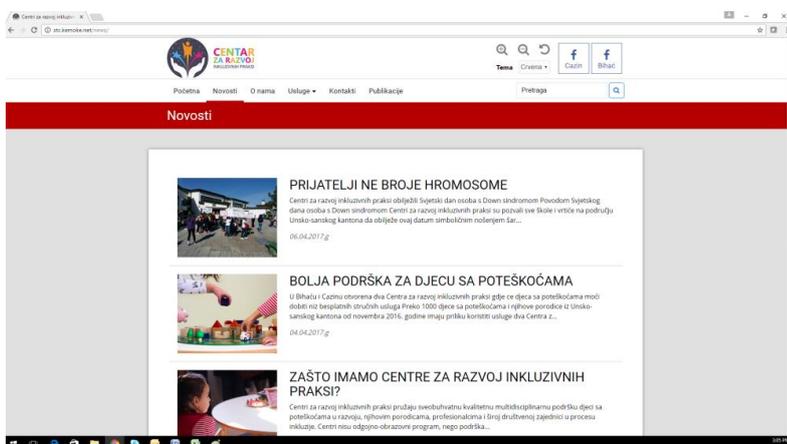
When one wants to emphasise a part of the text, they can use different means to do so. However, if we use only colour to emphasise text, it might not be visible to some people, such as screen reader users or people with colour blindness. Although bolding or underlying the text is more accessible, the best way to highlight importance of a part of the text is by emphasising in written that is important (e.g. Important to note: the Centres are...).

e) The content is easy to understand and read

When writing the web page content, it is important to use simple and clear sentences, avoiding complicated or too technical expressions, so that is more accessible for all. The font style should not be complicated, and the text structure logical and easy to understand. Therefore, we invested efforts to accommodate simple and well-structured texts which can be easily understood by everyone.

f) We paid attention on colour contrasts

The visual presentation of the web page (i.e. colour palettes) has a colour contrast ratio which is in accordance with W3C criteria, so that it can be seen by people with low vision or specific types of colour blindness. Since sometimes strong colours can be overwhelming to some people, we made additional colour theme with blue and pastel palette, which the user can choose if they prefer. The theme comes with non-white background, since some people can read more easily in this way (such as people with dyslexia).



Different color themes of the web page with adequate contrasts

g) The web page can be magnified as per need

It is important that the web page size can be increased and decreased as per need. The web page responds to Ctrl+ and Ctrl- keyboard shortcuts and accordingly adjusts its structure. Additionally, we introduced the magnifier option in the top corner of the web page, so that all people can manipulate with its size, including the ones who are not so familiar with the keyboard shortcuts. If the web page window size is changed, the structure of the page follows the change without the need to use the scroll line.

h) HTML, CSS, and Java Script is accessible

All the programming languages used (HTML, CSS, and Java Script) are written in semantic, standard-compliant way, which contributes to its accessibility. This for instance includes aligning heading levels and presentation layers appropriately, so that they can be “understood” by screen readers.

How do we know that our web page is accessible?

There are different ways to check if the web page is accessible or not, and the means of its validation continue to grow. Fortunately, there are many online resources where we can check some components of accessibility with just a few clicks, so here are some of them.

If you want to check if the colour contrasts you chose are adequate, WCAG offers tools for their validation. One of them is AccessColor⁴, which automatically finds relevant contrast combinations inside your HTML and CSS codes. There are also available tools in WCAG for checking if your HTML and CSS is accessible, with just one click⁵.

Although many online resources are very much useful for checking accessibility, the best way to check it is to present the web page to people with disabilities and to engage them in validation of its inclusiveness.

Nothing for us without us

When designing activities for people with disabilities, undoubtedly the main prerequisite of quality design is including people with disabilities in the process. Therefore, after we have completed development of the web page, we organized a validation workshop which was attended by people with disabilities. They explored the web page and provided us with feedbacks on its user friendliness. The workshop hosted students with disabilities from International University of Sarajevo and Centre for Blind and Low Vision Children and Youth in Sarajevo Canton.

We also tested the web page with screen readers, by using different screen reader softwares to check if the content is accessible. The workshop participants provided us with the feedback that all the web page content is accessible, i.e. they can access to all of its information easily, without any obstacles.

“I think the page is accessible and user friendly. Links open quickly, and information is well distributed on the page, making it very easy to use for persons who use screen readers. There are no adds and advertisements, which usually block the



IUS student at validation workshop

⁴ <http://www.accesskeys.org/tools/color-contrast.html>

⁵ <http://jigsaw.w3.org/css-validator/validator?uri=stc.kemoke.net&profile=css3&usermedium=all&warning=1&vextwarning=&lang=en> and <https://validator.w3.org/nul/?showsource=yes&showoutline=yes&showimagereport=yes&doc=http%3A%2F%2Fstc.kemoke.net%2F>

programme, which is a huge advantage for this page. The contents are simple, but at the same time very informative”, said Senija Okic, a teacher from the Centre for Blind and Low Vision Children and Youth Sarajevo.

According to an IT and engineering student from IUS, Fatima Velic, a person with visual impairments herself, the page is well done. *“It is very neat and orderly, when you get to the page, you can easily see what’s been published, when, you have an image with description, and a magnifier. There are very few pages for people with visual impairments. I’ve noticed that this trend is changing globally, web pages are done in contrasts that work better for us, they are better adapted, which is very good. We talked about it now, and it will be very good if this is applied on this page as well.”*

Psychology student Najra Janjos also thinks the page is done in a way to make it accessible to all. *“As psychology students, we learn through diverse courses, such as developmental psychology course, about different developmental disabilities and problems faced by persons with disabilities. We learned about these things and we often note that it is strange that in our country we do not give such persons enough attention, there is not enough support available, and these people only seem different, but actually we are all the same. I am so glad that this page was developed, and in such a way to make it easy for persons with disabilities to use it as well.”*

Did it cost more?

As one can assume from the presented accommodations, inclusive web design implies accommodation of the usual approach, rather than re-inventing web design process. Therefore, it can be implemented in line with the usual price ranges for web development and does not require significant budget allocations. Web design agencies might ask for more money as many are not familiar with the approach, but you need to stand your ground here and know and say- it is simply a slightly different way of working and thinking, it does not require more work, tools or knowledge.

COOPERATION WITH INTERNATIONAL UNIVERSITY OF SARAJEVO

The web page was developed in partnership with IT department of International University of Sarajevo, with the team comprising of three students and one teacher mentor. Cooperation with academia implies additional value of the web page development, since engaged students and the teacher can promote inclusive web design in their further work.

IUS practices inclusion and particular attention is devoted to students with disabilities, including some scholarship programmes, noted professor at the IT science department Jasminka Hasic -Telalovic. She leads the group of students who developed the inclusive web page. *“I am so happy that they participated in this project, they learned so much, it is really a great way for inclusive education to roll out, as well as inclusion in general in our society. Technology is rapidly spreading and we try to keep up with it, and accessibility is really just another aspect of technology”,* noted professor Hasic -Telalovic.



Ali Husic, Kemal Hrelja, and Adin Cebic are the three IUS students who developed inclusive web page for our centres

Adin Cebic is one of three IUS students engaged in development of the web page for Centres for development of inclusive practices. *“Our motivation was primarily to make something that will be used by larger number of people. The other thing we wanted is to build our own portfolio, because this is an excellent reference. Thirdly, I am particularly pleased that I was a part of this project because I*

have very low vision myself, and this was an opportunity to make something that everyone will be able to use. We were careful about every detail; some things which are not accessible with most of the pages are accessible on our web page. We tested the page now with audio readers, it all works flawlessly. For the first time my colleagues have seen such approach and they are already applying it on other projects, including mobile applications.

JOIN US

As presented above, inclusive web design should be considered as a standard, not just the privilege of singularized or inclusion related initiatives. One can conclude that accommodations we presented can be integrated easily, and they do not require significantly larger human or financial resources. Therefore, we invite you to join us in all future web development endeavours in making World Wide Web accessible to all. Let's make the digital revolution accessible to all!

Explore further

Web page of the Centres for development of inclusive practices: crip-usk.ba

Web Accessibility Initiative: <https://www.w3.org/WAI/intro/accessibility.php>