Web Accessibility for All

Learning materials towards the new EU Standard

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1. ABSTRACT

Nobody challenges the importance of having accessible webs, web content, and web interaction. This is the aim of the new European Directive on Web Accessibility following the compromise with the UN Convention on the Rights of Persons with Disabilities. The communication will describe a newly funded ERASMUS+ project named IMPACT. It will define the skills and competences towards training for the implementation of the European Standard on Accessibility of ICT products and services EN301 549.

2. KEYWORDS: 4-6

Accessibility, Web accessibility, Persons with Disability, Standard, Human Rights

3. DESENVOLUPAMENT:

Writing this presentation during the COVID19 pandemic brings more than ever to the fore the issue of accessible communication in the Information Society. If last year we thought that learning and teaching, in fact everything, has been changing since the introduction of the Internet, this year the change has been brutal. COVID19 has affected all areas, and learning andschooling is no exception. Lessons had to be adapted to a new virtual environment. Wishful thinking was quickly defeated by reality. Face to face teaching and learning will not return to theface to face set up in the near future and all learning set up needs to be restructured. Surfing the web and interacting with digital devices and content has become a basic daily routine for both students and teachers. Still at present most digital learning content is not accessible for all.The need for accessibility when accessing an Information and Communication Technology (ICT) product has risen since the endorsement of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) by European Directives. In 2010, the European Commission, Employment, Social Affairs and Equal Opportunities DG asked the European standardisation agencies CEN, CENELEC and ETSI to include the concept of Design for All in relevant standardization initiatives. This is known as the M/473 mandate. The concept behind the mandate is that each individual user has their own profile of needs, characteristics, capabilities, and preferences. This fact needs to be taken into account when developing mainstream products and services. In particular, to ensure access to information and participation for persons with disabilities on equal basis with others. In order to secure this accessibility of products and services is essential. A Design for All approach acknowledges these personal needs and variations and aims at meeting requirements to the greatest extent possible in order to achieve accessible products and services. The answer to the mandate was the recently published European Standard EN 17161:2019 'Design for All - Accessibility following a Design forAll approach in products, goods and services - Extending the range of users'. This European standard specifies requirements to design, develop and provide products, goods and services that can be accessed, understood and used by the widest range of users including persons with disabilities. This is the background against which to develop any accessibility service in the 21st century aiming at inclusion, personalization, and all members of society.

To this aim the publication of the European Standard on Accessibility of ICT products and services in public procurement (EN301 549) urge all Member States to develop common strategies to ensure that all citizens and in particular people with a disability can use digitally provided information and public services in Europe (see image 5.1 EU Accessibility Legislative Framework).

Who is the user who needs to access ICT environments? ICT accessibility means that all the mainstream technology such as computers, tablets, mobile phones, their software, and the content can be used by all end-users regardless of their abilities or disabilities (Orero and Tor-Carroggio 2018). In the realm of education people with learning disabilities (Lerner et al 1997) or difficulties (Goodley 2001) are now considered by their capabilities rather than by their difficulties or disabilities (Agulló et al 2018). The end user for ICT has been shifting gradually from a clinical classification where physical and cognitive issues determined their learning performance. Nowadays access to ICT is beyond physical or cognitive performances --or social contexts. ICT users in the 21st century are classified by the Capability Approach. Amartya Sen, 1998 winner of the Nobel Prize of Economics, along with Martha Nussbaum are responsible for developing this new framework to analyse different concepts in welfare economics (Mitra 2006). Following the capability approach requires the concept of Universal Design for All to be adopted at design stages in all ICT processes hence the need for a standard to regulate and secure this is observed.

Adapting a Universal Design for All approach at the earliest stage of the development process of any ICT product or service, maximizes accessibility for all potential end-users. The recent adoption of laws and policies at EU and international levels put accessibility in the front line requiring that any software, web content, documents and hardware can be accessed in a way that all people regardless of their capabilities can use and interact with them.

Universal Design in teaching can be the objective of an academic course, but in this case it is related to the development of tools that enable teaching and learning for all citizens. The first recommendation is to follow existing guidelines such as Word Wide Web Content Accessibility Guidelines (WCAG).

These guidelines are an ongoing process developed in cooperation with individuals and organizations around the world, such as Universitat Autonoma de Barcelona, who participated through the TransMedia Catalonia Research Group. The goal is to provide a single shared standard for web content accessibility that meets the needs of individuals, organizations, and governments internationally.

The WCAG documents explain how to make web content more accessible to all, and in particular to people with disabilities. Web "content" generally refers to the information in a web page or web application, including:

- natural information such as text, images, and sounds
- code or markup that defines structure, presentation, etc.

The four pillars behind the WCAG are: (1) Perceivable information and user interface. This is relevant to: text alternatives for non-text content, subtitle and other text alternatives to multimedia content, content that can be presented in different ways, content easier to read and hear. (2) Operable user interface and navigation. This is related to functionalities available from a keyboard, users have enough time to read and use the content, to secure that content that flashes at certain rates or patterns can cause photosensitive reactions, including seizures. Also animations and moving content can cause discomfort and physical reactions. That users know where they are, and secure different inputs beyond keyboard. (3) Understandable information and user interface, for example that the text is readable and understandable, that the content appears and operates in predictable ways, and that users are helped to avoid and correct mistakes. The last (4) is robustness of content and reliable interpretation. That means that content is compatible with existing and future tools. All these requirements need to be observed and implemented to secure a website is accessible, and students have access to any online learning situation.

In December 2018, a Decision of the European Ombudsman (strategic inquiry OI/6/2017/EA) on how the European Commission ensures that all persons can access its websites, states the need of a mandatory training on accessibility for all staff members working on websites. The aim is to ensure that all people, and especially people with disabilities, have access to all services when accessing digital content or using digital devices. This fact opens a discussion and a new space regarding the training required to generate accessible web content, webs, and ICT products and tools.

Many ERASMUS+ projects have been granted and developed in the past decade to train the new European accessibility services working profiles: managers or experts in the different accessibility services such as the audio description expert (Perego 2017), the expert or manager of accessibility for the scenic arts (Orero 2017, Matamala and Orero 2019, Remael et al 2019), in Easy to Understand (Matamala 2019) or the Live Subtitling Training (Bernabé and Orero 2018). While these projects have focused on the services to secure the media content is accessible, there was a need to scale accessibility at a higher requirement level, that of ICT accessibility. To fill this gap the new Erasmus+ project IMPACT (Inclusive Method based on the Perception of Accessibility and Compliance Testing) aims at defining the skills and competences that an ICT accessibility expert should acquire and master. This will allow at designing, testing and certifying a competence–based curriculum of the new professional profile(s) for the implementation of the European EN301 549 Accessibility Standard. The European standard EN301 549 specifies the functional accessibility requirements applicable to ICT products and services. It also provides a description of the test procedures and evaluation methodology for each accessibility requirement. Interestingly it sets the requirements for use in public procurement across Europe, but also in the private sector. In a way the EN301 549 is an accessible ICT procurement toolkit which becomes the object of study and course development for the IMPACT project.

This Erasmus+ project is a strategic partnership led by Koena (France) with partners from three high education institutions, namely Universitat Autònoma de Barcelona (UAB), University of Dublin (DCU), and University of Normandy, and two SMEs, namely Koena and ECQA.

The projecthas been designed in line with the EC initiative “An agenda for the modernisation of higher education” (28/02/2017, EACB1) since it aims to equip people with the right skills for our digital and modern society and take a coherent skills approach. The project has in mind to develop opentraining materials to work against social division and allow for a wider inclusion.

The project has been divided in five stages. The first aims at defining the skills and competences of the new professional for the implementation of the EN301 549. In the second stage a modular curriculum will be designed. The third plans to create training materials as open educational resources for training professionals on how to apply the EN301 549 Accessibility Standard. In the fourth stage the created materials will be assessed through users and prospective trainees in order to guarantee the quality of the resources and provide a repositoryof assessment methods. Finally, in the fifth, IMPACT will certify the new profile and the educational components for both academic and vocational levels: ECTS/ECVETS. This will securerecognition at EU level and the project sustainability. The European Accessibility Standard EN301 549 experts trained by IMPACT will acquire suitable skills to provide high-quality accessible contents in different contexts: website, technologies, and tools. The principles of the Standard EN301 549 will be applied to other funded ongoing EU projects such as HELIOS
(825585) TRACTION (870610), SOCLOSE (870939), and MEDIAVERSE (957252).

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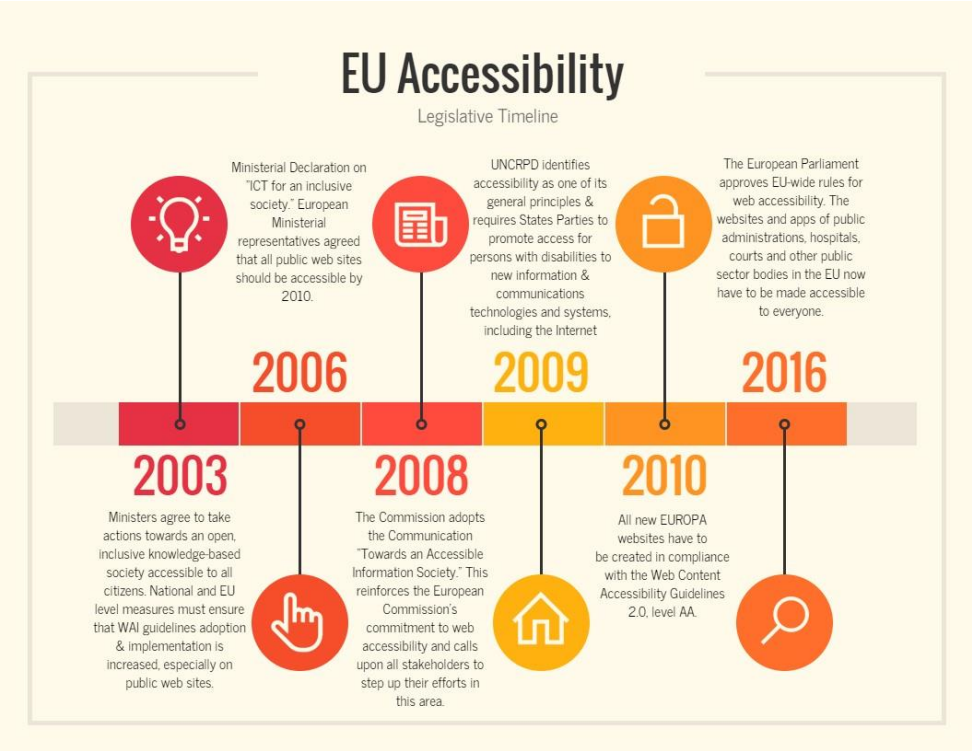
3.1. GRAPHIC OR TABLE 1



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