INTRODUCING THE INCLUSIVE LEARNING HANDBOOK: AN OER FOR TEACHERS AND POLICY MAKERS

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Abstract

Approximately 15% of the world’s population live with some form of disability. Facing a wide range of barriers, including access to information, education, healthcare and a lack of job opportunities, persons living with disabilities struggle every day to be integrated into society. In recent decades, the use of ICT for educational purposes has increased, and the spread of network technologies has caused e-learning practices to evolve significantly. Virtual Learning Environments (VLE), other technologies such as e-portfolio and mobile learning are all used extensively now as a means of ‘delivering’ parts of the curriculum and supporting student learning. E-learning has become an essential tool for the teaching of large numbers of diverse students. The authors of this paper are members of an EC-funded Leonardo Da Vinci project called “Inclusive Learning”. They lead a work package whose main aim is to integrate Accessibility Guidelines developed by partners’ previous projects and from other sources, in order to develop an on-line OER. These guidelines will help teachers adopt pedagogical methodologies that address learning needs of people with disabilities. The OER aims to help teachers provide as many learning options and accessible variations of the content they can to their students. By providing a range of teaching materials, for example, using video, audio, text, subtitles or sign language, more learners are encouraged and motivated to remain engaged with the learning process.

Keywords: Inclusive Learning; Open Educational Resource (OER); Inclusive guidelines; Accessible content; Learning Objects (LOs).

1 INTRODUCTION

Article 26 of the Universal Declaration of Human Rights guarantees the right to education. School is where we learn the skills to prepare us for adulthood, it is where we learn to socialize and learn about the rules that govern our societies. However in the 21st century there are kids that either don’t get the full benefits of formal education, due to a disability, or don’t attend school at all. According to IMS Global Learning Consortium, disability is the product of the relationship between the learner and the learning environment or education delivery. Therefore, an education-specific definition of disability states that it “is a mismatch between learner’s needs and the education offered” [1].

EFA (Education for All) has reported that 77 million children are not in school – and at least 25 million of them have a disability [2]. Moreover, approximately 5% of children with disabilities complete even a primary education [3]. A recent UNESCO (2013) report estimated that approximately 15 percent of the world’s population “live with some form of disability. Facing a wide range of barriers, including access to information, education, healthcare and a lack of job opportunities, persons living with disabilities struggle every day to be integrated into society” [4].

There was a need for a new approach to formal education. That came in the form of Inclusive Education, and has involved a series of changes at the societal and classroom level, along with a number of legal instruments at the international level. Inclusion has been implicitly supported since the Universal Declaration in 1948 and it has been mentioned in a number of key UN Declarations and Conventions.

Defining Inclusive Education though is not simple, because its meaning varies significantly in countries across the globe. It has been described as a process of
...addressing and responding to the diversity of needs of all learners through inclusive practices in learning, cultures and communities and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children" [5].

While an instant reaction would be to consider it is wholly unacceptable that people with disabilities still find it difficult to fully integrate into modern society, it is worth mentioning that international bodies such as the UN have actively promoted the rights of persons with disabilities and the principles of inclusion over the last 4 decades. An early landmark for inclusive education was The Declaration of the Rights of Disabled Persons [6]. Its 13-point proclamation has influenced many countries in their formulation of special education policies. The Declaration states that disabled persons have the right to respect for their human dignity, to measures designed to enable them to become as self-reliant as possible, and to a range of services, including education, which will enable them to develop their skills.

The United Nations and UNESCO have played a significant role in promoting inclusive education ever since then. In 1994, representatives of 92 governments and 25 international organisations made a commitment to inclusive education by agreeing on what is now called the Salamanca Statement [7]. The Statement emphasised the fact that those with special educational needs must have access to regular schools which should accommodate them within a child-centred pedagogy capable of meeting these needs; such schools would be most effective in combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving an education for all and they would provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system. According to the Statement, all governments should include the principle of inclusive education in their law or policy; all children should be able to enrol in regular schools, unless there are compelling reasons for doing otherwise.

More recently, the Convention on the Rights of Disabled Persons was confirmed in 2006 by the 61st session of the United Nations General Assembly, which included a significant commitment to inclusive education [8]. In the UNESCO International Conference on Education (2008), it was acknowledged that “inclusive education is an on-going process aimed at offering quality education for all while respecting diversity and the different needs and abilities, characteristics and learning expectations of the students and communities, eliminating all forms of discrimination” [9]. As a result of the above policy documents, diversity and inclusivity have become core watchwords for educational quality.

In recent decades, the use of ICT for educational purposes has increased, and the spread of network technologies has caused e-learning practices to evolve significantly [10]. Virtual Learning Environments (VLE), other technologies such as e-portfolio and mobile learning are all used extensively now as a means of ‘delivering’ parts of the curriculum and supporting student learning [11], [12]. E-learning has become an essential tool for the teaching of large numbers of diverse students. Indeed, Forman et al. maintain that e-learning can act as a catalyst for educational diversity, freedom to learn and equality of opportunity. They also argue that e-learning not only encourages diversity but also that “it paradoxically creates programmes that are more specifically tailored to the market needs than traditionally validated programmes” [13].

It is therefore becoming evident that e-learning is inclusive and accommodates as many learners as possible when teachers provide as many learning options and accessible variations of the content they can to their students. A commonly used definition for accessibility is the

“ability of the learning environment to adjust to the needs and preferences of each learner. Accessibility is determined by the flexibility of the education environment (with respect to presentation, control methods, access modality and learner supports) and the availability of adequate alternative-but-equivalent content and activities” [1].

This is due to the fact that some learners like to read, some prefer to be more active, some prefer to listen, and some prefer to watch. By providing a range of teaching materials, for example, using video, audio, text, subtitles or sign language, multiple languages, and easily understandable expressions (even for complex ideas), more learners are encouraged and motivated to remain engaged with the learning process.
2 INCLUSIVE PRINCIPLES AND OPEN EDUCATIONAL RESOURCES (OERS)

In support of provision of such flexible or individualized learning experiences that address inclusion, several frameworks have been developed, such as differentiated learning [14] and universal design for learning [15]. These frameworks recognize the broad diversity of learners with respect to ability, language, culture, gender and age and they provide specific learning design principles to ensure accessibility of all learner types to the learning environment or education delivery. New frameworks will need to also arise in which they expand the concept of disability to include the limitations brought about by the context, or the specific situation of the learner at the time of engaging with the learning environment or content (i.e. level of stress) and also include the variable of temporality in the approaches, as some learners live with disabilities during specific periods of times only, and these can also be different in different times.

Understanding the range of possible barriers to learning, and subsequently, how to overcome them, is essential when providing online or e-learning resources. Teachers need to work to ensure that no student is marginalised or excluded, that a variety of teaching resources are provided, where a variety of learning styles (or barriers to learning) are considered. Moreover, flexibility and accessibility is of primary importance and learning interfaces are appropriate and appealing to every learner.

According to the universal design principles guiding the perceptibility of information, e-learning should communicate “necessary information effectively to the user, regardless of ambient conditions or the user’s sensory abilities” [16], [17]. In order for online education to be inclusive and accommodate as many learners as possible, teachers need to provide many learning options and accessible variations of the content they want their students to interact with. Each person has different preferences for the ways they like to learn as some learners like to read, some prefer to be more active, some prefer to listen, and some prefer to watch.

By providing a range of teaching materials, such as the use of video, audio, text, subtitles, sign language, multiple languages, and easily understandable expressions, more learners are encouraged and motivated to remain engaged with the learning process. Allowing learners to customise and personalise their own e-learning will enrich their experience. Encompassing the diversity of learners through a broad provision of adaptable interfaces and materials is required.

While there is the potential for additional workload, which may present a barrier to teachers being able to provide the range of resources required, the use of Open Educational Resources (OERs) goes some way to alleviating the pressures on teachers. The Organization for Economic Co-operation and Development (OECD) defines OER as “digitized materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research. OER includes learning content, software tools to develop, use, and distribute content, and implementation resources such as open licenses” [18].

There has been a substantial growth of creative participation in developing digital content [19]. Through the Internet, users participate and interact to communicate and express themselves. This is known as participative web (or Web 2.0) that is based on new technologies which empower the user to contribute to developing, rating, collaborating and distributing Internet content and to develop and customise Internet applications. The emergence of the OERs has led to the rise of user-created content; amateur creators that create a variety of internet and technology based products (written, audio, visual and combined).

Open (easily-shared) resources allow for the reuse and remixing of content, through providing a pool of alternative, yet equivalent, resources. OERs can provide resources that are capable of being transformed. This enables teachers to collaborate and share materials, creating new materials from existing resources, and imbuing them with inclusivity. If teachers are aware of the constraints and preferences of their learners, they can then focus on providing resources that cater to their specific needs.
3 INCLUSIVE LEARNING HANDBOOK

This paper is based on work carried out through the Inclusive Learning project, a Leonardo Da Vinci funded programme. The consortium comprised of the University of Girona (UdG), the Open University of Catalonia (UOC), the University of Piraeus Research Centre (UPRC), University College Dublin (UCD) and Raising the Floor International (RF-I). One of its main aims is providing accessibility guidelines including pedagogical methodologies to address learning needs of people with disabilities in a learning process.

A key element of the Inclusive Learning Portal architecture is the Inclusive Learning Handbook, which provides an easy guide for teachers on how to develop accessible LOs. After an outline of key concepts and precepts, the Handbook proffers a how to guide for developing teaching and learning tools, resources and practices for technology enhanced learning contexts, such as online. As such, the handbook is primarily intended for educators involved in teaching students with different and diverse abilities, needs, and preferences. The Handbook aims to serve the global community of educators. It provides specific learning design principles to ensure that teaching practices can accommodate all types of students. It aims to assist educators in creating engaging and motivating learning experiences for all students, regardless of their special abilities and preferences. The Handbook also seeks to create a simple heuristic evaluation method for instructional technologists to use when designing online learning spaces and scenarios.

The Handbook incorporates a selection of guidelines generated in two previous projects of current partners – e-Access (University of Piraeus Research Centre -UPRC) and Alter-Nativa (University of Girona - UdG) – as well as other accessibility guidelines, such as WCAG 2.0, the AHEAD’s Charter for Inclusive Teaching and Learning section ‘The Seven Principles of Universal Design’, and IDRC’s FLOE project’s website [20], [21], [22]. The FLOE project was undertaken by the Inclusive Design Research Centre (IDRC) at the Ontario College of Art and Design (OCAD).

The Inclusive Learning Guidelines contained in the Handbook aim at contributing to the inclusive culture of the future by providing an easy-to-use tool and series of resources. As such, the Handbook provides design guidelines by focusing on these existing resources, specifically to increase accessibility and engagement during the learning process of all students (emphasizing “all”). The Handbook provides reasons for restricting or eliminating non-accessible elements, such as the use of extensive amounts of text, Flash animations, and other “unfriendly” design options. Instead, it gives advice on how to provide flexible access and user preference options by demonstrating alternative approaches to cover a range of users' learning requirements.

The implementation of the Handbook will be both in a digital pdf format and as an online website, utilizing the newly created Wordpress (http://wordpress.org) with Learner’s Options, to make this material more accessible to all. Wordpress is also an open source content-management system based on PHP and MySQL and it is distributed under the GNU General Public License. This choice of implementation enables the Inclusive Learning Handbook to be modified in the future as new tools, methodologies and technologies appear.

By generating an online version of the Inclusive Learning Handbook (http://boppo.udg.edu:8000/repo2/wordpress/) the resource becomes “alive” in that it will be able to be modified in the future, as new tools, methodologies and technologies appear. The Handbook (Fig. 1) will be hosted in the Inclusive Learning website (http://www.inclusive-learning.eu/). Its main features include text preferences (at the top) with regards to text and display, layout and navigation, links and buttons, audio and visual enhancements. Moreover the Handbook contains a historical context of Inclusive education worldwide, definitions, the main principles for inclusive e-learning and the Learning management tools that will be utilised. These will be followed by the sections listed under the example and use case tabs.
The former tackles the issue of web accessibility by offering useful tips on how to design web content that allows anyone to perceive, understand, navigate and interact with that content. It is then envisaged that teachers and practitioners will be able to create and deposit their own Learning Objects that show how to make content accessible to every student. Each example will have an introduction to the accessibility challenge addressed, the target group that will benefit from the solution, a step-by-step how-to guide to making the content more accessible and further recommendations and additional reading.

The use case tab contains learning scenarios, which is a space for reflection for educators. They present different circumstances that they may or are encountering in their classrooms and they try to help educators with the realization of the different needs and preferences of each student individually. The main objective of this task is to obtain a set of cases that offer teachers didactic and technological alternatives to enable them in supporting a diverse classroom in the context of an Inclusive Design for Learning.

The paper form of the Handbook will be a brief document that could be regarded as a ‘how-to guide’ to Inclusive Education and Accessibility. It will introduce novices to the field and enable them to understand the significance and importance of inclusion as a concept. It will consist of a brief introduction to the terminology and definitions, the key principles in order to make teaching and learning content accessible to people with disabilities (e.g. hearing and/or visual impairment) as well as a checklist with the basics steps towards a more inclusive pedagogical approach and teaching methodology.
In addition to being a set of guidelines and principles, the Handbook can also become a set of recommendations for policy-makers. As education is trying to make use of the latest technologies to ensure learning engagement (e.g. MOOCs), the technological advances and offerings by themselves are not sufficient to promote creativity and innovation in learning. Creativity and Innovation requires diversity: of people, thoughts, experiences and knowledge. This creates less homogeneous groups of people that have the potential to produce life-changing or revolutionary results, contributing to making this a better world. Diversity at large promotes empathy, respect, understanding, collaboration, humbleness, and many other positive characteristics, values and attributes.

It is therefore imperative that policy makers should embrace diversity as a source of potential positive outcomes for societies at large and adopt the Inclusive Learning Guidelines. This will assist in moulding a diverse group of learners and will help cultivate a new “breed” of learners that are inspired and not simply taught or educated. The classroom is no longer a one-way-communication environment, but a setting in which everyone learns with and from everyone else. Embracing an inclusive and diverse culture is paramount to innovation, both personally and socially.

In order to increase its reach, use and influence, the Handbook is looking for other similar mission-driven institutions to translate it to other languages and help distribute it. Initial work for translating it into Portuguese and Arabic is already taking place.

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