Teaching English to Special Educational Need Students through an Online Tool

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Abstract

Language learning through online tools has become customary, especially during COVID-19 pandemic, but this type of education does not always consider the requirements for students with special educational needs (SEN) despite teachers struggle to include disabled students in online teaching. This article presents the educational potential of using Universal Design for Learning (UDL) and Web Content Accessibility Guidelines (WCAG) to help SEN students learn English. First, a theoretical framework that covers the basis of the En-Abilities project and the UDL pedagogical principles that sustain the platform organisation and contents is provided. Then, practical examples of some of the activities and the results gathered after its practical implementation are shown. In the conclusions, achievements are summarised and new paths to explore in the field of foreign languages learning for students with SEN are foreseen.
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INTRODUCTION

A recent study (Blázquez-Arribas, Barros-del Río, Alcalde Peñalver, & Sigona, 2020) analysed methodological strategies and teaching

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attitudes towards disability. Results showed that the teachers doubted the importance of teaching languages to people with intellectual disabilities, mental illness or brain damage, arguing that language learning is not a basic need for their personal and professional development. They also pointed at a lack of training on alternative methodologies to meet the needs of all people, regardless of their abilities. Moreover, participants stated their limited experience with SEN students, as well as with appropriate technologies. In fact, 90% of the participants admitted that they had never used virtual learning environments with SEN students. In sum, results revealed ableist beliefs among language teachers.

However, we believe that communication in different languages provides access to education and that the strategic use of technology can help educators make language learning more accessible for learners who may struggle to access language learning because of their physical or cognitive abilities (Block & Cameron, 2002; Nijakowska, 2010). Despite the fact that virtual training in foreign languages has become increasingly important in the past few years (Kannan & Munday, 2018; Rachimova, Valerjevna Varlamova, & Antonovna Tulusina, 2016), the current situation due to the COVID-19 pandemic has definitely imposed this way of teaching. Moreover, teachers struggle to include disabled students in online teaching, especially during the COVID-19 pandemic. As a general rule, the necessary training to acquire the skills to communicate in a foreign language is developed through methodologies that involve a certain physical, auditory, visual and cognitive ability, a one-size-fits-all model, which can be easy to follow for students without difficulties or conditions that prevent them from learning the standard way. This standard format implies ableism, and, as a consequence, a limitation to both their educational and work opportunities (Europa Press, 2018). Such disregard goes against social justice and equal access to education.

As a response to this matter, this article seeks to help teachers learn strategies to help learners with SEN access language learning. For this purpose, we use examples from our project En-Abilities, co-financed by the Erasmus + Program of the European Union (2020), to illustrate ways of enabling inclusive education through technology. First, we provide a brief theoretical framework, which sets the basis of Universal Design for Learning (UDL) and Web Content Accessibility Guidelines (WCAG) implemented in this specific project. Then, we explain its main objectives and challenges. Next, we show examples that illustrate the different adaptations designed on the bases of different types of disabilities and the wide range of activities available for any teacher of English. In addition, we point at the possible adaptations to be made regardless the different disabilities.

TEACHING FOREIGN LANGUAGES ONLINE TO SPECIAL EDUCATIONAL NEED STUDENTS

For a comprehensive and integrated view of language teaching to SEN students, several core principles such as lifelong learning, linguistic competences, ethical issues and technical principles must be addressed. This section describes the theoretical and pedagogical frameworks that contextualize the En-Abilities project, a model example for online teaching of foreign languages to SEN students.

Recommendation 2006/962/EC resulted in the EU Framework for Key Competences for lifelong learning (LLL), one of the key competences being communication in foreign languages. This document recognizes the Member States' role to provide the appropriate infrastructures for continuing education and training of adults. Added to that, it also highlights the importance to ensure equal access to LLL. In particular, equality and access for those in need of support to fulfil their educational potential is underlined. This foundational idea becomes evident when teaching people with special needs.

The pedagogical approach we took when designing En-Abilities was informed by our understanding that language instruction must incorporate a marked cultural and linguistic approach so that their learning is both meaningful and comprehensive (García and Ortíz, 2008). Following the Common European Framework of Reference (Council of Europe, 2001), general competences, such as knowledge of the world, socio-cultural competence and professional experience, must be progressively presented as the global levels of competence for languages unfold from "basic" (A1, A2) to "independent" (B1). Contemporary trends in foreign language instruction favour the communicative approach because it trains the learner for real communication (Alamin & Ahmed, 2013). Because of the enormous varieties of special needs, this approach is enriched with other options, such as the audio-lingual method. According to Ganschow and Myer (1988), the visual and auditory modalities facilitate information processing. This way, the SEN students learn by physically practicing a language with exercises until recognition of habits becomes natural (Hanchey, 1974).

In addition, ethical issues have been considered in this project because a variety of gender, races, nationalities and age categories have been consciously included in the contents, examples and exercises of the platform.

Finally, the technical principles combine language pedagogy and personal capability. So far, some initiatives have focused on how this teaching–learning process can be achieved online adopting the

principles stated by Universal Design for Learning (UDL) (CAST, 2018). For example, the ADOLL project aimed at providing visually impaired people with an online platform to acquire basic competences in Spanish, Russian or English. Additionally, platform Bookbuilder[1] created by CAST allow to make content in multiple formats (text, images, audio and videos) at the same time. This platform has used in different empirical studies with optimal results (Kasch, 2019, 2020; Proctor, Dalton, & Grisham, 2007).

UDL implementation minimizes barriers and maximizes the learning possibilities of students, not only for those with SEN but also for all (Blanco, Sánchez, & Zubillaga, 2016). Its principles are as follows (En-Abilities, 2020b, p. 25):

1. To provide multiple forms of involvement to allow each learner to find meaning in learning and feel motivated in this process.
2. To provide multiple forms of representation of information and content because each person perceives and understands information differently.
3. To provide multiple forms of action and expression, which allow each student to interact with the information and demonstrate their learning according to their preferences or abilities because each person has their own strategic abilities.

In addition, the WCAG (W3C, 2018) was created in 1999 by the World Web Wide Consortium (W3C), an international community that develops guidelines and support materials so that all people can use, perceive, understand, navigate, interact and, ultimately, access the web. Its accessibility and easy use benefit people with a specific disability, people with difficulties accessing the web (e.g. with slow connection), people who suffer from a temporary disability (as it could be the case of a broken arm) or elderly people who have had their abilities diminished (such as memory and sight). The guidelines to ensure web accessibility are as follows (En-Abilities, 2020a, p. 25):

1. Content must be presented to users in a way that they can perceive it. This means that content should be presented in different ways without losing information or structure and therefore provide textual and auditory alternatives.
2. The interface and navigation components must be operable, that is, the interface cannot require interaction that a user cannot perform. For example, it ensures that the platform is accessible by keyboard and not just by mouse, and that there is enough time to read and solve the tasks.

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[1] For more information, see http://bookbuilder.cast.org/

3. The information and the operation of the interface must be understandable, that is, the content should be presented in a readable and predictable way.
4. The content must be robust, that is, users must be able to access the content through assistive technologies.

Based on the situation described above, the main objective of the European project EN-Abilities (2019) was to design a virtual learning environment to teach English to adults with SEN, based on the principles of UDL and WCAG. Moreover, this project defends that the process of teaching English needs to focus on UDL to ensure accessibility and motivation, which is essential in the learning process (Sigona and Barros del Río, 2016). The methodology that supports the different activities provided on the project platform follows a sequenced learning process suitable to be adapted to each student and his or her own conditions and capabilities. Thus, the software used provides personalized pathways according to the skills of students with SEN and a compilation of suitable virtual learning resources, divided into age ranges, developmental stage, etc. (En-Abilities, 2019).[2] To save the progress, users will have to provide an email and personal password and register for a free account before they can access the tool.

The application of these principles is actually much more complex than it might initially appear. The statements seem rather simple, but they are deceptively so. Thus, to help teachers see how the UDL/ WCAG guidelines can be implemented to foster language learning among SEN students, the following section displays a set of practical examples developed in the En-Abilities online tool in the hope that they encourage teachers to explore similar paths.

ADAPTATION EXAMPLES FROM THE EN-ABILITIES PROJECT

The En-Abilities project currently provides lessons at three levels of English language competence, namely A1, A2 and B1 (En-Ablities 2020c). Each level is divided into 10 different units. The lower levels address the personal and immediate experience of the world. Then, the course progressively expands towards a wider comprehension of the use of language in society and the different areas of social interaction. Accordingly, grammar, vocabulary and listening exercises are presented in a natural, sequential and progressive way, allowing the students to check whether their answers are correct, and monitor their

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[2] The tool is accessible at http://en-abilities.eu/the-tool/

own pace. All exercises and tests can be completed online or down-loaded as PDF documents. For every level, extra exercises are offered so that the students can further develop their English skills. Each level includes a final and comprehensive test. The platform ensures every-body can access information through an ATbar,[3] which has been cre-ated as an open-source, cross-browser toolbar to help users customize the way they view and interact with webpages (Figure 1). Some options allow that information is presented to users in a way that they can per-ceive it (Table 1).

The ATbar can increase the accessibility to the website and offers a personalized user experience. Among many other options, it allows change of webpage display. The main purpose of the ATbar is to ease accessibility problems for a range of impairments. In particular, it can be very useful for students with low vision, allowing to increase the font size and type, as Figure 2 and 3 show.

To ensure that the text is readable by people with visual impair-ment, the ATbar also offers the possibility to change the background colour so that visibility is improved, as Figure 4 shows.

In addition, changes for contrast purposes are available, as Figure 5 illustrates.

Added to these options, the ATbar also offers the possibility to acti-vate an online dictionary for word search, as shown in Figure 6.

FIGURE 1. ATbar [Color figure can be viewed at wileyonlinelibrary.com]

TABLE 1
Options ATbar that Allow Guidelines to Ensure Web Accessibility

	The magnifiers button is used to increase or decrease the size of text.
	The font button is used for font and line spacing changes.
	The dictionary button allows to look for unknown words.
	The text-to-speech button is used to read aloud text read.

[3] For more information, see https://www.atbar.org/

FIGURE 2. Example to increase font size [Color figure can be viewed at wileyonlinelibrary.com]
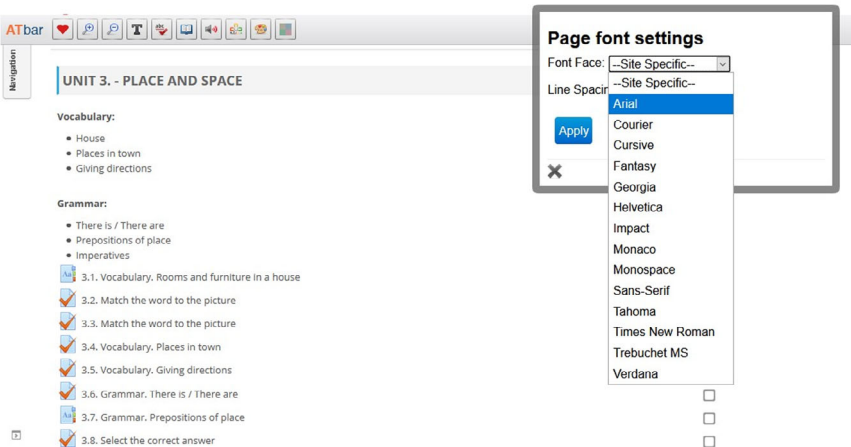

FIGURE 3. Example to change font type [Color figure can be viewed at wileyonlinelibrary.com]
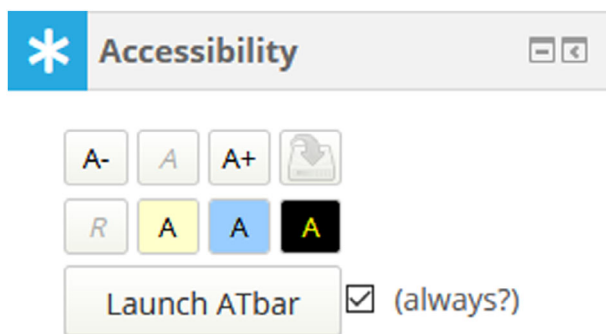
FIGURE 4. Example to change background colour [Color figure can be viewed at wile yonlinelibrary.com]

FIGURE 5. Example exercise with high contrast colour [Color figure can be viewed at wile yonlinelibrary.com]

Note that the possibilities explained before are suitable for adults with dyslexia and other reading difficulties, for example allowing them to choose a font, like Arial or Comic Sans, that helps them better notice contrast between letters, as well as for those who may wish to reduce the glare of black text on bright white backgrounds. SEN students "may also experience greater difficulty with decoding new vocabulary, visual or auditory processing, retaining new information, and/or organizing ideas" (García & Tyler, 2010, p. 116). To solve these matters, the tool uses different UDL strategies aligned with learning networks. To start with, there are different types of exercises: multiple choice, drag and drop into text or drag and drop onto image.
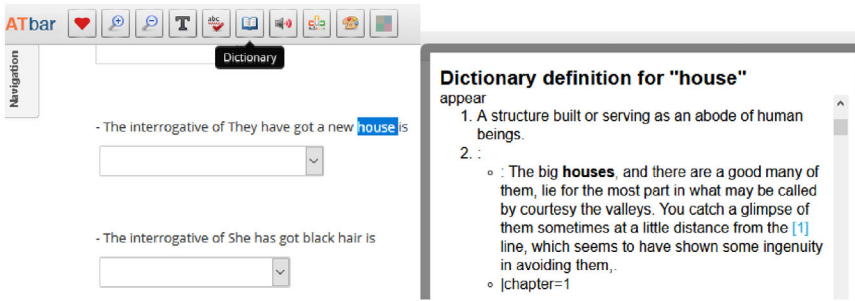
FIGURE 6. Online dictionary [Color figure can be viewed at wileyonlinelibrary.com]
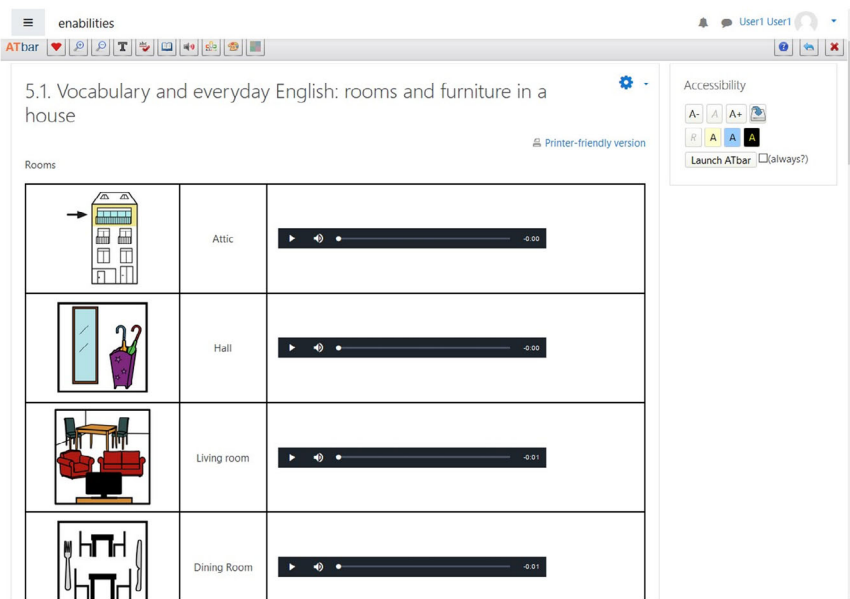

FIGURE 7. Example of an exercise offering text, image and audio [Color figure can be viewed at wileyonlinelibrary.com]

Considering that many SEN students have difficulties in reading and speaking in their own native language, the variety of these formats and their intuitive nature grant them an easier approach to contents. Added to that, most exercises offer the possibility to choose between text, image and/or audio, as Figure 7 shows. This way, the students are given a wider range of options to ease comprehension and adaptability to their personal circumstances.

Besides, the platform also provides multiple examples to familiarize the students with the contents before completing the exercises, and

FIGURE 8. Example of feedback [Color figure can be viewed at wileyonlinelibrary.com]

they also include relevant feedback, reinforcement options and learning rewards, as shown in Figure 8.

To facilitate completion of exercises, the platform provides enough time for reading and comprehension as there is no time limit. This allows students to learn at their own pace.

Finally, En-Abilities maximizes compatibility with current and future user-assistive technologies, such as head wands, switches, keyboards and webcams (see Figure 9).

USABILITY AND ACCESSIBILITY

To test usability of the tool among SEN students, a pilot study[4] was conducted with 13 adults with SEN aged between 18 and 49 (M = 30, SD= 9.27) from Spain, Portugal, Rumania and Serbia with different

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[4] For more information, see González-Castro et al., (2020).

FIGURE 9. Student using the platform with assistive technology [Color figure can be viewed at wileyonlinelibrary.com]

diagnoses such as visual and hearing impairment, memory deficit, attention deficit or cerebral palsy. The aim of this study was to gather participants' opinions about their experience with the platform, so a Likert-type questionnaire was used *ranging up to* 7 points (1*: totally dis-agree; 7:* totally agree). Results show*ed* that participants *were prone to* use the platform again in the future (M = 5.77, SD=1.88). *Those who* consider*ed* that the web platform *was* adapted to their needs *affirmed* that their expectations ha*d* been met*, t*hat the content *was* useful and that learning English with the platform w*ould* allow them to improve their working conditions ($p<.001$).

CONCLUSIONS

The tool, designed to foster the learning of English among adult people with SEN, promotes equality and inclusion because its format

is tailored taking into consideration students with physical and sensory disabilities, as well as communicative and cognitive disabilities. The pedagogical foundations of this course, inspired by the communicative and audio-lingual methods, are amplified with repetition and alternative audio-visual means. Its contents are oriented towards a universal and non-segregated vision of the world. Units devoted to travelling, jobs, social events and holidays motivate the students and at the same time included a diversity of gender and racial identities in an attempt to represent many different kinds of people. In addition, the progressive and flexible structure of the contents contributes to autoregulation of advancement.

Technically, the tool follows the European guidelines regarding accessibility and Design for all (En-Abilities, 2020c, p. 21). As it encourages autonomous learning, it can also be used outside the classroom. Also, it is free of charge, allowing LLL for all. In sum, the main features of the tool prove that online teaching of English can be accessible to SEN students.

In the end, our goal is to counter ableism in TESOL through increased accessibility to language learning material. We hope to be able to continue developing more adapted and accessible content for the levels currently available in the En-Abilities platform. Further action would include the design in form and content of higher language levels and the adaptation of the tool to other languages. We believe that this project has provided the foundations to break through the one-size-fits-all model for learning languages, and we see the En-Abilities platform as a tool towards a more inclusive society by means of a plurilingual and intercultural education. The En-Abilities project can serve as inspiration to create new resources that allow all people, regardless of their characteristics, to learn everything they set out to do.

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