

# Teaching English to Visually Impaired Learners

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## Session 2. Tools and Resources

### Boards and Digital Books

#### Boards

The board is a common resource in face-to-face classes. Depending on the type of board used, we must take into account some considerations for blind and visually impaired learners.

#### Conventional slate (dark green or blackboard, with white chalk or whiteboard with coloured markers)

- **Low vision students:** Currently, most students with low vision have a portable TV magnifier with video. This TV magnifier allows them to bring any image in the classroom closer to their screen, work on it, capture it on video and work on it later. In the event that the student does not have this optical aid, we must consider the following issues:
  - Place the learner close to the board and in the best position for his or her remaining vision.
  - Avoid reflections of natural or artificial light on the board.
  - Use chalk and marker colours that contrast well with the background of the board.
  - Support what is written with verbal explanations.
  - When possible, offer the student written notes.
- **Blind students:** Although mobile devices are increasingly capable of focusing and describing images, they are still not fast or accurate enough to be used as tools for approaching the board. Therefore, if we have a blind student, it will be necessary to say out loud anything we write on the board and, when possible, also offer them the notes in Braille or digital format.

In any case, for both blind and visually impaired students, we must remember that listening to the student is what will provide us with the best information about their needs and the adaptations that are most effective for them.

## Interactive whiteboard (IWB)

This is undoubtedly the best option if available, due to its features and the possibilities it offers through software.

With most of them, you can:

- Record classes for learners to review.
- Mark parts of the board.
- Manage the board from the teacher's device.
- View the board from the learner's computer.
- Manage the board from the learner's computer.

Many of these functions help students with low vision, however, they are not usually accessible to those who are totally blind.

### Connecting a digital whiteboard to the learner's computer

For students with low vision who work with a screen, there is a possibility that the student can see from their computer what is appearing on the digital whiteboard. There are some options for connection.

First of all, it is important to keep in mind that we are used to doing “the opposite”, that is, sending information from a computer to the digital whiteboard. However, what is interesting for us is sharing the information from the whiteboard to a computer.

If they have an electronic device, the whiteboard can be connected via Wi-Fi, either with the software that these whiteboards usually come with or with other alternatives such as VNC, Teams or RIM. This way, the student will be able to see what the teacher writes on the whiteboard on their computer screen and even write on the whiteboard, from their own device, when the teacher enables permission.

However, if the connection is unstable, doing this can hold back the normal development of the lesson, so another option is proposed:

Most digital whiteboards have an **HDMI OUTPUT** which can often be difficult to locate. It's usually found on the back of a digital whiteboard. We should differentiate between the HDMI input, where we connect a wire to send information from our computer screen to the digital board, and the

HDMI OUTPUT. By connecting the latter to the computer, we will ensure that the student sees the information on the whiteboard on his or her personal computer.

However, the end of an HDMI output wire is different from those we normally have. For this reason, there are adapters to transform an input HDMI wire (jack) to an output one (plug):



HDMI to VGA Adapter - Plug to Jack Converter

For students without vision, this connection will not be very useful, since the screen reader can only be used on their device and will not be able to read what is projected on the whiteboard.

## Digital books

Digital books and magazines have become a common work tool in the classroom in recent years. They allow students to work directly with the book on their tablet or PC or to have the book on the screen and be able to access videos or interactive activities from it.

For students with low vision, by using them with their accessibility tools, these books will meet the same objectives as for other students, although in many cases they will need more time to locate images or texts on the screen. In addition, if the images or texts are not well contrasted or are located on an unclear background or have varied fonts, important details may go unnoticed.

For blind students, digital books are not currently fully accessible. In many of them, they will be able to access the written texts, but they may come across difficulties accessing the exercises and carrying out the interactive activities, and many images may not have alternative text.

### Possible solutions for blind students

- The best solution will always be for the publisher to provide the student with the book in Word format, something that, in many cases, can be difficult to acquire.
- The other solution is to request the transcription of the book.

In Spain, ONCE is the organization that takes care of these transcriptions, according to the following procedure:

- To request the transcription of the book in extracurricular studies, the learner must directly contact the Department of User Support, Quality and Reading Promotion (e.g. [sbodacafo@once.es](mailto:sbodacafo@once.es) in Spain).
- In order for the transcription to be faster, the student will have to provide a certificate of registration with their request.

- The student may request the book in printed or computerized Braille. The first takes up a lot of space and is less manageable in a large group but can be very useful at an individual level; the second is more manageable with the braille display, although more uncomfortable to read, as it contains specific symbols for braille printers that will hinder continuous reading.
- In very justified cases, the book could be requested in Word format, which the student can use comfortably with the braille display, answer the exercises in it and correct and edit any questions.
- Reading books could also be requested in audio format, although, as this is a language learning tool, it is considered more useful for students to be able to read in Braille in order to learn how to write the words.

If you want to learn more about how activities can be adapted for visually impaired students, we recommend reading the supporting documents on “Adapting Tasks and Materials BC\_ONCE” in this course.