

4. Accessibility

4.2. Cognitive Accessibility

Cognitive accessibility means creating an environment where students with diverse levels of cognitive abilities can fully understand, engage with, and benefit from educational materials and activities. This includes using clear instructions, visual aids, simplified language, flexible teaching methods, and supportive technologies to ensure all students can participate and succeed in their learning.

For students with literacy difficulties (especially in reading comprehension), with intellectual disabilities and with a first language other than the one used in class, educational content can be made accessible through the use of simplified or “Easy Language” or through pictograms for students with severe communication difficulties.

These methods help to bridge communication gaps and promote inclusion in educational settings.

4.2.2. Pictograms

Pictograms are simple, **universally recognizable images** that represent objects, actions or concepts.

Pictograms can be used to **support communication**, both in understanding and expression, helping to bridge communication gaps and promote inclusion in educational settings.

They can be a valuable tool for students with severe communication difficulties, such as:

- learners with non-verbal autism without literacy,
- learners with intellectual disabilities without literacy,
- learners with cerebral palsy (and related conditions) without literacy, and many others.

Pictograms can help to **promote personal autonomy** in carrying out tasks related to the educational resource.

Examples of good practices are:

- pictograms for giving instructions,

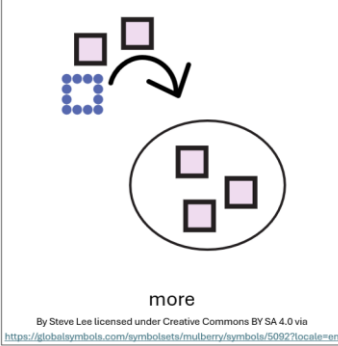

EQui-T - European Quality Development System for Inclusive Education and Teacher Training

Recommendations

- pictograms for orientation in the educational resource,
- pictograms for distributing information in space
- pictograms to structure the types of activities.

MATERIAL	RECOMMENDATION	EXAMPLE
SUPPORT	Learners must have access to the pictograms on appropriate and (digitally) adaptable material.	<ol style="list-style-type: none"> 1. Some users point to a material. This could be paper, plastic or have a digital support. If users access through their vision, they need digital support. Some users with motor disabilities may also need digital support. 2. If digital support is used, some users may need additional material in order to lower brightness in their screens. When adapting content, different material possibilities should be taken into account. 3. Some users may need stronger types of paper or cardboard.
ACCESS	Learners must have physical access to point and select pictograms with ease.	
PICTOGRAM SYSTEMS	There are several pictographic systems, differing from each other in their graphic design. Choose pictograms that do not differ much from each other. Above all, try not to make them contradictory.	Pictograms for the word “more” in different systems:

Recommendations

MATERIAL	RECOMMENDATION	EXAMPLE
		<div style="display: flex; justify-content: space-around;"> <div data-bbox="1413 331 1749 678">  <p>more</p> <p><small>By Steve Lee licensed under Creative Commons BY SA 4.0 via https://globalsymbols.com/symbolsets/mulberry/symbol/5092?locale=en</small></p> </div> <div data-bbox="1756 331 2107 678">  <p>more</p> <p><small>By Otisimo (Erin Kymaz, Naz Yilmaz, Ersin Sinay) licensed under Creative Commons BY SA 4.0 via https://globalsymbols.com/symbolsets/otismo/symbol/47561?locale=en</small></p> </div> </div>

SOURCES

Freely available pictograms can be either pictograms for augmentative and alternative communication (AAC) or pictograms for graphical illustrations.


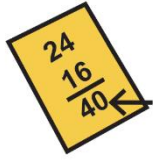

OPEN-ACCESS IMAGE BANKS

Search in open-access image banks. They are another useful resource for OER.


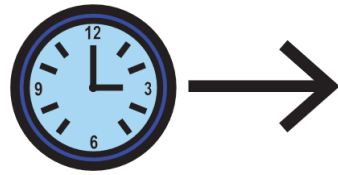
For example:

1. Coco Material <https://cocomaterial.com/>
2. Mulberry Symbols <https://mulberrysymbols.org/>
3. Open Moji <https://globalsymbols.com/symbolsets/openmoji?!ocale=en>
4. Stellar Symbols <https://globalsymbols.com/symbolsets/stellar-symbols?locale=en&page=8>

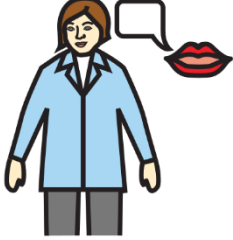

Recommendations

FORM	RECOMMENDATION	EXAMPLE
SIZE	The size of the pictograms should be appropriate to the means of access used by the learner.	
CONTRAST	Pictograms should have high contrast for visually impaired learners. Pictograms for learners with visual cortical damage should use red, yellow, black, white.	
BACKGROUND	Pictograms usually have a white background. In the case of Augmentative and Alternative Communication users, pictograms may have a coloured background depending on the Grammatical class of the word being represented.	
TEXT	Some pictograms may be difficult to guess if they don't show their label. Pictograms should have a caption or transcription above or below the picture in the learner's native language.	 <p>answer</p> <p><small>By Steve Lea - Creative Commons BY SA 4.0 via https://global.symbols.com/symbols/mulberry/symbols/31567boculc1sn</small></p>
BILINGUAL TEXT	In the case of bilingual contexts, one language may be placed above and one below.	<p>schüchtern</p>  <p>shy</p>

Recommendations

FORM	RECOMMENDATION	EXAMPLE
TRANSCRIPTIONS	If a transcription of a text is needed, do not make a word-for-word translation of the pictogram text. Use pictograms for the most important words in the text or use other visual aids (visual scenes).	
USE	RECOMMENDATION	EXAMPLE
COHERENCE	Use the same pictograms throughout the resource, i.e. do not change the type of pictogram you have used for the same concept throughout the resource.	
AMBIGUITY	Explain to the learner that many concepts can be represented by the same pictogram and vice versa.	 <p>Example of the same pictogram for the words: “to win”, “the first one”, “winner” .</p> <p>winner</p> <p><small>by Paxtoncrafts Charitable Trust licensed under CC-BY-SA 4.0 via https://www.opensymbols.org/symbols/mulberry/winner-985799e6?id=15643</small></p>
ABSTRACTION	Avoid pictograms that are too abstract. It is difficult to interpret their meaning.	 <p>“future” by Paxtoncrafts Charitable Trust licensed under CC-BY-SA 4.0 via https://www.opensymbols.org/symbols/mulberry/future-920e8706?id=14123</p>

Recommendations

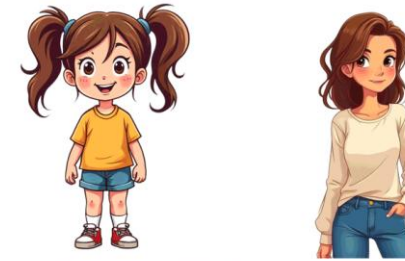
USE	RECOMMENDATION	EXAMPLE
<p>DETAILS</p>	<p>Always try to use pictograms that match the complexity of what they represent.</p>	 <p><small>"speech language therapist" by Pixtoncrafts Charitable Trust licensed under CC-BY-SA 4.0 via https://www.opensymbols.org/symbols/mulberry/speech-language-therapist-2a-94e69a77id=15221</small></p>
<p>VARIETY</p>	<p>Illustrations are useful for complex scientific content. Visual scenes provide a useful context for storytelling, processes or facts.</p>	
ADAPTATION	RECOMMENDATION	EXAMPLE
<p>DIDACTICS</p>	<p>Pictograms should represent concepts that the learner understands or can understand (zone of proximal development).</p>	
<p>AGE OF USERS</p>	<p>Pictograms should be appropriate to the age of the learner.</p>	<p>Pictograms for the word "woman" for adult and younger learners:</p>

Recommendations

ADAPTATION

RECOMMENDATION

EXAMPLE



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via <https://globalsymbols.com/symbolsets/ai-cartoon-symbols-picom-core-fringe-get/symbols/64390?locale=en>

LITERACY LEVEL

Use pictograms appropriate to the learner's level of literacy.

PERSONAL AUTONOMY

Pictograms can help to promote personal autonomy in carrying out tasks related to the educational resource.

Example of good practice:

- pictograms for giving instructions,
- pictograms for orientation in the educational resource,
- pictograms for distributing information in space
- pictograms to structure the type of activities.

Pictograms for giving instructions:



read



write



cut out