



IASLT

The Irish Association of
Speech + Language Therapists

Visual Communication Displays in Playgrounds

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1.0 Introduction and background.

Communication is the most fundamental of human capacities, and the opportunity to communicate is a basic human right (Universal Declaration of Communication Rights, International Communication Project, 2014). Communication takes many different forms including spoken and sign languages as well as body language and less common forms of communication like augmentative and alternative communication (AAC) (Beukelman and Mirenda, 2013).



AAC includes the use of gesture based systems and aided systems where pictures or text is used to communicate. Everybody has the potential to communicate and all forms of communication are equally recognised and valued (McCormack, Baker and Crowe, 2018). Speech and language therapists (SLTs) have a key role in promoting the human right of all people to express their thoughts, wishes, goals and feelings through their preferred mode of communication.

Visual display communication boards are one form of AAC that are used to support or replace speech. Communication boards display pictures, letters and/or words that can be used to communicate (Beukelman and Mirenda, 2013). A person may point with their hands or eyes or another person might scan through the options for them to express their message. Communication boards can also be used to support an individual's understanding of their world.



2.0 The importance of Visual Communication Displays in Playgrounds

Recently, there has been a high level of support from the public, County Councils and the speech and language therapy profession for installing visual communication displays in playgrounds and other spaces. Having access to visual displays that can be used to support communication in everyday spaces is very important for several reasons.

Visual displays in playgrounds offer another way of communicating allowing children to make choices, express themselves and connect socially with others. Having immediate access to appropriate vocabulary makes playgrounds more inclusive for children with speech, language and communication needs (Conroy and Lynch, 2022).



Visual displays in playgrounds may raise awareness of different communication modes. An estimated 22,000 people in Ireland use AAC to communicate (IASLT, 2016), yet few people have heard about AAC. Many individuals face discrimination and exclusion due to a lack of understanding or support for other ways of communication. Visual displays in playgrounds may increase awareness of AAC and promote a better understanding of diverse communication methods.

Visual displays in playgrounds may also promote inclusion and increase acceptance of different ways of communicating for children with speech, language and communication needs. In turn, it may reduce anxiety when communicating for those with additional needs. A recent survey of Irish Speech and Language Therapists indicated that communication displays are welcome initiatives that may support individual children to communicate as well as promote inclusion and awareness of the many ways people communicate (Conroy and Lynch, 2022).



3.0 Logistical Considerations

3.1 Design team

In undertaking the design, development and installation of visual displays in playgrounds or other community locations, it is important to bring together representation from the following groups:

- Children and young people who use AAC
- Parents and family members of children who use AAC
- Speech and language therapists with expertise in AAC
- County council representatives with understanding and expertise in playground infrastructure.

Undertaking communication display design without the involvement of Speech and Language Therapists is not recommended by the IASLT and creates a risk of displays not meeting the needs of children (Conroy and Lynch, 2022).

3.2 Universal Design for Everyone principles

All aspects of design, production and installation should be in line with Universal Design for Everyone principles. Universal Design supports the creation of inclusive environments that are accessible to as many people as possible (NDA, 2018).

County Councils prescribe to these principles and the inclusion of a communication board is in keeping with the vision of inclusion.

- **Equitable Use.** The design is useful to people with diverse abilities.
- **Flexibility in Use.** The design accommodates a wide range of individual preferences and abilities.
- **Simple and Intuitive Use.** Use of the design is easy to understand regardless of the user's experience, knowledge, language skills, current concentration level.
- **Perceptible Information.** The design communicates necessary information effectively to the user regardless of ambient conditions or the user's sensory abilities.
- **Tolerance for Error.** The design minimizes hazards and the adverse consequences of



accidental or unintended actions.

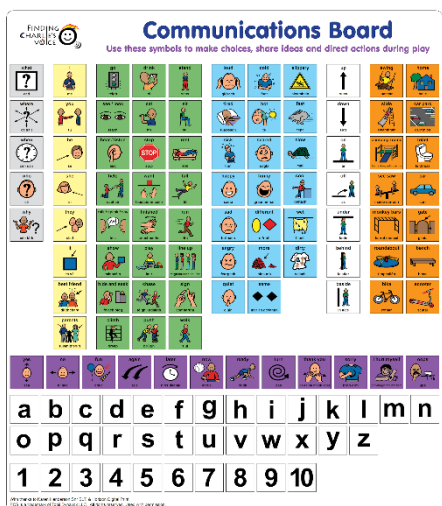
- **Low Physical Effort.** The design can be used efficiently and comfortably.
- **Size and Space for Approach and Use.** Appropriate size and space are provided for approach, reach, manipulation and use regardless of user’s body size, posture or mobility.

3.3 Materials

- The production and installation of the playground display is a straightforward process. Outdoor signage is routinely produced by signage companies, who are experienced in design and logistics. Once the design is completed, this can be provided to the signage company, who will take care of the rest. A PDF file provides a good quality image.
- Displays must be durable and weather resistant. For example, multibond, aluminium with gloss laminate finish – this material is reported to last an estimated 5-7 years once not in direct sunlight or damaged by other means.

3.4 Size

- The size of the display will vary depending on the content (e.g. size and number of images). The following examples demonstrate a variety of layouts.



Credit to Finding Charlie’s Voice.



Credit to Leahy Farm



3.7 Inclusion of multiple languages

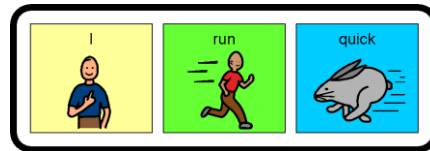
- Communication displays generally transcend language barriers as images can be universal to any language. This enables children who have varied linguistic identities to communicate with each other more effectively.
- There can often be a request to include more than one language on a display. A survey of Irish Speech and Language Therapists conducted for this position paper (Conroy and Lynch 2022) indicated that the majority of respondents viewed visual displays as AAC tools rather than signage. As such, displays should be designed to meet the needs of children who may use these communication tools rather than legislative requirements for signs. The inclusion of two language on a display should be considered in the context of vocabulary and syntactic structure. For example, Irish words change depending on how they are used in a sentence, therefore a direct English-Irish translation to a root form may not be accurate linguistically. Furthermore, the syntax of Irish is also different to English, so in Gaeltacht areas if the vocabulary is laid out syntactically for English, it does not support Irish syntax. Given the primary function of the displays is to support communication, consideration should be given to provide visual displays appropriate for the languages spoken in the community (for example, provision of an Irish symbol board and an English symbol board in the playground but not all on one display).
- Braille and sign language (either static images or QR codes linked to videos of the signs being modelled) may also be considered for inclusion. Specialist guidance will need to be sought to ensure appropriate design for both. Permission will need to be sought as there may be copyright issues regarding their use.



3.8 Symbol sets and colour-coding

Mayer-Johnson Picture Communication Symbols (PCS) were identified as the most popular choice of graphic representation in a recent survey (Conroy and Lynch, 2022). PCS also known as Boardmaker symbols are a popular choice due to its extensive use by SLTs across services and ready availability for designing a display. Boardmaker symbols have been used for the “core” vocabulary element of the displays with additional photos of the equipment specific to that playground. The inclusion of photos also functions as a more concrete representation for children who find symbols too abstract.

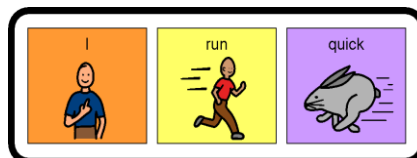
In the examples of displays provided above (section 3.3), the “Fitzgerald Key” is used as the colour-coding system.



This system is used to

support syntactic skills as it reflects the organisation of words in sentence order. As the displays are intended to support the language and communication skills of children at all support levels regardless of cognitive ability, this method of colour-coding may assist children who have language abilities at a range of Mean Length of Utterance (MLU) levels.

Many SLTs use the “Colourful Semantics” colour-coding system in their work (Bryan, 2003). This system colour-codes sentences by assigning words to thematic or semantic roles (e.g. who, what, doing, what, where, etc). If this system is more appropriate to the setting in which a display is being developed, then the decision to use this colour-coding system can be made locally.



3.9 Boardmaker Licence:

- The use of Boardmaker to create a Playground Communication Display, requires a “Maker Free” licence. This entitles the clinician to create public service materials in PDF format at no cost. Interest must be registered with Tobii Dynavox. Details and application forms are available on the website here: <https://goboardmaker.com/pages/pcs-licensing-request-form>.
- Once approved by Tobii Dynavox, the following copyright statement must be used on any resources created: *“PCS and Boardmaker are trademarks of Tobii Dynavox LLC. All rights reserved. Used with permission.”*



4.0 Communication board support

Alongside the design and development of the communication displays, consideration should also be given to awareness raising and training so that communication displays are used to promote and support children’s communication and inclusion in everyday activities (Conroy and Lynch, 2022).

Including all stakeholders in the design team is a first step to ensuring the displays are used and adopted by the community. Further steps to promote use may include:

- A launch event to promote the displays and provide resources to support use
- Training provided by local SLT teams
- Adoption of the displays by a local school with activities to raise awareness.
- Provision of video and other resources via QR code or web link on the display.

(Conroy and Lynch, 2022)

5.0 Revision and Audit

This document is to be revised every three years or sooner as deemed necessary by the profession.



References

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Appendices


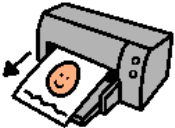


Key considerations

Playground communication boards facilitate those with communication difficulties to participate fully while in the playground.

Consistency in layout of the board will assist in its use i.e. use of colour coding, a systematic approach to language layout....

Checklist <input checked="" type="checkbox"/> :	Considerations
 <p>Identify who will use the visual display</p> <p><input type="checkbox"/></p>	<p>Age Range – this may influence:</p> <ul style="list-style-type: none"> ○ number and size of symbols ○ height of board off the ground. <p>Disability – this may influence:</p> <ul style="list-style-type: none"> ○ height of board off the ground e.g. wheelchair users will be less able to reach symbols placed high up without a pointing tool. ○ display modalities e.g. symbols/ photos, letters, braille etc.
 <p>Create list of vocabulary that is needed for visual display</p> <p><input type="checkbox"/></p>	<p>Predicting what someone may want to say is difficult.</p> <p>Laying the board out in a consistent and logical manner with a range of core vocabulary and some fringe vocabulary will allow the board to meet a range of communication needs.</p> <p>Include:</p> <ul style="list-style-type: none"> ○ Core vocabulary i.e. words that are used frequently across different contexts by us all and which help us to control our environment e.g. stop, go, more, want... ○ Fringe vocabulary i.e. words that are specific to an environment e.g. swing, slide.... ○ Social/pragmatic words ○ Alphabet ○ Number line
 <p>Design considerations</p> <p>- Size</p> <p><input type="checkbox"/></p>	<p>Measure the size and shape of the board.</p> <ul style="list-style-type: none"> ○ How many symbols/photos can you include? ○ What size are the symbols/photos? ○ How much space is between the symbols/photos? ○ What size font will be used?
<p>Choose picture symbol software</p>	<p>Choose picture symbol software that can be used to create the visual display. <i>Consider copyright and permissions for use.</i></p>



<p><input type="checkbox"/></p>  <p>Create visual display using picture symbol software</p> <p><input type="checkbox"/></p> <p>Save as PDF file</p> <p><input type="checkbox"/></p>	<p>Create your visual display using your chosen picture symbol software.</p> <p>Follow a layout that matches the sentence structure of a language and a colour coding system.</p> <p>The 'Fitzgerald key' is an example of a colour coding system that is frequently used:</p> <ul style="list-style-type: none"> ○ Blue: Adjectives ○ Green: Verbs ○ Yellow: Pronouns ○ Orange: Nouns ○ White: Conjunctions ○ Pink: Prepositions, social words ○ Purple: Questions ○ Brown: Adverbs ○ Red: Important function words, negation, emergency words ○ Grey: Determiners <p>Save the visual display as a PDF document.</p>
 <p>Contact printing/signage company</p> <p><input type="checkbox"/></p> <p>Choose material</p> <p><input type="checkbox"/></p>	<p>Share the PDF document with a local printing / signage company who can support with printing.</p> <p>The company may be able to assist in mounting the board to a fence/wall or placing on standalone posts.</p> <p>Choose a material for the visual display that is suitable for the outdoors i.e. highly durable, waterproof, can withstand sunlight.</p>
 <p>Identify accessible location in the playground</p> <p><input type="checkbox"/></p>	<p>Choose a location that is accessible to all:</p> <ul style="list-style-type: none"> ○ At a child's height that is easy to see and to reach ○ On a flat surface ○ On a wheelchair accessible route ○ Off the main path ○ Near the playground entrance
 <p>Include instructions for use</p> <p><input type="checkbox"/></p>	<p>Consider the inclusion of a 'How-to:' guide on the visual display to support parents and carers in understanding how to use the display to support communication.</p> <p>For example: "Use this communication board to send messages to others by pointing to a picture. Point to more than one picture to make phrases. For example: point to 'more' + 'slide'"</p>



Membership of the working group

- Karen Henderson
- Muireann McCleary
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- Ciara O'Byrne
- Sarah Mullaney
- Jessica McGrath

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