

Visual scene displays: Searching for evidence of developmental consequences

In semiotic theory it is a defining characteristic of the linguistic sign that it is *arbitrary*, that there is no physical relationship between the word form and its meaning or use. The relationship between form and meaning, the *signifier* and the *signified*, is conventional (de Saussure, 1974). However, many discussions of graphic communication systems – the words of young aided communicators – seems to take the images themselves as the starting point, rather than the symbols' function as referring expressions (von Tetzchner, 2015). One example is the recent suggestion to organize graphic symbols in communication aids in pages with «visual scenes» (Drager et al., 2003). A visual scene could be a photograph or drawing of a room in the house or a photograph of the child in a play situation. Symbols are placed under some of the objects depicted in the scene, and the child activates a symbol and its spoken gloss by indicating the object. The argument for doing this is that young children tend to organize things around events (Light et al., 2004; Maatz, 2011). The visual scene display thus represents a continuity of the assumption that iconicity is useful for learning to use graphic symbols for everyday communication, and relates interpretations to the literal form of a single exemplar or a metonymic feature rather than to an emerging more broad or abstract category.

Within the framework of communication and language, a “context” may be regarded as a construct of the mind on the basis of earlier and immediate personal and cultural experiences and knowledge (Rommetveit, 1974). Contextual understanding is both a result of and a prerequisite for language development (von Tetzchner & Martinsen, 2000). Presentation of symbols in visual scene displays in communication aids is said to add contextual elements:

“VSDs capture the social interactions that are the contexts in which young children learn language and communication skills; VSDs replicate these contexts within the AAC system, thus providing visual supports for the children’s language learning and use.” (Light & McNaughton, 2012, p. 38)

This appears to be a confounding of different meanings of “context”. The “context” that Light and McNaughton refer to – represented by the visual scene on the display – seems to relate to some usages of the object referred to, and not to the communicative context created in the child’s mind, which is based on cultural and personal knowledge about the social situation and the interaction in which the actual conversation is taking place. The situation and interaction are, of course, not represented in the symbol. The symbol is a tool that is used by the child to achieve communicative goals. Visual displays may possibly be used for didactic purposes, similar to how other pictures are used by teachers and others to illustrate the meaning and use of words, to supplement verbal explanations of what the symbol refers to, but then the teacher should have many different visual scenes to help the child understand the scope of the usage of the symbol, its extension and limitations.

One possible consequence of placing vocabulary items in visual scene displays is a less generalized usage of the symbols because a symbol-in-a-scene may anchor the child use of the symbol in one particular activity or event. Spoken words gain meaning, not by association with one routine or static situation but through use in different situations, in relation to different persons, objects and events, in combination with different words, and for different purposes (Veneziano, 2005,

2013). A visual scene display in a communication aid may contribute to a more specific and concrete or literal symbol use. Moreover, the pictographic quality of the symbols may have a decisive influence on the communication partners' interpretation of the child's graphic utterances and hence on how he or she comes to use the symbols and construct utterances.

The over-riding question is how the use of communication systems with mainly pictographic symbols embedded in visual scenes may influence the language development of young aided communicators, their utterances and conversational interactions. A search for evidence for claims made about visual scenes indicates that there is little evidence that supports these claims and that the developmental consequences for children developing aided communication having such displays are simply not known.

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Declaration of interest

The authors disclose that they have no financial or other interest in objects or entities mentioned in this paper



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