

## **Keyword Signing: Evidence of impact** (from *Budiyanto and Sheehy, in preparation*)

KWS approaches have been used to support children with severe learning difficulties in several countries, often with individual manual signs adopted from those of the respective country's Deaf community. For example using British Sign Language (Walker, 1987), Irish Sign Language (Lámh, 2008) or adapted as in the Flemish *Spreken Met Ondersteuning van Gebaren* (SMOG) approach (Vandereet, Maes, Lembrechts, & Zink, 2011).

KWS is learned relatively easily and several factors have been associated with this (Kristien Meuris, Maes, & Zink, 2014): Signs' multimodality may enhance their comprehension (Sigafos & Drasgow, 2001); signs are produced more slowly than speech, and can be physically modelled and shaped for children (Bryen, Goldman, & Quinlisk-Gill, 1988), they require no technologies (Mirenda, 2003) and can be based in typical everyday interactions (e.g with regard to turn-taking and eye contact) (Clibbens, 2001). Learning KWS is reported to be enjoyable, so children may be motivated to learn and use it (Mandel & Livingston, 1993), including children without learning difficulties (Mistry & Barnes, 2012). There is extensive evidence that KWS improves the communication and language development of children with severe learning difficulties, including those without spoken language (Doherty-Sneddon, 2008; Dunst & Hamby, 2011; Snell et al., 2010; Tan, Trembath, & Bloomberg, 2014). It can also enhance children's expressive language development (Rudd, Grove, & Pring, 2007), stimulate speech development (Millar, Light, & Schlosser, 2006; R. Schlosser & Wendt, 2008) and make communication easier for others to understand, for example by making speech (where it exists) more intelligible to others (Meuris, Maes, Meyer, & Zink, 2014). By reducing communicative frustration for some children it can reduce problematic behaviours (Doherty-Sneddon, 2008). Furthermore research suggests that the positive effects of KWS are greater than using either a sign alone or a purely oral approach (Schlosser & Sigafos, 2006).

Children use KWS in different ways. For some children it is a limited part of their communication repertoire, for others it is a developmental phase in which their language development is facilitated and for others it becomes their main means of communication (Vandereet et al., 2011). Within inclusive classrooms there will also be children who do not themselves 'need' KWS, but use it to communicate with their peers. Developing the communication skills of all members of a class has positive outcomes for those who experience communication barriers (Roulstone & Lindsay, 2012) and KWS has been perceived by teachers as a tool to support inclusive classrooms (Sheehy & Duffy, 2009).

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