

## Picture Exchange Communication System (PECS)

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### Statement of the Problem

Many individuals with autism spectrum disorders (ASD) and other significant developmental disabilities have difficulty in developing basic communication skills and, in some cases, speech may not develop or may be very limited.

### Proposed Solution/ Intervention

PECS is a systematic communication intervention program usually involving the use of pictures. The program is structured into a number of phases, preceded by an assessment of the learner's preferences. The program starts with exchange of a single symbol for a preferred item. Learners are progressively taught to be more persistent in communication, to discriminate between different symbols, join symbols into simple sentences, answer questions and make comments. While pictures are typically used, the program can also be used with tangible symbols (objects).

### The theoretical rationale – how does it work?

PECS draws extensively on well-validated behavioural learning theory and teaching is typically conducted in structured and natural routines. Several features may be important to the intervention. Requesting is seen as particularly motivating for the learner and is initially targeted. Physical exchange of symbols is viewed as important in PECS as it is a clear and unambiguous response that inherently involves a social approach to a partner.

### What does the research say? What is the evidence for its efficacy?

Two major reviews of the PECS intervention have been recently conducted, including over 30 studies. There are only a few randomized control trials but a number of well-designed

small n studies. There is a reasonable body of interpretable evidence suggesting that the use of PECS results in the development and generalisation of communication via picture exchange. At this stage, there is limited evidence on benefits to speech development and effects on challenging behaviour. When compared with other augmentative and alternative communication systems (such as signing), PECS appears to perform better overall but this is variable, suggesting it may not be the best option for all learners. The vast majority of existing research has been conducted with individuals with ASD but PECS has been used successfully with learners with other disabilities.

There remain some important research questions regarding PECS. More good quality studies are needed examining maintenance. In addition, PECS is a complex program and the relative importance of individual program components (such as physical exchange) needs to be examined. There is also a need to examine whether learners with particular characteristics are best suited to PECS.

### Conclusions

PECS is based on well-validated learning principles. While further studies are needed, existing research is certainly sufficient to allow conditional recommendation.

### The MUSEC Verdict:

Well worth a try

Key references may be found at:  
[http://www.musec.mq.edu.au/co\\_brief.aspx](http://www.musec.mq.edu.au/co_brief.aspx)

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