

What is CABAS®



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The Comprehensive Application of Behaviour Analysis to Schooling (CABAS) is a research-driven system-wide approach providing individualised programmes for children and young people with and without disabilities. It was developed by R. Douglas Greer PhD and colleagues of Teachers College, Columbia University. It is based on the principles of applied behaviour analysis.

CABAS uses a scripted curricula measured through “learn units”, tactics from the scientific literature and PSI (Personalised System of Instruction) for staff training. Research has shown strong relationships between the number of learning objectives achieved by pupils and (a) the number of learn units received by pupils, (b) the number of weekly teacher observations and (c) the number of accurate reactions to pupil responses.

The CABAS approach was developed over 30 years ago. It provides us with an individualised approach to education. Research on CABAS has shown 4-7 times more learning compared to more traditional approaches to teaching (Selinske, Greer & Lodhi,1991)

Curriculum

Pupils are initially assessed to determine which behaviours are present and which require instruction. We assess the pupils across the following repertoires:

Communication

This is based on a verbal behaviour model and focuses on listening skills such as following vocal directions and speaking skills such as asking for items, labelling and responding to questions. Pupils can work through the same targets with sign or pictures to aid their communication skills.

Academic Literacy

This category includes all academic skills linked to an Early Years and Key Stage 1 curriculum eg. maths, reading and writing, sorting items into categories and learning about opposites.

Community of Reinforcers

This involves expanding each pupil’s interests

and preferences, eg. playing with toys independently and choosing to look at books during free time.

Self-management

This category focuses on skills that a pupil needs to be independent in school, such as toileting, eating and dressing independently and following the classroom rules. It also focuses on social skills such as playing alongside others turn-taking and sharing.

Physical Development

This includes the fine motor skills that are important for school, such as holding and using scissors, and also gross motor skills, such as throwing a ball and jumping.

We carry out a comprehensive assessment of the pupil’s repertoires and are provided with a set of important instructional goals that are individualised for each pupil. Those that require instruction are targeted and written up with long-term and short-term objectives.

Learn Units

The basic pupil to teacher interaction is referred to as a learn unit (McDonough & Greer, 1999; Greer, 2002). A learn unit includes teacher presentations, pupil responses, and how the teacher should respond depending on whether the pupil's response is accurate or inaccurate. It also includes a wider context of ensuring the pupil is motivated to respond.

- To provide an example of a learn unit we can look at a programme where the target is for the pupil to identify objects. The teacher presents the pupil with an apple and asks, "What's this?" (the teacher antecedent). The pupil then responds with "apple" and that is their accurate response. The teacher then reinforces this response with verbal praise, an edible, a token or access to a toy.
- If the pupil responded incorrectly or did not respond at all then the teacher consequence would be to correct the pupil. The teacher would say "apple" and the pupil would then repeat this. The teacher would then provide a further opportunity for the pupil to respond independently. This response is not reinforced.
- A learn unit can also take the form of permanent products. The teacher might present the pupil with a worksheet to complete which the teacher would mark later and then show to the pupil. The antecedent would be the written question or instruction on the worksheet. The behaviour would be the pupil's written response. The consequence would be the teacher's tick or cross on the worksheet. The learn unit would not be complete until the pupil had had feedback on their work.
- Learn units are presented to both mastery and fluency criteria. All pupil responses and all objectives achieved are measured and graphed. The direct measurement of each of the pupil's responses during instruction is the most sound measure of their learning.

Decision Protocol

We use the decision protocol, as described by Keohane and Greer (2005) and Greer (2002), to analyse the graphs and make empirically driven instructional decisions, and to gauge the effectiveness of the teaching.

TPRAs

An observational procedure has been designed by CABAS to collect data on pupil and teacher responding and to convert responses to rates of teacher and pupil behaviour. This procedure is termed teacher performance rate and accuracy (TPRA).

The supervisor records data on the teacher's antecedent, whether it was accurate or inaccurate. The supervisor then records inter-observer reliability on the pupil's response, again whether it was correct or incorrect. Then records

data on the teacher's consequence; whether it was accurately reinforced or corrected.

Basically, the supervisor is collecting data on whether the learn unit presentation as a whole is accurate.

Ingham and Greer (1992) found that use of the CABAS teacher-performance observation procedures by a supervisor resulted in significant increases in total learn units taught and correct responses by pupils in the observed and other settings.

Communication & Verbal Behaviour

The focus of a CABAS curriculum is to increase an individual's communication skills which is critical as they move to higher levels of independence. Researched procedures to increase communication skills form an integral part of each individual pupil's curriculum (Greer & Ross, 2008; Petursdottir, A. I. & Carr, J. E. (2011). A review of recommendations for sequencing receptive and expressive language instruction. *Journal of Applied Behavior Analysis*, 44, 859-876).

Modules

To be system-wide means that the approach is applied to the whole organisation. Teachers are taught to be scientists, decision-makers and leaders. All are working through a set of individualised modules set up by Columbia University. The Jigsaw School teaching staff receive intensive training, and their skills are assessed on an ongoing basis to ensure that standards are maintained. Staff training is an integral part of the CABAS system, which believes that investing in the staff is investing in the child's future. CABAS research has shown a direct correlation between the expertise of the instructional personnel and the eventual outcome for children.

References

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jigsawschool.co.uk
cabasschools.org

The Jigsaw CABAS School, Building 20, Dunsfold Park, Stovolds Hill, Cranleigh, Surrey GU6 8TB

T: 01483 273874 E: info@jigsawschool.co.uk



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