

At University College London (UCL) our speech and language therapy students understand that effective intervention involves bringing about behaviour change in a positive direction. What they find more challenging is describing and sometimes recognising what is being done to bring about the intended change – in other words, what makes the intervention work.

We introduce students to a variety of terms, often used interchangeably, that refer to interventions, including ‘approaches’, ‘programmes’, ‘packages’ and ‘schemes’. Some interventions have specific names (eg, ‘Focused Stimulation’), some are described in published manuals (eg, ‘The Derbyshire Language Scheme’ and ‘Melodic Intonation Therapy’) and some are described in research papers (eg, ‘Parent Child Interaction Therapy’ and ‘Colourful Semantics’). There are interventions without specific names, but none-the-less based on sound rationale (eg, ‘manipulating the environment to promote communication’).

The named interventions often involve a large subset of techniques and may prove to be effective because of one or a subset of particular techniques. For example, common approaches used to promote communication development in pre-school deaf children by altering their parents’ interaction style share a large number of specific techniques (Rees et al, 2015). It is perhaps not surprising that students have difficulty in describing the techniques used to promote change when they do not have a common terminology to draw on.

Precise reporting

Within the discipline of behavioural science, several guidance documents advocate clear and precise reporting of interventions (eg, CONSORT guidelines; Moher et al, 2003). A full specification of the ‘active ingredients’, ie, the behaviour change techniques (BCTs), in an intervention is necessary for investigating effectiveness of specific techniques and for designing effective interventions. Behaviour change techniques are defined as the smallest components of an intervention that in optimal circumstances can bring about change (Michie et al, 2015). They can be used alone or in combination with other BCTs and are observable and replicable.

Behaviour change techniques: part one

In the first a series of articles on behaviour change techniques, **Rachel Rees, Caroline Wood and Kathleen Cavin** look at their contribution to teaching speech and language therapy students about intervention

ILLUSTRATION BY **John-Patrick Thomas**

Researchers have started to develop structured lists, or ‘taxonomies’, of BCTs to provide a shared, comprehensive and consistent terminology for describing intervention content. Building on behaviourally specific taxonomies (eg, Abraham and Michie, 2008) and supported by a wide number of international experts from across domains, disciplines and countries, Susan Michie and her colleagues at the UCL Centre for Behaviour Change (CBC) (www.ucl.ac.uk/behaviour-change), developed the ‘Behaviour Change Technique Taxonomy version 1’ (BCTTv1; Michie et al, 2013); a cross-behaviour taxonomy comprising 93 unique BCTs. The study team has rigorously tested the BCTTv1 as a reliable method for improving specification of intervention content and has developed a free, online training tool to support its use (Wood et al, 2015; www.bct-taxonomy.com). Since its publication the BCTTv1 paper has been cited more than 500 times. The UCL CBC has established an interactive system to gather feedback from users to inform development of the taxonomy. Part of this conversation has involved learning how the BCTTv1 could be further adapted for use by therapeutic disciplines and professions, such as speech and language therapy.

Learning about behaviour

Seeing the potential advantages of the application of BCTs to teaching our SLT students, we collaborated with our colleagues at the UCL CBC and involved them in our teaching programme. During a one-day workshop on BCTs in October 2016, we introduced students to the basic concepts of BCTs and encouraged to apply them to practice. We asked them to think carefully about what behaviours they were trying to change in clients or their significant others. They considered additional questions to help them further specify their target behaviour (main figure). This exercise complemented the guidelines we give students on setting SMART objectives, but took it one stage further.

We provided the students with a chart of the commonly-used BCTs, with definitions and examples, from BCTTv1, asked them to identify the BCTs in video clips of speech and language therapy interventions, such as a discussion between an SLT and a parent as part of parent-child interaction therapy, and to discuss BCT application. However, most of the BCT examples referred to non-SLT interventions, such as those promoting healthy eating and smoking cessation. Since then, SLT tutors have added examples from speech and language

SPECIFYING THE
TARGET BEHAVIOUR





For example, in designing a training package on bilingualism for health visitors, students described how they would use ‘information about consequences’ BCTs. They suggested outlining the following advantages of bilingualism: keeping the culture alive, developing cognitive skills and increasing employment opportunities. Similarly, in describing rationale for intervention with a child with motor execution difficulties, many students made a clear differentiation between the BCT of ‘feedback on the behaviour’ and ‘feedback on the outcome of behaviour’. The teaching of BCTs appears to have helped the students use a common language to describe methods used to promote change.

Future directions

University College London SLT staff have now joined the SLT BCT Taxonomy Network, a group chaired by Dr Helen Stringer from Newcastle University. One of their aims is to provide resources for SLT professionals and students, such as a list of BCTs with concrete examples relevant to speech and language therapy. ■

Rachel Rees, Programme Director of MSc Speech and Language Sciences, Department of Language and Cognition; Caroline Wood, Assistant Director for the Centre for Behaviour Change; Kathleen Cavin, Teaching Fellow, Department of Language and Cognition, UCL, University College London. Email: rachel.rees@ucl.ac.uk

therapy to help our students deepen their understanding of the BCTs and how to identify and apply them (table one).

Since this workshop, students have been referring to BCTs when describing and rationalising their intervention in coursework.

Table one: A Section of the chart of BCTs with examples from SLT practice:

No.	Label	Definition	Example	Examples from speech and language therapy
8	Feedback on behaviour	Monitor and provide feedback on performance of the behaviour (eg form, frequency, duration, intensity).	Inform the person of how many steps they walked each day (as recorded on a pedometer) or how many calories they ate each day (based on a food consumption questionnaire).	Providing specific feedback on what has improved and/or what needs to be modified. Examples: 1 “You looked at me the whole time I was telling you the story.” 2 “Great – you remembered to say “k” that time.”
9	Feedback on outcome of behaviour	Monitor and provide feedback on the outcome of performance of the behaviour.		Providing a description of the outcome of the behaviour. Examples: 1 “Because you looked at me the whole time I was telling you the story – I thought you were interested and was happy to carry on.” 2 “I knew to point to the picture of a ‘key’ (out of a choice of ‘key’ and ‘tea’)”.



References & resources

Abraham C, Michie S. A taxonomy of behavior change techniques used in interventions. *Health Psychology* 2008; 27, 379-87.
 Michie S, et al. Behaviour change techniques: The development and evaluation of a taxonomic method for reporting and describing behaviour change interventions (a suite of five studies involving consensus methods, randomised controlled trials and analysis of qualitative data). *Health Technology Assessment* 2015, 19: 99, 1-188. 10.3310/hta19990
 Michie S, et al. The Behavior Change Technique Taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine* 2013; 46:1, 81-95. Moher D, Schulz K, Altman D. The CONSORT statement: revised recommendations for improving the quality of reports of parallel-group randomised trials. *Clinical Oral Investigations* 2003; 7, 2-7. DOI 10.1007/s00784-002-0188-x
 Rees R, et al. Communication interventions for families of pre-school deaf children in the UK. *Deafness and Education International*, 2015; <http://doi.org/10.1179/1557069X14Y.0000000043>
 Wood CE, et al. Applying the Behaviour Change Technique (BCT) Taxonomy v1: A study of user training. *Translational Behavioral Medicine: Research, Policy and Practice* 2015; 5:2, 134-148. DOI: 10.1007/s13142-014-0290-z