

Developing a Competence Framework for ABA and Autism: What Can we Learn From Others?

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Competence frameworks have become a defining feature of modern professions. They were originally developed to facilitate training and to help benchmark pay scales. However, they are increasingly being used to achieve a high level of consistency with respect to quality of service provision, assessing performance, and providing a basis of common language both within a profession and for its external audience. The present paper describes the process we employed to define the scope and structure of a framework appropriate for the field of ABA, specifically focused on autism education in the UK. We present an overview of the issues that led to the proposals to develop such a framework, a review of the common and critical features of competence frameworks across health and education in the UK, and discuss how these features might best map onto ABA practice in typical settings, as well as the Behavior Analyst Certification Board (2005) Behavior analyst task list, third edition.

Key words: competence framework, competencies; autism, therapists, supervisors; consultants, Behavior Analyst Certification Board®.

Historical Context

The first use of Applied Behaviour Analysis (ABA) for a child with autism in the UK was a home-based programme established in 1994. By 1997 it was estimated that there were 250 families involved in home programmes (Mudford, Martin, Eikeseth, & Bibby, 2001). Two parent led organisations, Parents for the Early intervention of Autism in Children (Peach) and Parent's Education as Autism Therapists (PEAT) were set up in 1996 in England, and 1997 in Northern Ireland, respectively. Peach now estimates that there are just over 500 families running home programmes in England.

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The organisation currently works with 138 families and has 2 clinical managers and 8 case managers on its staff (M. Williams, personal communication, November 22, 2010). The UK Young Autism Project (UK YAP), another home programme provider in England, started in 2000 with 4 members of staff. They currently have 35 employees and provide services to approximately 100 families (C. Gale, personal communication, November 11, 2010).

There was also a demand for school-based provision. TreeHouse, the first ABA school in the UK opened its doors in 1997. As of March 2010, there were 14 self-identified ABA schools for children with autism that catered for almost 250 children ranging in age from 3 to 18 years, employing 310 ABA staff (Griffith, Fletcher, & Hastings, n.d).

That increase in demand, based on strong research evidence to support the effectiveness of ABA with children with autism (Eldevik et al., 2010, 2009) also led to a growth in the number of people working on ABA programmes and seeking the training and professional development necessary to become ABA practitioners. Because of a lack of UK-based resources, early programmes were typically established with consultation from abroad, mostly Norway and the USA where home-based ABA programmes were more established. In 2000, there were no certified behaviour analysts in Europe and no courses that were approved by the Behavior Analyst Certification Board (BACB) as providing the coursework content eligibility (Hughes & Shook, 2007). As of March 2011, there were 99 Board Certified Behavior Analysts (BCBA) or Board Certified assistant Behavior Analyst (BCaBA) certificants,¹ across the UK as follows: England 72; Northern Ireland 11, Scotland 4; and Wales 12. There were also four approved BACB courses at Bangor, Cardiff, Ulster, and Kent universities operating (see bacb.com for more information about the BACB and the certification of behaviour analysts). The first UK-based international conference in ABA and autism was held in Northern Ireland in 2000. There have been three similar conferences since in 2004, 2005, and 2009. The Experimental Analysis of Behaviour Group (EABG), originally established in 1963 to promote collaboration between behaviour analysts working in universities across Europe, now includes behaviour analysts working in applied settings across the UK and holds biennial conferences to disseminate and discuss research in both Experimental and Applied Behaviour Analysis (Hughes, 2007).

Accompanying these developments has been an increasing acknowledgement that there is additional work needed to specifically address the establishment of ABA as a profession in the UK context. ABA was, and still is, both misunderstood and misrepresented

by other professions and organisations including the British Psychological Society (Keenan, 2010). Additionally, much of the delivery of ABA provision for children with autism is carried out by tutors /therapists for whom there is no BACB certification. There is also recognition that, although the increase in demand for ABA has been from parents with children with autism, ABA is not autism specific (Chiesa, 2005). Furthermore, practitioners need an understanding of autism education in the nation within which they practice, as well as a sound knowledge of ABA. Education policy and practice in England, Northern Ireland, Scotland, and Wales is governed at a national level and is therefore not identical across the UK.

In December 2004, a workshop organised by TreeHouse², the Parents Autism Campaign for Education (PACE)³ and Peach, was held to consult with professionals in the field of autism and to gather ideas about an accreditation and career path for autism ABA practitioners (TreeHouse, 2005). A series of stakeholder conferences and steering group discussions followed over the next two and a half years. There was clear agreement about a set of overlapping and inter-related issues that required collaborative action: the credibility and recognition of ABA and of its practitioners, the recruitment and retention of tutors/therapists, the lack of a recognised qualification or even approved coursework at ABA tutor/therapist level (the front-end delivery of most ABA services), and a lack of career infrastructure and associated pay scales. Perhaps not surprisingly, the lack of a systematic infrastructure with respect to ABA in the UK translated into claims of inconsistent practice. For example, in a survey of UK service providers, Martin (2008) highlighted a number of issues with ABA practices in the UK. These included: inconsistencies in the use of terminology, descriptors, and

²TreeHouse was rebranded Ambitious about Autism, the national charity for children and young people with autism, in February 2011.

³Parents Autism Campaign for Education (PACE) merged with TreeHouse in 2005.

¹Data from BACB website March 2011.

curricula; the nature and frequency of assessments and data collection; the intensity of provision; and the structure and delivery of training and supervision.

Despite the clear agreement on the issues for collaborative action at initial UK stakeholder meetings, there was little clarity on the process of addressing these points. As noted above it was agreed that ABA practice in the field of *autism education* would be an immediate focus. The stakeholder recommendations were also clear that there would be no attempt to set up a “rival” UK version of the BACB and the BCBA or BCaBA credentials. Rather, compatibility with BACB standards and credentials would be an important guiding principle. This makes sense not only from a “why re-invent the wheel” point of view, but also because the BCBA-D, BCBA, and BCaBA credentials are increasingly internationally recognised, certainly from within behaviour analysis (Arntzen, Hughes, Pello, & Moderato, 2009; Hughes & Shook, 2007; Shook & Favell, 2008). The UK stakeholder conference in 2007 proposed to build upon the work on competencies done by other professionals as well as the BACB through the development of a shared competencies framework for practitioners in the UK working with children with autism using the principles of ABA.

The Aims of Competence Frameworks

The growth of competence frameworks internationally in the last three decades has been rapid and widespread: geographically, by industry sector, and increasingly, by profession. The first published article to refer to “competency – based” practice was by McClelland in 1973 who proposed that competence, rather than intelligence, was a better indicator of management performance (and see, Boyatzis, 2008). Early use of competence frameworks was aimed at identifying excellent performers, facilitating training, and benchmarking pay scales. Increasingly, however, competence frameworks

are being used to achieve a high level of consistency when measuring the quality of service provided, assessing performance, as well as providing a basis of common language both within a profession and for its external audience. Today, competencies are used in “almost every organisation with more than 300 people”, (Boyatzis, p.5) and this includes both the private and public sectors. In 2007, the UK Chartered Institute of Personnel and Development (CIPD) conducted a survey of UK employers aimed at charting employers’ use of competence frameworks across sectors. The CIPD Annual Survey Report (Learning and Development, 2007) states that 60% of respondents had a competence framework in place for their employees. Of the 40% that did not, almost half (48%) had plans to develop one. Those that had no plans were predominantly private sector employers with fewer than 250 employees.

The UK ABA Autism Education Competencies Project

The UK ABA Autism Education Competencies Project was launched in February 2009 by TreeHouse and other key stakeholders⁴. The primary goal of the project is to establish a shared competence framework for practitioners in the UK working with children with autism using the principles of ABA. The project also aims to set up a system that will support the provision of appropriate training, supervision and assessment for delivering qualifications against the competence framework, and ultimately to establish an accredited UK ABA qualification at tutor/therapist level. The objective is to ensure that this qualification maps onto both the Qualifications and Credit Framework in the UK, but also onto existing international qualifications and guidelines (e.g., BACB certification).

Although there is no qualification at tutor/therapist level at present, and no BACB

⁴<http://www.treehouse.org.uk/promoting-change/aba-competencies-project>.

approved course sequence at that level, individual provider organisations are providing in-house training, much of which maps onto the BACB task list and is of high quality. A further aim of the project is, therefore, to establish accreditation of the in-house training that is offered by current service providers (on home programmes and in school settings). A secondary but equally important goal is the dissemination and implementation of the project's work throughout the community of ABA practitioners in the field of autism education in the UK.

Fulfilling these objectives should ensure progress on a number of important fronts: more children and young people with autism will benefit from high-quality, evidence-based education delivered by competent professionals; practitioners will benefit from professional development and occupational standards; parents and children's services departments will be able to employ practitioners with a greater degree of certainty about competence and quality; and education providers and the academic community will have a greater understanding of the nature and use of ABA in educational practice for children with autism.

In the remainder of this paper, we describe the process employed to define the scope and structure of a competence framework appropriate for the field of ABA, specifically focussed on autism education in the UK. This process included an overview of the concept of competencies and competence frameworks across professions, and an analysis of the common and critical features of selected competence frameworks within health and education in the UK and in the field of autism. The aim of this analysis was to identify the defining features of competencies frameworks that have been used by other professions and in particular, to choose those features most appropriate to the practice of ABA and which best addressed the project objectives. These features were then mapped onto measurement tools typically used in ABA settings as well as the BACB task list

to ensure professional as well as geographical consistency. Three questions were posed: 1. How are competencies defined? 2. How are competence frameworks structured? 3. What key features do competence frameworks include? The conclusions from the examination of these three questions were then used to discuss a fourth question: 4. Which definitions, structures, and common features are most relevant to ABA and autism? The paper concludes with an outline of the proposed UK ABA Autism Education Competence Framework.

Review of Existing UK Competence Frameworks

A review of existing frameworks across health, education in use in the UK, and in the field of autism was conducted. These were identified by asking the ABA Autism Education Competencies Project Advisory Group members, and other stakeholders and professionals working in ABA settings, including teachers and Speech and Language Therapists, for examples of competence frameworks used in their settings and by reviewing the websites of professional bodies in health and education in the UK. Health and education were chosen because home and school based autism provision in the UK is predominantly through education with specialist health professionals' involvement on a needs basis. Social care professionals are not typically involved in the delivery of ABA programmes for children with autism in the UK. The list of competence frameworks examined is not exhaustive but reflects those frameworks deemed by the Advisory Group to be relevant to the aims of the project. Tables 1 and 2 list the frameworks examined.

Each of the frameworks was analysed in terms of their definition of competencies, how they were structured, and the key features incorporated in the frameworks both in terms of use and presentation. In terms of use, common key features examined included use of specific measurement tools,

Table 1. *Competence Frameworks/Guidelines reviewed related to Autism*

Sector	Institute	Competence Framework/Guidelines
Autism	BACB	Autism Task List
	New York State Education Department	Autism Programme Quality Indicators
	West Midlands Regional Partnership	Autism Spectrum Disorder Training Policy and Framework

Table 2. *UK Health and Education Competence Frameworks/Guidelines examined*

Sector	Institute	Competence Framework/Guidelines
Health	Royal College of Psychiatrists	A Competency Curriculum for Specialist Training in Psychiatry
	IAPT ⁱ	CBT ⁱⁱ Competencies for people with anxiety and/or depression disorders
	Royal College of Speech and Language Therapists	The Speech, Language and Communication Competence Framework
	British Psychological Society	National Occupational Standards for Psychology
	Skills for Health	Competence based approach to service delivery
Education	Children's Workforce Development Council	Common Core of Skills and Knowledge for the Children's Workforce
	Skills for Business	National Occupation Standards (various)
	Training and Development Agency	Professional Standards for qualified teacher (QTs) status
		Professional Standards for Higher level teaching assistant (HLTA) status
		National occupational standards for supporting teaching and learning (STL)

ⁱ Improving Access to Psychological Therapies

ⁱⁱ Cognitive Behavioural Therapy

professional development, links to specific curricula/training courses, and accreditation of those curricula or training courses. In terms of presentation, key features included availability on websites, hard copies, and additional information such as glossaries and references.

A similar exercise was conducted for the materials currently in use across ABA service providers internationally. Table 3 lists the ABA service providers reviewed and deemed as a reasonably representative sample by the Advisory Group. Although

none of the service providers reviewed have competence frameworks in place, all had elements that might be included in such a framework including assessment tools, key skills areas identified for training purposes, and/or agreed service standards. To propose the scope and structure of a competence framework of direct relevance to ABA and autism in the UK, these common elements were identified and mapped onto the findings of the review of competence frameworks.

How are Competencies Defined?

Definitions of "competence", "competencies", or "competency"⁵ vary. One of the first uses of the term "competence" was in a legal

⁵Competencies and Competency are often used interchangeably. For the purpose of this article the term "competencies" will be used, except when quoting from other sources which have used the term "competency".

Table 3. *Materials from ABA Service providers examined.*

Institute	Competence Framework/Guidelines
BACB	ABA Task List
York University, Canada	The York Measure of Quality of Intensive Behavioral Intervention
Ontario Pre-School Initiative	Competence check lists
UK Young Autism Project	Training materials, in-house service standards and tutor assessments
Peach	Training materials, in-house service standards, tutor assessments and tutor record of experience
Jigsaw School	CABAS service standards, training programme and TPRA
Westwood School, Wales	Training materials, mainstream inclusion policy and Tutor Assessment Tool
TreeHouse School	Training materials, in-house service standards and tutor assessments
Southampton Childhood Autism Programme (SCaMP)	Training materials, code of practice and Tutor Assessment Tool

context, used to determine an individual's ability to give evidence. In clinical psychology "competency" then came to refer to legal standards of mental capacity and awareness. The vocational counselling professions adopted the term in relation to their practices defining competencies as "broad areas of knowledge, skills and abilities linked to specific occupations" (Schippmann et al., 2000, p. 707). In education, the term was also used but with the emphasis on knowledge. Early industrial psychology defined competence as the characteristics shown by successful individuals (Schippmann et al.).

Today there is no single definition of the term "competencies". The Job Analysis and Competency Modelling Task Force (JACMTF) commissioned by the Society for Industrial and Organisational Psychology (SIOP) in 1997, asked 37 experts in the development and use of competencies models for their definitions. They received a number of different answers including, from one, "I can't" (Schippmann et al., 2000). The lack of consistency is a reflection of a number of factors including: perspective, purpose, the role of governments, and culture.

McLagan (1996) (as cited in Schippmann

et al, 2000) outlines two ways of defining competencies. First, the differential psychology approach places an emphasis on individual differences with a corresponding focus on individuals' abilities (including intellect) and attributes. Second, the educational/behavioural approach focuses on performance outcomes and behaviours reflecting the view that behaviours can be changed.

Competencies have also been defined according to purpose. Garavan and McGuire (2001) suggest that competencies are differentially defined as characteristics of the individual, characteristics of an organisation or profession, and as a "mode of discourse between education and the labour market" (p. 148). Within this classification structure, most of the literature treats competencies as the characteristics of the individual. This stems from a desire within an increasingly competitive market to understand the basis of excellence in an employee context: that is, identifying and developing the most "competent" performers. The models that focus on the individual tend to emphasise attribute-based competencies (Boyatzis, 1982, 2008; Rausch, Sherman & Washbush, 2002). Definitions of competencies as characteristics

of an organisation initially focussed on the identification of “core competencies” that give an organisation strategic competitive advantage (Hamel & Prahalad, 1993, as cited in Garavan & McGuire, 2001). Increasingly, competencies are being used to define the distinguishing characteristic of a profession and the contribution that the profession makes to specific subjects of enquiry. The focus of this tends to be on skills and knowledge. Boon and Van der Klink (2001) (as cited in Garavan & McGuire) proposed that, in addition, there is increasing recognition of the value of competencies in relation to workplace learning: their use allows learning provision to match with service delivery, and also leads to better identification of learning needs. Added to this is an increase in the mobility of employees and a demand that competencies be recognised through certification processes.

The role of governments has had a defining impact on competencies (Horton, 2000). Having national competence standards is seen as a means of increasing economic competitiveness. The US National Skills Standards Board (NSSB) was set up in 1994 with a view to setting out national standards across all occupations. The goal is that these are then assessed and certified. It is anticipated that this will be in place in 2013. In the UK, the key driver was concern over a growing skills gap and poor quality vocational training. The National Council for Vocational Qualifications (NCVQ) was established to co-ordinate a national framework of performance standards, broadly outcomes based, against which a qualifications framework could be developed. This has led to the establishment of National Occupation Standards (NOS) and an accompanying set of National Vocational Qualifications (NVQ).

Garavan and McGuire (2001) suggest that there are also cultural differences in the definition of competencies. In the USA, the focus is on competencies related to the individual and in particular the knowledge and skills required of an excellent performer.

Accordingly, there is an emphasis on cognitive aspects of learning. In the UK there is less focus on individual excellence and more on task completion. The emphasis is on standards of job functions and work based aspects of learning, and competencies are based on the attitudes of individuals. In Germany, the approach is based on the capacity of individuals to perform a function or profession and, therefore, on qualifications and certification.

Holmes (1992) suggests that many of the attempts to define competencies do so on the assumption that competence is an entity and is therefore “observable and measurable” (p. 4). He argues however that competence is not an entity. It is a concept, difficult to define and extremely complex, and that rather than the factors of perspective, purpose, the role of governments, and culture described above, competence should be viewed as a multi-faceted set of personal, social, and technical factors. He points out that an underlying assumption of many models of competencies is that competence defines performance or is a predictor of performance when in fact individuals may be competent, but many other factors may affect performance. Holmes distinguishes between a “Job approach” to competencies which identifies observable activities which are performed; a “Role or Social approach” which considers work performance in terms of the interactions of the role and those with whom the incumbent relates including perceptions and expectations; and a “Personal or Biographical approach” which looks at the evolving competencies of an individual as he or she progresses through an organisation and changing roles.

Interestingly we could find no clear behaviour analytic definition of the term competencies. Much of the behaviour analysis literature surrounding the professional credentials of behaviour analysis refers to, but does not specifically define, competencies. The identification of “competencies” are part of the job analysis process described by

Table 4. *Defining Competencies.*

Differential Psychology		Educational/behavioural	
←		→	
<i>Definitions</i>			
Knowledge, Skills Attributes/Attitudes	Knowledge Skills	Performance Criteria Knowledge & understanding	Competence & indicator of competence
A Competency Curriculum for Specialist Training in Psychiatry	Common Core of Skills and Knowledge for the Children’s Workforce	National Occupational Standards (all)	The Speech, Language and Communication Competence Framework
CBT Competencies for people with anxiety and/or depression disorders	Autism Spectrum Disorder Training Policy and Framework		
Professional Standards for qualified teacher (QTS) status & Higher level teaching assistant (HLTA) status			

Shook, Johnston, and Mellichamp (2004) that was conducted by the BACB and used to determine the certification task standards and the content of the BACB credentialing examination. Indeed, the BACB task lists (all editions) have all been based on “the importance of each of more than 100 competencies to the practice of behavior analysis” (Shook & Favell, 1996, p. 224), originally used by the Florida Department of Business and Professional Regulation to determine the content area for the 1994 Florida Behaviour analysis Certification Examination. To derive those “competencies”, a set of task statements relating to broad content areas were first defined. Those task statements were classified into specific knowledge, skill and ability statements and included in the task list without retaining that distinction (Shook, Johnston, & Mellichamp, 2004).

The review of competencies frameworks across health and education in the UK, and autism in the UK and the US, reflected some of the different ways that competencies have been defined. Of the seven health frameworks reviewed, three

are specifically described as competence frameworks, while the other four are based on National Occupation Standards. Of the six education frameworks reviewed, two most closely resemble competence frameworks, while the other four are based on National Occupation Standards. Of the autism frameworks reviewed, only one was a true competencies framework. Table 4 represents the variety of ways in which competencies are conceptualised. Two common definitions of competencies predominate. The “Knowledge, Skills, and Attributes” definition is used by two of the three health competence frameworks, and by the Training and Development Agency: Professional Standards for Teachers. The National Occupation Standards use Performance Criteria (outcomes, broadly defined behaviours) and Knowledge. The autism competence framework defined competencies as Skills and Knowledge, and The Speech, Language and Communication Competence Framework defines uses “Competence” and “Indicator of Competence” – broadly Knowledge and Outcome.

Table 5. *Structure of Competencies Frameworks.*

Clusters of competencies	Progressive career structure
A Competency Curriculum for Specialist Training in Psychiatry	The Speech, Language and Communication Competence Framework
CBT Competencies for people with anxiety and/or depression disorders	Autism Spectrum Disorder Training Policy and Framework
Common Core of Skills and Knowledge for the Children's Workforce	Professional Standards for qualified teacher (QTS) status & Higher level teaching assistant (HLTA) status
National Occupational Standards (all)	

How are Competence Frameworks Structured?

Not only is there a broad range of definitions of competencies, the same is true of the definition and structure of competencies frameworks. Models reflect the purpose of the framework: some are based on clusters of competencies within a defined profession or organisation, whilst others are based on providing a career structure in terms of defining increasing levels of competence. The Kioto People Management Model (Devisch, 1998), an example of a model based on clusters, proposes three levels of competencies: Core, Functional, and Specific. Core competencies reflect the corporate culture of the organisation, Functional competencies are linked to job roles and their interaction within the organisation, and Specific competencies outline the attributes required by individuals to perform their role.

The Dreyfus and Dreyfus (1986) "Novice to Expert" model is an example of an approach used to structure frameworks where the emphasis is on supporting progress in the development of skills or competencies. It also provides a means of assessing these progressive levels of competence. The model describes five levels of increasing competence: *novice*, *beginner*, *competent*, *proficient*, and *expert*. These levels are each defined in terms of five areas of competence: knowledge, standard of work, autonomy, coping with complexity, and perception of context (taking a task-based as opposed to a holistic approach to problems). Taking autonomy as

an example, a *novice* is described as someone needing close supervision or instruction; a *beginner* as one able to achieve some steps using his or her own judgement but needing supervision for the overall task; a *competent* worker as one able to use his or her own judgement for most tasks; a *proficient* worker as one able to take full responsibility for his or her own work and supervise others; and an *expert* as one able to take responsibility beyond his or her specific remit.

The structure of the frameworks (where relevant) examined in the review reflected two approaches. Those frameworks relating to professions (e.g., the Professional Standards for Teachers and the Speech, Language and Communication Competence Framework) followed the progressive career structure model. Those based on specific subject areas (e.g., the Cognitive Behaviour Therapy Competencies for people with anxiety and/or depression disorders) reflected the "cluster" of competencies model. Table 5 summarises the structure of competence frameworks.

What Key Features do Competence Frameworks Include?

In the review, we also sought to identify key features of competence frameworks. Here too we found a lack of consistency. Features identified included: measurement tools, self-assessment tools, links to curricula, accreditation of curricula, links to qualifications, continuous professional development, a website, glossaries, and references. Particularly interesting was the lack of measurement

Table 6. *Common features of frameworks.*

Features	Health	Education	Autism	ABA
Measurement tools/system	Work based assessment for NOS	Work based assessment for NOS		All providers use assessment tools
Self Assessment tool	The Speech, Language and Communication Competence Framework		Autism Programme Quality Indicators (for providers)	
Linked to specific curriculum/training course	A Competency Curriculum for Specialist Training in Psychiatry	All NOS linked to NVQs		All providers course content consistent with BACB task list
	All NOS linked to NVQs			
Website	All	All		

tools, although the assessment inherent in NVQs is such that the NOS-based competencies are assessed by some means. Table 6 summarises common features of frameworks.

Defining a UK ABA Autism Education Competence Framework

Which Definitions, Structures, and Common Features are Most Relevant to ABA and Autism?

For the purposes of the UK ABA Autism Education Competence Framework, the definition of competencies according to the educational/behavioural model McLagan (1996) is most in keeping with the dimensions of ABA (Baer, Wolf, & Risley, 1968). Behaviours can indeed be changed, and of interest in terms of best practice is what people actually do. At the same time, because of the desire to develop a set of qualifications that map onto the UK Qualifications and Credit Framework, and in particular to establish in future a UK recognised qualification such as the NVQ or its equivalent, it makes sense to broadly follow the NOS definition of competencies. Using “Knowledge” and “Demonstrable Behaviour” would be com-

patible with an education/behavioural model and the NOS model. The ABA profession, for associate behaviour analysts and higher, already has a defined content in terms of Knowledge by dint of the BACB Task List (3rd Edition, 2006) and, as discussed above, the task list reflects knowledge, skills, and ability. What is critical is to ensure that the competencies included in the framework under “Demonstrable Behaviour” can be observed so that they can be measured and evaluated. Demonstrable behaviours, therefore, need to be of a form that will allow observation and measurement either directly or with some further definition.

In terms of structure, the original discussions surrounding the competencies framework outlined a vision “to set up a framework which is ‘cradle to grave’ in terms of ABA career” (TreeHouse, 2007, p 2). The Dreyfus and Dreyfus (1998) model of skill acquisition most closely meets this aspiration and was therefore likely to be the most appropriate way of structuring the proposed framework. The BCBA-D, BCBA, and BCaBA credentials probably map most closely onto the expert, competent, and proficient levels, respectively, as described in the Dreyfus and

Dreyfus model – what is clear is the gap at the novice and beginner practitioner levels. These levels are of particular interest as there are more tutors/therapists working on school and home programmes than supervisors, consultants, or senior Behaviour Analysts (e.g., Griffith et al., n.d) and yet there is no formalised training or qualification recognised throughout the UK for this group of practitioners. Although the Dreyfus and Dreyfus model clearly maps onto the ABA Competencies project objectives, the idea of “clusters” of competencies, particularly in terms of subject areas is also relevant. The main objective of the project is to *establish a shared competencies framework for practitioners in the UK working with children with autism using the principles of ABA*. Yet the current training and certification in ABA that exists at BCaBA level and above is not autism, nor children, nor UK-specific. Furthermore, whilst at the time of the original stakeholder conferences the fastest growth in demand for ABA services was arguably from parents of children with autism, this may no longer be the case. There is evidence of increasing demand for services for adults with intellectual disabilities and challenging behaviour (Emerson & Hatton, 2008). Whilst the ABA competencies required across settings and populations are clearly generic, additional competencies specifically related to those settings and populations are also desirable. The idea of having both content-specific (autism and education) and generic competencies (ABA) is therefore relevant. It is also appropriate to note that one of the anticipated outcomes of the project is a better understanding of ABA: the use of generic competencies for ABA may address the widely held misconception that ABA is an autism-specific intervention (Chiesa, 2005). It was also clear from interviews with ABA providers as well as from the review of other frameworks, and in particular the certification processes used by other professions, that a list of competencies does not in itself lead to best practice. As Holmes

(1992) suggests, there are many factors that affect performance. A key component of any proposed framework should therefore be those additional competencies needed to maintain a professional infrastructure including its code of responsible conduct, and also ethical guidelines.

Proposed Competence Framework for ABA and Autism in the UK

Drawing upon the examination of existing frameworks and relating those to the practice of ABA, the following structure (Figure 1) is guiding our project work.

The working model for our competence framework is in two parts: 1. A “core” framework that covers the profession of ABA from Level 1 (ABA tutor/therapist) through to Level 4 (BCBA-D) working within an education setting, and 2. A set of “foundation” competencies that would be expected of non-ABA practitioners working in an ABA education setting irrespective of role/level.

The key features of the “Core” part of our working model are that at each level of the framework there are four content strands: ABA, Professionalism, Autism, and Education. The relative emphasis of each will vary by level and they will be broadly generic. Competencies in each strand are defined in terms of “knowledge” and “demonstrable behaviours”. The opportunity exists for other settings or population strands to be

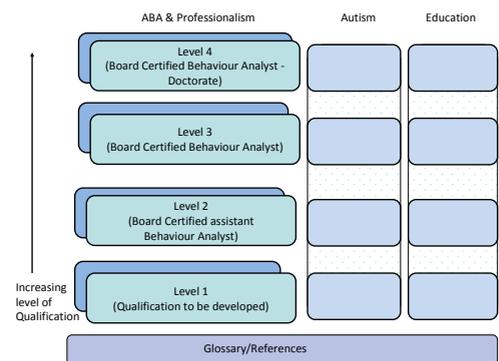


Figure 1. The core professional framework for UK practitioners working with children with autism using ABA.

developed in the future. ABA competencies, qualifications, and professional certification at Levels 2 to 4 will be defined for practitioners in the UK by the international standards established by the BACB. ABA competencies developed at Level 1 will be informed by the BACB Task List 3rd Edition (and in the near future by Task List 4th Edition), employers and supervisors of, and individuals working in roles typically called ABA tutor or ABA therapist, and will detail all of the competencies that a practitioner needs to know, and to be able to show, to deliver current best practice. Competencies relating to the professional practice of ABA in a UK setting, autism competencies, and UK education competencies will be integrated with BACB requirements to define Levels 1 to 4 of the Framework in full.

The “Foundation” level of ABA competencies will be developed for those who may not wish to develop a career as a behaviour analyst in autism but may be interested in learning more about ABA, working to support the delivery of an ABA-based educational model, or working in another professional role in an ABA setting.

We are currently working with ABA and autism stakeholders in the UK to develop the detail of the proposed framework⁶. The focus to begin with is on the development of ABA competencies at Level 1 – the tutor/therapist level – as there is currently nothing in place at this level that is shared across the UK. We are also developing the associated Level 1 competencies in autism and education that whilst initially focused on Level 1 will form the basis of autism and education competencies for other Levels of the framework. Defining competencies is only part of the process: ensuring that they translate into best practice will be the real test of whether the project objectives are realised.

⁶As a part of the development process, at the EABA V conference in Crete participants were given the opportunity to contribute to that detail. Participants were introduced to the idea of competence-based thinking and how that translates into best practice in the workplace.

References

- Arntzen, E., Hughes, J. C., Pellon, R., & Moderato, P. (2009). Behavior Analysis in Europe. An update. *European Journal of Behavior Analysis, 10*, 95-100.
- Baer, D., Wolf, M., & Risley, R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis, 1*, 91 -97. doi:10.1901/jaba.1968.1-91
- Behavior Analyst Certification Board. (2005). *Behavior Analyst Task List, third edition*. Tallahassee, Fl. Retrieved February 2009, from <http://www.bacb.com/Downloadfiles/TaskList/207-3rdEd-TaskList.pdf>
- Behavior Analyst Certification Board. (2007). *Task List for Board Certified Behavior Analysts working with persons with Autism*. Retrieved February 2009, from <http://www.bacb.com/Downloadfiles/AutismTaskList/708AutismTaskListF.pdf>
- Boon, J., & Van der Klink, M. (2001, January). *Scanning the concept of competencies: how major vagueness can be highly functional*. 2nd Conference on HRD Research and Practice across Europe, Netherlands.
- Boyatzis, R. E. (2008). Competencies in the 21st century. *Journal of Management Development 27*(1), 5-12. doi:10.1108/02621710810840730
- Boyatzis, R. E. (1982). *The Competent Manager: A Guide for Effective Management*. Wiley: New York.
- Chartered Institute of Personnel and Development. (2007). *Learning and Development*. Retrieved September 2010, from <http://www.cipd.co.uk/NR/rdonlyres/EB18FA28-BD40-4D47-81B9-660034D280C1/0/learndevsr.pdf>
- Chiesa, M. (2005). ABA is not “A Therapy for Autism”. In Keenan, M., Henderson, M., Kerr, K. P., & Dillenberger, K. (Eds.). *Applied behaviour analysis and autism: Building a future together* (pp. 225-240). London. Jessica Kingsley Publishers.
- Devisch, M. (1998). *The Kioto People*

- Management Model. *Total Quality Management*, 9 (Nos 4-5), 62-65. doi:10.1080/0954412988578
- Dreyfus, H. L., & Dreyfus, S. E. (1986). *Mind over machine: the power of Human intuition and expertise in the age of the computer*. Oxford: Basil Blackwell.
- Eldevik, S., Hastings, R. P., Hughes, J. C., Jahr, E., Eikeseth, S., & Cross, S. (2010). Using participant data to extend the evidence base for intensive behavioral intervention for children with autism. *American Journal on Intellectual and Developmental Disabilities*, 115, 381-405. doi:10.1352/1944-7558-115.5.381
- Eldevik, S., Hastings, R.P., Hughes, J.C., Jahr, E., Eikeseth, S., Cross, S. (2009). Meta Analysis of Early Intensive Behavioural Intervention for Children with Autism. *Journal of Clinical Child and Adolescent Psychology*, 38(3), 439-450. doi:10.1080/15374410902851739
- Emerson, E., & Hatton, C. (2008). *Estimating Future Need for Adult Social Care for People with Learning Disabilities in England. Project Report*. Centre for Disability Research, Lancaster University, Lancaster.
- Garavan, T. N., & McGuire, D. (2001). Competencies and work place learning: some reflections on the rhetoric and the reality. *Journal of Workplace Learning*, 13(4), 144-163. doi:10.110/13665620110391097
- Griffith, G. M., Fletcher, R., & Hastings, R. P. (n. d.). *ABA educational provision throughout the UK – ABA Schools Census*. Manuscript submitted for publication.
- Hamel, B., & Prahalad, C. K. (1993). Strategy as Stretch and Leverage. *Harvard Business Review*, March-April, 75-84.
- Holmes, L. (1992, July). *Understanding Professional Competence: Beyond the Limits of Functional Analysis*. Paper presented at the Institute of Personnel Management Course Tutors' Conference, Manchester. Retrieved March 2011, from <http://www.re-skill.org.uk/relskill/profcomp.htm>
- Horton, S. (2000). Introduction – the competency movement: its origins and impact on the public sector. *The International Journal of Public Sector Management*, 13(4), 306-318. doi:10.1108/09513550010350283
- Hughes, J. C. (2007). The Experimental Analysis of Behaviour Group, UK and Europe. *European Journal of Behavior Analysis*, 8(2), 105-107.
- Hughes, J. C., & Shook, G. L. (2007). Training and certification of behaviour analysts in Europe: Past, present, and future challenges. *European Journal of Behavior Analysis*, 8(2), 239-250.
- Improving Access to Psychological Therapies (IAPT). (2007). *The competencies required to deliver effective cognitive and behavioural therapy for people with depression and anxiety disorders*. Retrieved May 2009, from http://www.ucl.ac.uk/clinical-psychology/CORE/CBT_Framework.htm
- Kennan, M. (2010, August). *Evidence-based practice and autism: A political minefield*. Paper presented at Inclusion and Supportive Educational Congress. Promoting Diversity and Inclusive Practice, Queen's University, Belfast.
- Martin, N. T. (2008, May). *Behavioral Intervention for Autism: A survey of UK Service Providers*. Paper presented at the 34th Annual Association of Behavior Analysis International Convention, Chicago.
- McClelland, D. C. (1973). Testing for competence, rather than intelligence. *American Psychologist*, 28, 1-14. doi:10.1037/h0034092
- McLagan, P. (1996). *Competency systems in the new world of work*. Paper presented at the third international Linkage Inc., conference on Using Competency-Based Tools And Applications To Drive Organizational Performance, Chicago.
- Mudford, O. C., Martin, N. T., Eikeseth, S., & Bibby, P. (2000). Parent-Managed Behavioural Treatment for Pre-School Children with Autism: Some Characteristics of UK Programmes. *Research in Developmental Disabilities*, 22, 173-182. doi:10.1016/S0891-4222(01)00066-X

- National Occupational Standards for Psychology*. (n. d.) Retrieved May 2009, from http://www.bps.org.uk/professional-development/nos/nos_home.cfm
- National Occupational Standards* (various) (n. d.). Retrieved May 2009, from <http://www.ukstandards.org.uk/>
- New York State Education Department. (2001). *Autism programme quality indicators*. Retrieved May 2009, from <http://www.p12.nysed.gov/specialed/autism/apqi.htm>
- Professional Standards for qualified teacher status*. (n. d.) Retrieved May 2009, from <http://www.tda.gov.uk/training-provider/itt/qts-standards-itt-requirements.aspx>
- Professional Standards for Higher level teaching assistant status*. (n.d.) Retrieved May 2009, from <http://www.tda.gov.uk/support-staff/developing-progressing/hlta/professional-standards.aspx>
- Rausch, E., Sherman, H., & Washbush, J., B. (2002). Defining and assessing competences for competency-based, outcome-focused management development. *Journal of Management Development*, 21(3), 184-200. doi:10.1108/02621710210420264
- Royal College of Psychiatrists. (2010). *A Competency Based Curriculum for Specialist Training in Psychiatry*. Retrieved May 2009, from <http://www.rcpsych.ac.uk/training/curriculum2010.aspx>
- Schippmann, J. S., Ash, R. A., Battista, M., Carr, L., Eyde, L., Hesketh, B., Kehoe, J., Pearlman, K., Prien, E. P., & Sanchez, J. I. (2000). The practice of competency modelling. *Personnel Psychology*, 53, 703-740. doi:10.1111/j.1744-6570.2000.tb00220.x
- Shook, G. L., & Favell, J. E. (1996). Identifying qualified professionals in behavior analysis. In Maurice, C., Green, G., & Luce, S. C. (Eds.), *Behavioral Intervention for Young Children with Autism: A Manual for Parents and Professionals* (pp. 221-229). Austin: Pro-Ed.
- Shook, G. L., & Favell, J. E. (2008). The Behavior Analyst Certification Board and the Profession of Behavior Analysis. *Behavior Analysis in Practice*, 1(1), 44-48.
- Shook, G. L., Johnston, J. M., & Mellichamp, F. (2004). Determining essential content for applied behavior analyst practitioners. *The Behavior Analyst*, 27(1), 67-94.
- The Speech, Language and Communication Competence Framework*. (2001). Retrieved May 2009, from <http://www.communicationhelppoint.org.uk/About%20the%20SLCF.aspx>
- TreeHouse. (2005). *October Club ABA Training and Accreditation Project: Report on Consultation and discussion of findings*. Retrieved February 2009, from <http://groups.yahoo.com/group/ABAstakeholdersUK/>
- TreeHouse. (2007). *Response to discussion Group Feedback ABA Stakeholder Day Monday 21 May 2007*. Retrieved February 2009, from <http://groups.yahoo.com/group/ABAstakeholdersUK/>
- West Midlands Regional Partnership. (2006). *Autism spectrum disorders Training policy and framework*. Coventry.