

Addressing the social, cognitive and emotional needs of children: The case for dynamic assessment

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Abstract

This paper examines the extent to which the use of psychological assessment addresses the social, emotional and cognitive needs of children experiencing difficulties with learning. Evidence in favour of a curriculum-based assessment (CBA) approach is presented, and the advantages and disadvantages are evaluated. This paper argues that CBA does not stand up well to the demand for a more ecological approach to assessment that considers the social and emotional needs of children. CBA can often be too task oriented, and more importantly fails to consider an interactive environment in which to assess the child. Finally, the underlying theory of CBA on behavioural approaches to learning neglects a focus on the cognitive and meta-cognitive aspects of learning. Arguments in favour of dynamic assessment are offered as an approach which does consider such aspects of learning. Nevertheless, the appropriateness and effectiveness of CBA and dynamic assessment can only truly be considered in light of the purposes of each individual assessment. Different approaches to psychological assessment could be used in different circumstances, therefore, the 'why?' of assessment (Frederickson, Wright & Webster, 1991) should receive careful consideration before the issue of 'which approach is best?'

Introduction

In the 1980s educational psychologists (EPs) undertook a shift in emphasis away from normative, psychometric approaches to criterion-referenced, curriculum-based assessment (Frederickson, 1993). The move was given momentum by many factors, mainly by the failure of the use of norm-referenced tests in answering the many questions being posed to EPs. For example, the use of norm-referenced assessment, while proving functional as a means of classifying children into certain categories and labels (and thus being useful for school placement purposes and the allocation of scarce resources), were considered unsatisfactory in attempting to answer questions such as: Why is this child encountering learning difficulties? What can we do about it? Solity (1993) argued:

Ultimately arguments about normative and psychometric assessment rest on ... whether the information they provide is largely irrelevant in answering salient questions about promoting children's learning (p. 29).

The scores obtained in a normative psychometric test do not provide a direct link to classroom intervention since there is no information about what the child can and cannot do (Solity & Bull, 1987; Dockrell & McShane, 1993). Many educational psychologists have questioned the use of such tests because they feel it is not a profitable exercise to:

... spend an hour and a half administering and scoring the WISC-R and ending up with only an IQ score. School psychologists, for example, find that teachers want to know specifically what to do for and with children (Witt & Gresham, 1985, p. 1717).

Psychometric tests have received further criticism for being unfair to ethnic minorities and children from disadvantaged backgrounds (Kaniel, 1992; Gamlin & Luther, 1992; Hessels & Hamers, 1993; Brown & Ferrara, 1985). The performance of children from such environments is more likely to be below average because the test norms are largely based on children from a different socio-economic and cultural background (Haywood, 1984; Lunt, 1993). The tests are administered on the assumption that all children have had similar backgrounds (or 'learning histories'), that is, it is assumed that they have had equal opportunity to acquire the knowledge and skills necessary to perform well on the psychometric tests (Haywood, Filler, Shifman & Chatelanat, 1975; Hamers & Resing, 1993). For many children, especially those from ethnic minorities and disadvantaged backgrounds, this assumption may be false. It has been argued that the intelligence of these specific groups of children is often underestimated (Campione, Brown & Ferrara, 1982).

Further criticism could be made of the tendency of psychometric test performance to be used as representative of overall ability when only a fraction of the child's intelligence has been tested (Campione & Brown, 1987; Lunt, 1993; Hamers & Resing, 1993). This can have serious consequences for a child and lead to negative labels being attached to children on the basis of their performance on psychometric tests. Such labels can be very difficult to escape, "even in the face of subsequent contrary performance" (Haywood, 1997, p. 104). Assessing the ability of a football team may be used as an analogy. Inferring from the skills of the worst player that the whole team must be bad is a fallacious argument. As Feuerstein, Rand & Hoffman (1979) argued: "what for the child starts out as an episode and a fragment becomes a durable view of his total personality with the extension of the retarded label" (p. 12).

The development of curriculum-based assessment

The use of curriculum-based assessment (CBA) represented a deliberate move away from a 'within-child' explanation of learning difficulties to one which focused on the appropriateness of the curriculum to the child. In other words, an emphasis was placed on features of the teaching and learning process and how this could be delivered to the child.

The CBA approach focuses on the child's entry skills (what skills he or she brings to the learning situation), and also on the demands of the curriculum. The aim is to uncover what the teacher should teach next and how this should be taught. Particular emphasis is placed on how the results from CBA can assist teachers in deciding upon appropriate curriculum materials for individual students, how they can adjust instruction based on the student's performance, and how to evaluate and communicate the students' progress (Blankenship, 1985).

CBA is based on the following three themes: (i) the curriculum offers the most logical avenue for classroom assessment, (ii) the curriculum places clear, unambiguous demands on the learner, and (iii) the curriculum must be monitored closely if academic success is to be achieved (Gickling & Thompson, 1985).

The criteria (or sub-components) that are used in CBA are often constructed with reference to what is expected for the age-group concerned (Kelly, 1992). Interpreting the significance of what the child has understood is often made in reference to what other children of their age can master. In other words, reference may be made to the norm for the age group (Phye, 1997). Clearly, in trying to move away from normative tests, there are some uses of CBA which are based on similar principles of comparison with peers.

Precision teaching

Precision teaching is a sub-set of curriculum-based assessment, and is more explicitly related to the teaching of individual children. In precision teaching a pupil's progress is recorded daily, and the value of instant reinforcement and feedback is emphasised (Kessissoglou & Farrell, 1995). Assessment is used to identify which of the sequentially arranged objectives the child has already learnt, so that the child can be placed at an appropriate level of the curriculum. A precision teaching programme has a structured series of steps to follow – the aim is to have the child achieve mastery on a particular task for three consecutive days. A criticism of precision teaching is that there is not sufficient emphasis on how one teaches, only about what one should teach.

What evidence is there that CBA is a useful approach to adopt?

It has been argued that the use of CBA gives a clear indication of what a child can and cannot do, and therefore provides information about the areas which subsequently require special attention (Dockrell & McShane, 1993). Moreover, teachers have reported that the information gained from CBA is valuable in setting classroom goals and achievement targets (Phye, 1997).

The use of precision teaching was found to be successful in teaching children with learning difficulties to read words which they were unable to read prior to the introduction of the programme (Kessissoglou & Farrell, 1995). Although gains were unlikely in reading age (since the intervention only focused on learning to read a few words accurately), the authors claimed that the children's inferred gains in self-esteem and motivational level could result in more generalised gains in reading age. However, caution must be made with this study since the sample size was extremely small (n=12, four in each of the three groups in the study), and the intervention lasted just a period of five weeks.

Shapiro (1992) demonstrated the effectiveness of CBA in improving primary school children's reading performance. CBA was used to feed into the children's instruction programmes as a means of improving acquisition of new words, and mastery of new information. The reading performance of children improved considerably as a result of the study. However, the study involved just four students, and it is unclear whether the success of the intervention was due to the small size of the group, or to the use of CBA. Moreover,

the possibility of improved reading performance regardless of the use of CBA was not given sufficient consideration.

A number of studies have found the use of CBA to be both a reliable and valid method of aiding teachers' decisions regarding student placement and identifying children considered academically at risk (Marston & Magnusson, 1985; Joyce & Wolking, 1987; Ysseldyke, 1987; Shinn, Rosenfield & Knutson, 1989). Data from the Marston and Magnusson study indicated that CBA may be useful for screening purposes, programme planning, progress monitoring, and programme evaluation decisions for children with learning difficulties. CBA was also shown to be effective in promoting good classroom performance, especially with low achieving children in mainstream education, and those with Attention Deficit Hyperactivity Disorder (Gickling & Thompson, 1985).

Research in the USA has demonstrated the usefulness of both long-term and short-term goals in achieving learning outcomes for students (Fuchs & Fuchs, 1986). Fuchs and Deno (1994) explored the importance of using testing materials based on the student's curriculum, however, these authors are reluctant to claim that instructionally useful assessment must always be rooted in the curriculum. While the work of Fuchs and colleagues has been instrumental in promoting the usefulness of CBA, their research nevertheless lacked an acceptable (and unambiguous) definition of curriculum (Howell & Evans, 1995). Howell and Evans (1995) argued that educationalists need to distinguish between *what* is taught and *how* it is taught.

It has been argued that CBA was considered by teachers to be useful regarding how to teach children and for assessing whether teaching has been effective (Ysseldyke, 1987). In an attempt to investigate such a claim, Eckert, Shapiro & Lutz (1995) conducted a survey of over 200 teachers on the 'acceptability rating' of CBA (the acceptability rating scale used in the study had high internal consistency and strong test-retest reliability). Eckert *et al.* found that CBA was consistently rated as a more acceptable method of assessment than norm-referenced tests. However, there is an implicit assumption made on the basis of this result which may or may not be true. CBA may have received a higher acceptability rating than norm-referenced tests, however, this does not necessarily imply that teachers found the approach useful and meaningful.

Shapiro and Eckert (1993) conducted a survey of over 200 educational psychologists (EPs) in an investigation of the EPs' knowledge of, and attitude towards curriculum-based assessment. The results indicated that 46 per cent had used some form of CBA but, despite emphasising the importance of the approach, only 18 per cent responded that they use CBA on a regular basis. Respondents viewed CBA as less biased than normative tests, especially for children from ethnic minorities. It was felt by EPs that curriculum-based assessment was considered valuable by teachers and parents, and the general view expressed was that CBA provides valuable feedback to children.

The evidence presented above highlights some positive outcomes of the use of CBA in a number of educational settings, with a number of different populations of students. However, much of the research presented above was conducted by teachers rather than educational psychologists. While one may accept that teachers use CBA more frequently, and possibly in a different manner from EPs, it is nevertheless true that CBA is not used

extensively by EPs in the UK. Why then is the approach not used more widely? Let us assess the extent to which the use of CBA addresses the social, emotional and cognitive needs of children who have learning difficulties.

Addressing the social and emotional needs of children

By the 1990s, a number of reservations were expressed as to the effectiveness of CBA in understanding children's learning difficulties (Solity, 1993). For example, CBA was frequently criticised for being too restrictive, focusing on the child's achievement within the constraints of the school curriculum as opposed to considering the child's ability to learn outside of the academic environment (Ainscow & Tweddle, 1988; Boxer, Challen & McCarthy, 1991; Frederickson, 1993). In restricting assessment to that of curriculum tasks, other aspects to a child's learning such as attitudes, values and motivation were neglected. It was argued that there should be more of a consideration of the learning context and how learning situations can be set up to facilitate access to the curriculum (Boxer *et al.*, 1991).

In using CBA, often the overall learning environment of the child is not assessed. A more ecological view of assessment has been posited as more effective for understanding the child's difficulties in learning. For instance, there should be consideration of the child's immediate environment (e.g. at school and at home) as well as the child's wider environment (extended family, neighbours, mass media), and also the attitudes and ideologies of the culture in which he resides (Bronfenbrenner, 1979).

Recently, in the UK, there has been a move to a more ecological perspective to assessment (Boxer *et al.*, 1991; Frederickson *et al.*, 1991; Thomas, 1992). While norm-referenced tests, and to a certain extent CBA, focused mainly on the child alone, and frequently on the child's deficits, there has been a conceptual shift in looking at the child in context, including some of the more global issues impinging upon the child's environment.

Boxer *et al.* (1991), seemingly using Bronfenbrenner's model as a starting point, identified the following layers of influence which constitute a child's environment: (i) the child-focused dimensions of learning, (ii) the learning context, including specific classroom factors, (iii) whole school issues, (iv) the child's community, and (v) local authority issues and/or policy.

Child-focused dimensions of learning

Boxer *et al.* (1991) identified the need for assessment to include other dimensions such as the child's confidence, their independence as a learner, and their learning styles. In other words, the criticism was that CBA was too much focused on task and the achievement of the child in relation to the curriculum, instead of considering a wider focus on the child's learning environment, and other factors which impinge upon the child's context for learning.

*A child's achievement cannot be separated from the extent to which the curriculum on offer matches with individual needs, the account taken of individual learning style **and the social context of the classroom** (Boxer *et al.*, 1991, p. 32, my emphasis).*

Specific classroom factors

A number of classroom factors were identified by Boxer *et al.* as influencing children's achievement, for example, teacher/pupil interaction, classroom organisation, the different modes of presentation used, the ways in which teachers decide to group children, and the familiarity of materials in relation to pupils' own experiences. They argued that the use of CBA does not take sufficient consideration of these classroom factors, that is, factors that constitute the child's learning context.

Whole-school issues

It could be argued that the EP should consider the following questions: What kind of school does the child go to? Does the school have an 'ethos' which enables sharing of practice? Is the school well-managed? Does it have skilled, competent staff? Are there good home-school links? What are the priorities of the school? These issues may have an impact on the child's learning, and should therefore be regarded as significant.

Community and local authority issues

The child's community may play a significant role in his or her learning, for example, the community may or may not provide the following: a library, a leisure centre, and a variety of youth clubs and organisations. Moreover, there may not be a match between the cultural ideologies of the school and the local community. Some activities may be considered acceptable in one culture, but not another.

In addition, the role of the local education authority in encouraging good practice and promoting education for all may also be a significant factor impinging upon the child's learning.

The wider learning context advocated by Boxer *et al.* and others (e.g. Thomas, 1992; Frederickson, 1993) is neatly summarised in the *DES Circular*:

The extent to which a learning difficulty hinders a child's development does not depend solely on the nature and severity of that difficulty. Other significant factors include the personal resources and attributes of the child as well as the help and support provided at home and the provision made by the school and the LEA. A child's special educational needs are thus related both to abilities and disabilities, and to the nature and extent of the interaction of these with his or her environment (DES Circular 22/89, paragraph 17, quoted in Frederickson, 1993, p. 24).

Addressing the cognitive needs of children

In the early 1990s, there was an expressed need amongst cognitive psychologists, especially those from an information processing context, to consider a different perspective in understanding children's learning difficulties. Rather than focusing on the content, or product (reflected in the child's achievement), the emphasis was on the process of the child's learning (Ashman & Conway, 1993; Dockrell & McShane, 1993). This was a conscious change in direction from the behavioural to the cognitive, highlighting the role of the child as an active constructor, or processor, of information, rather than a passive recipient of knowledge.

Boxer *et al.* (1991) argued that due to the goal-oriented nature of CBA, one may overlook the cognitive strategies involved in the process of completing a task. If one focuses on the child's *achievement* on curriculum-based assessment tasks, then there is a shift in emphasis away from the child's ability to *learn* (Solity, 1992). In other words, the use of CBA focuses upon the *products* of the child's learning – what the child has learned up until that point. There is no consideration of skills that are in the *process* of learning (Phye, 1997). There is now growing importance being placed on assessing processes as well as the products of learning (Boxer *et al.*, 1991; Dockrell & McShane, 1993).

Vygotsky (1987) demonstrated this point by drawing an analogy of a gardener who works in an orchard. Suppose the owner of the orchard comes to visit one day, to assess how his fruit trees are coming along. The owner asks the gardener to give him a summary of progress. The gardener will not only focus on the fully grown trees with the apples and oranges hanging from the branches – this will not do his hard work any justice. Rather, the gardener will also discuss the trees that are growing and maturing, not quite fully grown, but in the process of developing. Vygotsky (1987) argued that one should also view cognitive development in a similar way. The child's cognitive processes may not be fully grown and matured to the extent that they are revealed by the child's independent performance. However, they may be revealed when appropriate assistance and help is provided by the assessor, that is, in an interactive, collaborative environment.

The child's perception of themselves while learning (related to 'Child focused dimensions of learning' discussed above) is another significant factor to be considered. In other words, as well as the cognitive approach to learning, the meta-cognitive beliefs of the child should also be emphasised. For example, is the child aware of his or her own errors, can he/she self-regulate their thinking, and inhibit impulsive responses?

Curriculum-based assessment has been criticised because, it is argued, the assessor is trying to identify 'what' must be taught, which is an admirable goal, but this is usually at the expense of focusing on 'why' it should be taught, or even 'how', for each unique individual (Kaufman, 1994). Frederickson *et al.* (1991) argued that if an educational psychologist's assessment is to be of value to the child's learning, then it must go beyond a mere description of what a child can and cannot do. Rather, there should be clearer explanations of why particular strengths and difficulties are being demonstrated by the child, and how cognitive skills can be taught to him or her.

In response to criticism, Solity (1993) outlines a strong argument in favour of one form of CBA: assessment through teaching (ATT). Solity argues that critics of ATT have misinterpreted the approach, and that, contrary to criticism, ATT is not merely restricted to a focus on the curriculum. Instead, there is consideration of the curriculum, the learner, and the learning context. However, the extent to which this is the case remains a contentious issue. In using the ATT approach there is undoubtedly more of an emphasis on curricular issues, rather than other classroom factors, the child's confidence and the wider environmental factors (e.g. home, community, local authority). Additionally, it is doubtful if by assessing how a child performs independently (as in ATT), one can truly explore the learning context of the child, and his or her preferred learning styles. It could be argued that only by becoming involved in an interactive, collaborative assessment can one explore such learning issues (Campion & Brown, 1987; Lidz, 1991; Feuerstein *et al.*, 1979).

Frederickson *et al.* (1991) argued that the behavioural approach to CBA should be broadened to take into account the cognitive psychology of the child and the social psychology of the context. Involving the child in an interactive environment and focusing upon the cognitive and meta-cognitive aspects of his or her learning could address the limitations that Frederickson *et al.* highlighted.

An alternative approach

In addressing the social, emotional and cognitive needs of children, it may be considered better to create a mini-learning environment between assessor and child: offer support and assistance to the child and uncover what they can achieve with help. In other words, this would involve an interactive approach to assessment, sometimes referred to as dynamic assessment (Feuerstein *et al.*, 1979; Campione & Brown, 1987).

Dynamic assessment (DA) is predicated on the belief that one can learn more from a child's cognitive development by working with the child, together, as opposed to assessing their unassisted performance. In norm-referenced assessment and CBA there is usually little regard given to the child's ability to modify his or her behaviour, that is, there is little recognition of the child's potential to succeed with assessor assistance (Jitendra & Kameenui, 1993). Advocates of DA, on the other hand, view the provision of assistance as offering many advantages to the assessor, as well as allowing children to reveal more information about their cognitive processes:

... dynamic assessment allows the testee in one way or another ... to show not only his momentary competence, but also his ability to respond to new information and to learn from feedback and prompts during the course of the test (Guthke, 1993, p. 63).

The child is personally involved in the assessment process such that interaction between assessor and assessee is legitimised. The child is encouraged to talk to the assessor, ask questions, and contribute to the assessment in ways that would not be permitted in normative and curriculum-based testing. If a child is encountering difficulty with a task, the assessor can attempt to move the child from failure to success by changing the format of the task, providing more trials, offering successful problem-solving strategies, or providing hints (Swanson, 1995).

It has been shown that an interactive environment reduces feelings of anxiety and apprehension on the part of the child (Bethge, Carlson & Wiedl, 1982). The opportunity to become involved in a collaborative environment enables the assessor to explore more thoroughly the affective factors of the individual child (Tzuriel, Samuels & Feuerstein, 1988). Exploring such motivational and personality factors (e.g. anxiety, fear of failure, frustration tolerance, motivation) may provide the assessor with a better understanding of the ways in which these factors may be contributing to the child's learning difficulties.

An objective in DA is that by providing assistance, the assessor can induce change in the child's performance, which may help the assessor gain a more in-depth account of the child's difficulties. An understanding of the child's sensitivity to change is a key link between assessment and intervention (Swanson, 1996). Thus, the assessor should be better

informed when attempting to provide guidance to teachers or parents about how to tackle the child's difficulties.

During dynamic assessment the assessor should focus on the cognitive processes that are illustrative of the child's cognitive behaviour during the assessment. Since DA includes an interactive component, it is argued that working in collaboration with the child makes it possible to identify those cognitive processes which are in the process of developing (see gardener anecdote on page 10). For example, consider a child working on a classification task where they have to classify coloured blocks by colour and shape (i.e. put all the blue squares together, all the red squares together, all the blue triangles, etc.). If the child is assessed on this task without assistance, the child may struggle, and the assessor may conclude that he or she cannot classify according to two dimensions. However, if the assessor begins to help the child, either by demonstration, or by carefully guided hints (e.g. "In what way are these two blocks the same? Yes, that's right, they're both blue, and is there another way in which they are the same? Yes, they are both round. That means they are the same ...? Shape, that's right") then a different picture may emerge. If the child proceeds to finish the task without difficulty then the provision of assistance has revealed that the child has an ability to classify using two dimensions, but the ability is in the process of developing – it is not yet fully developed to be revealed without some assistance.

Recent research to emerge on dynamic assessment in the UK

The majority of research on dynamic assessment has been conducted abroad (e.g. the USA, Israel, the Netherlands, and Switzerland; see *Educational and Child Psychology, 14(4)*). However, more recently, due to increasing interest in the approach, some research on dynamic assessment has emerged in the UK. Lauchlan and Elliott (2001) explored the value of an assisted performance measurement (or, learning potential) in nine-year-old children with learning difficulties. Mixed results were obtained, however, the general outcome appeared to be that a measurement of high learning potential was valuable if accompanied by a programme of cognitive intervention designed to foster such potential. A group of trainee educational psychologists explored teachers' views on dynamic assessment reports (Short, Greatrex, Bham, Hayes, Cottam, Hurni, Robertson & Wood, 1999). Teachers found the reports extremely valuable for planning work for children. For example, one teacher commented "Normal reports do not inform teachers. Dynamic assessment is a move that way". Similar positive feedback from teachers on the usefulness of dynamic assessment reports was found by Lauchlan (1999) and Elliott and Lauchlan (2000).

Deutsch & Reynolds (2000) reported a survey of 88 EPs based in the UK on their views on dynamic assessment. While the sample was biased towards those who had an expressed interest in the DA approach, the results nevertheless highlighted the perceived usefulness of DA to educational psychologists working in the UK. The research reported above represents some encouraging findings on the value of dynamic assessment, however, there remains much work to be done in exploring whether an interactive approach to assessment can offer valuable and instructionally useful information to teachers, parents and children themselves.

Purposes of assessment

This paper has considered the extent to which curriculum-based assessment addresses the social, emotional and cognitive needs of children with learning difficulties and, so far, has considered an alternative approach which can be used by psychologists. However, an often neglected question in psychological assessment is: why are we carrying out this assessment? (Burden, 1996). Cizek (1997) argued that frequently, psychologists take the latest technique from the shelf without pausing to consider why one is carrying out the assessment. Burden (1996) argued that, prior to embarking on the assessment process, psychologists pay far too little attention to essential questions regarding the purposes of assessment. This can result in teachers, parents, and administrators obtaining "useless information which they either find impossible to interpret, or which does not answer the questions that were required but they did not bother to ask" (Burden, 1996, p. 97).

Burden (1996) outlined five main reasons why educational psychologists assess:

1. To classify children and assist the decision-making process

Classification is a function which is frequently associated with educational psychologists. Traditionally, it was perhaps the most important (or even the sole) purpose of the assessment. Even today, when a child is encountering many learning difficulties in the classroom, it is often the case that the child is referred to an educational psychologist so that a decision can be made regarding the allocation of resources, usually involving school placement (Burden, 1994, 1996). Classification remains a core purpose of psychological assessment and, moreover, it seems that psychometric tests are used for this purpose by educational psychologists all over the world (Oakland & Cunningham, 1992).

2. To provide an explanation for a child's learning difficulties

Another reason for carrying out an assessment may be to gain a better understanding of the 'why' question (Frederickson *et al.*, 1991; Burden, 1996). When children ask "why do I have learning difficulties?", or when parents and teachers ask such questions about a child, what they are generally asking for is an explanation. They are asking for more than a set of test scores and observations that describe a series of behaviours which they already recognise (Elliott, Lauchlan & Stringer, 1996). As discussed above, Frederickson *et al.* argued that there should be a change of focus in psychological assessment to a consideration of "all areas of psychology ... in particular social and cognitive aspects" (p. 28), in order that the 'why' question can be addressed.

3. To obtain a summary of a child's cognitive ability

Often educational psychologists carry out an assessment to evaluate a student's performance, or to obtain a summary of performance. The evaluation may be undertaken to investigate whether an educational intervention has been successful, or it may be undertaken to assist the decision-making process of school placement and allocation of resources (Cizek, 1997). In other words, a child's (usually) academic performance is summarised by a score, a grade, or a percentage. Such assessment is often referred to as summative, and is used in the classroom by teachers as well as by educational psychologists.

4. To link assessment findings to subsequent intervention

There is an important relationship between psychological assessment and what happens subsequently regarding the child's learning. The EP is attempting to discover the ways in

which the assessment can inform the next steps of the child's learning. Linking assessment findings to a child's programme of intervention is commonly referred to as formative assessment. The intention of formative assessment is to have a subsequent, positive effect on a child's development through the use of feedback and consultation.

Traditionally, in assessment (and in particular, normative psychometric tests) there has been a focus primarily on technical issues, for example, standardisation and reliability and, therefore, a lot of other important issues are neglected; for example how can the child's learning be improved? As Raven (1991) commented, rather than judging tests against criteria such as reliability and validity, we should be evaluating them in relation to whether they:

... tend to yield new insights into the educational process, offer important insights into the benefits and disbenefits of particular educational programs, help us to identify what is working and what is not working – and why – and how to improve the educational process (pp. 34-35).

5) To help, or empower, the child

It is often argued that assessment in education can often be an impersonal experience, and can often fail to consider the rights of the child being assessed (Kelly, 1992; Henning-Stout, 1994). Burden (1996) questions whether everyone involved in the assessment process (especially the student being assessed) is fully aware of what is happening, and why. Students are rarely asked to provide insights into their own learning problems (Henning-Stout, 1994).

The empowering function of assessment may not be considered sufficiently by educational psychologists. As argued above, one of the first questions an EP should ask is: why am I carrying out this assessment? Burden (1996) took this question a step further, and argued that the deeper issue is: why have I chosen to be an educational psychologist? As Burden pointed out, many educational psychologists, particularly trainee educational psychologists, would probably answer this question by making reference to helping, or empowering, children. However, in reality, educational psychologists are often using assessment approaches which do not appear to be helping, or empowering, children at all:

All too often educational psychologists submit children to psychometric tests without telling them what they are doing or why, without asking their permission, without involving them personally in the process in ways that will enable them to perform at an optimum level, without informing them how well they performed, and without telling them what will happen next (Burden, 1996, pp. 101-102).

When using psychometric tests and CBA, certain procedures are followed, and specific tasks are given. The children must remain passive, and are not able to make their own contribution to the assessment process, since it may interfere with the conditions of the test. In this way, educational psychologists may be viewed as doing things to children, rather than for them, and certainly not with them (Burden, 1996). There is an ethical responsibility to include children in the assessment process as much as possible (Henning-Stout, 1994).

Conclusion

Within the context of purposes of assessment, one may consider what norm-referenced, CBA, and dynamic assessment approaches contribute to assessment practice. Normative, psychometric tests seem to be used as a means of comparing a child's summative performance with other children (usually national norms) and, in turn, often assist the assessor in making a decision about allocation of resources and school placement. In comparison, curriculum-based approaches may assist with linking the assessment to subsequent intervention (since the use of CBA may help the assessor ascertain what a child has and has not learned, which can help in deciding those activities that should next be tackled). However, neither approach has provided overwhelming evidence of helping to address the social, emotional and cognitive needs of children with learning difficulties. More specifically, neither of these approaches assists with providing explanations of a child's difficulties, nor do they help with specifying the nature of subsequent intervention (i.e. how it should be taught), and they do not necessarily empower children. The rigid and non-interactive framework of these approaches:

... makes it impossible to involve those being assessed to contribute in any way other than as passive subjects of assessment. Here one is very much in the game of doing things to children (Burden, 1996, p. 102, my emphasis).

Empowering the child could mean many things, but a major aspect is to offer the child the best opportunity to demonstrate his or her ability to learn. A starting point, therefore, in empowering the child may be to offer an interactive environment during assessment which enables the child to demonstrate his or her capability.

Lidz (1991) offered a useful comparison between the three approaches of normative, CBA and dynamic assessment in relation to their different purposes:

If we wish to determine how far the child's knowledge base deviates from the norm, we will continue to administer a psychometric measure. If we wish to determine the content of the child's knowledge base within a specific domain, we will administer a curriculum-based or criterion-referenced test. If we wish to derive hypotheses about how the child learns, how responsive the child is to attempts to intervene, and what seems to be interfering with the child's ability to profit from existing attempts at instruction, we will use dynamic assessment (pp. 121-122).

The message here is clear: while this paper has considered the extent to which different approaches to assessment meet the social, emotional, and cognitive needs of children, this should not be done in isolation of the purposes of assessment. Different approaches to assessment can serve different purposes: they may be used in an attempt to answer completely different assessment questions (Cizek, 1997). Kaufman (1994) believed that educational psychologists should be familiar with psychometric tests, CBA, and dynamic assessment, but argued that the latter two approaches should not be seen as alternatives to psychometrics, but rather as supplementing the information that can be gained from them. While I do not argue in favour of one approach to the exclusion of others, I would argue that the dynamic assessment approach may be best suited to meeting the social, emotional and cognitive needs of children with learning difficulties. While CBA does link well to

teaching in the classroom, there could be more consideration of the wider learning context, more emphasis on the cognitive aspects of learning and, in particular, a consideration of the child's performance in an interactive assessment. However, the need for further research on dynamic assessment, particularly in UK educational settings, is clear.

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A meta-analytic evaluation of Feuerstein's Instrumental Enrichment program

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Abstract

Proponents of Feuerstein's Instrumental Enrichment (FIE) claim that the program results in an improvement in school achievement, cognitive ability and classroom behaviour. However, because some outcome studies have produced negative results, a meta-analysis was undertaken to provide a reliable and comprehensive assessment of the efficacy of FIE. A total of 40 controlled studies, comprising 47 different samples, were examined. Significant, though modest, average effect sizes were found in all three areas – achievement, ability, and behaviour – with the most extensive improvement being made in ability. Gains in spatial/perceptual ability were related to the length of the intervention (number of hours), and self-esteem was related to age, with older children showing increases and young children showing decreases. These and other findings are discussed and suggestions made for future research.

Recent years have seen an increasing interest in cognitive education programs focusing on teaching processes for effective learning. Costa (1991) presents 27 programs in his book, *Developing Minds*, and his list is by no means exhaustive. Programs range from those that focus on teaching general thinking and problem-solving strategies to those that teach thinking within a particular curriculum area. Cognitive education programs have been of particular interest in the past few years with the realisation that the important commodity of the 21st century will not be material products but rather knowledge and innovation (Samuels, 1994).

Research on children experiencing learning difficulties has also stimulated the interest in cognitive education programs. Children with learning difficulties may have inaccurate or incomplete knowledge in a particular content domain or poor knowledge of the use of learning strategies (Wong, 1996). The recognition of the importance of metacognition and learning strategies and of the relationships between knowledge, cognitive processes, emotion and motivation has been the impetus for cognitive educational approaches. Increasingly popular constructivist-based approaches to teaching and learning (Harris & Graham, 1994) in which children are viewed "as inherently active, self-regulating learners who construct knowledge in developmentally appropriate ways while interacting with the perceived world" (p. 234) are also consistent with the beliefs underlying cognitive education.

Cognitive education programs are based on research and theory from several disciplines with interest in the nature of critical thinking (Sternberg, 1985). Lipman's *Philosophy for Children* (Lipman, Sharp & Oscanyan, 1980) is an example of a program from a philosoph-