

**Re-assessing the current
assessment practice of
children with special
education needs in
Europe**



School Psychology International
23(1) 69-92
© The Author(s) 2011
Reprints and permissions:
sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0143034311409975
sagepub.com

Re-assessing the Current Assessment Practice of Children with Special Education Needs in Europe

Citation (APA): Lebeer, J., Birta-Szekely, N., Demeter, K., Bohács, K., Candeias, A.A., Sønnesyn, G., Partanen, P., Dawson, L. (2011), Re-assessing the Current Assessment Practice of Children with Special Education Needs, *School Psychology International*, 33 (1), 69-92. DOI 10.1177/0143034311409975

Jo Lebeer

Disability Studies, Department of Primary & Interdisciplinary Care, Faculty of Medicine
University of Antwerp, Antwerp, Belgium

Noémi Birta-Szekely

Department of Psychology
Babes-Bolyai University, Cluj-Napoca, Romania

Kármén Demeter

Department of Psychology
Babes-Bolyai University, Cluj-Napoca, Romania

Krisztina Bohács

Doctoral School of Educational Sciences
University of Szeged, Szeged, Hungary

Adelinda Araujo Candeias

Centre for Research in Education and Psychology
University of Evora, Evora, Portugal

Gunvor Sønnesyn,

Pedverket, Voss, Norway

Petri Partanen,

Department of Psychology
Mid-Sweden University, Östersund, Sweden

Lorna Dawson

Student Services Centre, Department of Education,
Ministry of Education & Culture, Tortola, Virgin Islands

Corresponding author

Jo Lebeer MD PhD, Daffodil Project, Disability Studies, Department of Primary & Interdisciplinary Care, Faculty of Medicine, University of Antwerp, Campus Drie Eiken, Universiteitsplein 1, 2610 Wilrijk, Belgium.

Email: jo.lebeer@uantwerpen.be

Abstract

This article reports the results of the European “DAFFODIL” (Dynamic Assessment of Functioning and Oriented at Development and Inclusive Learning) Project on the question of how functional and learning assessment systems facilitate or inhibit participation of children with developmental difficulties in inclusive education. Questionnaires were sent to medical, psychological, educational professionals and parents in Sweden, Portugal, Hungary, Belgium, Romania, Norway and the Virgin Islands. Interviews and focus groups were organised. Results (95%) showed that static standardized psychometric tests of intellectual, behavioural and language functioning were mainly used, with the WISC-III being the most frequent test applied. Only less than 5% of 166 professionals in our sample, used formative assessment and contextual observation to reveal learning or developmental potential in a process-oriented way. Experts were generally not satisfied with current assessment practices. Reported weaknesses included lack of time, human resources, materials, cooperation and follow-up. Assessment practice was mainly used to determine whether a child should be placed in a special needs programme, a special school or an institutional setting, depending on whether a country has inclusive education practice or not. Parents were satisfied with static functional assessment when its purpose was to obtain disability benefits (financial, special education resources, recognition), but were unhappy with the negative outlook of reports. The main complaint of teachers and parents was about the poverty of recommendations on how to work with the child. Our conclusion is that the current practice of standardized psychometric testing seems to contribute to barriers of learning if it is used in a deterministic or predictive way. In this regard, dynamic and functional assessment methods that are qualitatively oriented seem promising in addressing the issues of learning and development in a different way. The methods also contribute to an understanding of the child’s needs in learning and development. However, interpretation and communication of assessment results in a way that emphasises a more adequate and challenging educational intervention for the child seems to be central.

Keywords: special education needs, assessment practices, assessment needs, inclusive education, dynamic assessment, functional assessment

The DAFFODIL (Dynamic Assessment of Functioning and Oriented at Development and Inclusive Learning) project is a consortium of eight partners in six European countries and a United Kingdom Overseas Territory in the Caribbean, aiming to improve assessment and coaching procedures of children with developmental disabilities in relation to inclusion. As a Lifelong Learning Programme, it aims to improve the inclusive educational opportunities of children with learning impairment or functional difficulties by transforming and coordinating three major assessment systems: the “medical diagnosis” system, the system used in school psychologist diagnostic centres and a functional assessment. Our target groups are children and youth experiencing barriers to learning and teachers or professionals dealing with assessment and counselling.

Despite international developments towards inclusion (e.g. the UN 2006 Convention on the Rights of Persons with Disability) in practice, many children are excluded and deprived of adequate education because of impairment and functional difficulties. Special needs are on the increase. Children, particularly those from ethnic minorities or socio-economical less favourable circumstances, are at risk. Although many European countries have changed their legislation regarding inclusion (Italy and Norway for 25 years, the UK for about 10 years and more recently France, Portugal, Romania & the Netherlands), frequently mentioned problems are a lack of classroom support; a lack of teachers’ training and preparation and assessment systems that are too deficiency-oriented (Lebeer, 2006). The policy towards inclusive education is a general trend. However, special schools still enrol between 1-6% of all pupils in segregated schools and classes (Peters, 2004).

According to the UN Convention, inclusive education is a fundamental human right for every child. It involves reducing barriers to learning and increasing participation for all students, not only those with impairments or those who are categorized as ‘having special educational needs’. One of the barriers is the way children are assessed. The question is how suitable are current assessment systems for inclusive teaching. This article explores current assessment practices of pupils’ functioning in 6 European countries (Belgium, Norway, Sweden, Hungary, Romania, Portugal and a United Kingdom Overseas Territory (Virgin Islands). These selected countries will be referred to as the Partner Countries throughout the article.

Assessment process and inclusion

Assessment is an important part in the life of a child who does not have a “typical development”. The European Agency for Development in Special Needs Education, which has representatives from all the Ministries of Education in the EU, conducted a research project and subsequently issued the “Cyprus recommendations on Inclusive Assessment” –The recommendations specified that “...there is a need to develop systems of on-going, formative assessment that are effective for mainstream schools: giving schools and class teachers the tools to take responsibility for assessing the learning of all pupils including those with Special Educational Needs (SEN) and furthermore identifying (initially) the special needs of other pupils.” (Watkins, 2007).

In many countries, where inclusive education is not yet a right, however, access to regular schooling still depends on sufficiently high results on cognitive, behavioural and learning tests. This constitutes a barrier to inclusion.

The current problems are reflected in the following case history. Ronald, a 6 year old child from Belgium, with Down syndrome, had been subjected to many developmental tests. At 2.5 years he received extensive developmental testing at the Centre for Developmental Disturbances: language, intelligence, motor, behaviour and medical tests. His mother was disappointed, angry and sad after reading the report, because it contained only a list of deficiencies of which she was already aware. The report mentioned numbers, such as a Bayley scales index of 55, IQ of 50, etc. Although the conclusions contained positive statements too, the majority of the report mentioned what

Ronald was not able to do, as compared to his peers. It contained a referral to a special school, as well as to a home-based guidance service for children with intellectual disability. The report contained no pedagogical or therapeutic recommendations. This left his mother with a feeling of having a “very disabled child”, ready to be put into an institution and certainly not ready for education. She decided nevertheless to take him to a regular kindergarten. In the first two years, he participated well in class. His language improved, by using a combination of sign language and spoken language. However, the kindergarten teacher thought she had a very disabled child with very low potential because on every school achievement test, he performed far below standards. The test results were always depressing. In the third year, he was also subjected to the same “school maturity tests” as his “normal” peers, on which he performed very low. On this basis, the teacher and school psychologists recommended against him continuing in a regular school, because of “his lack of understanding of numbers, lack of concentration, lack of readiness to work, etc.” However, a dynamic learning potential assessment revealed a capacity to learn and benefit from close mediation (Lebeer, 2005), which led to a series of concrete recommendations for home, classroom and therapeutic use. He had some difficulties in listening, but explaining to the teachers how to make him “listen better” (requesting eye contact; giving one message at a time; using short sentences; articulating loudly and clearly), resulted in him being capable of participating more in learning activities. The dynamic assessment report also recommended spending one or two more years in kindergarten (Lebeer, Birta-Szekely & Demeter, 2010).

This example is but one out of hundreds of similar cases. It pinpoints the heart of the problem of assessment in relation to inclusion: “classic” reports made by medical evaluation, school psychologists and teachers, as shown in this example, by focusing mainly on deficiencies, seem to cause low expectations and in this case have led to exclusion. The question is whether this is common practice and if so, what alternatives can be formulated. There are data regarding attitude changes for access to educational assessment of students with disabilities. Specific areas (individualization of needs assessment, use of student and parent voice, consideration of test anxiety factors, improving communication) of the current British assessment practice, for example, face an enhanced development that help inclusion (Woods et al., 2010). In this study, we wanted to know what the current assessment practices of functioning of pupils with special needs are in the Partner Countries: who does assessment, with what kind of instruments are used, how results are communicated; how the users – teachers, therapists and parents – experience these assessments, and in what way assessment enhances or inhibits participation of a child with special needs in a mainstream school.

Organization and legislation of special needs education in some European Countries

There exists a *wide disparity* between European countries in the prevalence of children with special needs. Finland, for example, reported 17.8% of children with special needs in 1999, whereas Belgium reported 5% and Sweden only 2% (EADSNE, 2003). Equally there are large differences among European countries in the proportion of children being schooled in separate special needs institutions. In Italy and Norway, it is a national policy to include all children with SEN, whatever their impairments. With the exception of children with severe difficulties, children are generally included in mainstream schools in the Virgin Islands. Belgium, Romania and Hungary, inversely, belong to the most separating countries in Europe as regards children with SEN (EADSNE, 2003).

In Belgium, special education is in a period of transition. There are currently 8 types of special education schools based on the children’s impairments. School Psychological Services often advise referral to special schools. The total of children in special needs facilities is 4.97% of the school population (2.5-18 years). 85% of the children receiving these “types” of special education are in separate special schools (Lebeer, Struyf et al., 2010). Children are allowed to be integrated in

regular schools, but in most of the schools this is dependent on the child's capacity to follow the regular curriculum. Support is limited to two to four hours (for visually impaired children) per week. There is an experimental group of 75 children with intellectual impairment who are integrated in regular schools with an individual education programme (without obligation to succeed in uniform exams) and 5.5 hours of teacher support per week. Although on paper children with SEN have a right to be in a regular school, there is insufficient support at regular schools and the school has a right to refuse on the ground of "lack of capacity". Because referrals to special schools have increased, even almost doubled in 10 years time, despite financial incentives to keep children in the mainstream (Van Rompu et al., 2008), the government decided that the special needs' system needs to be reformed and become more inclusive. This was also in response to international pressure to have a more inclusive school system in accordance with international developments. This plan requires a completely different way of assessing special needs, based on "needs-based assessment", integrated assessment with school functioning and parents' cooperation.

Through the 1960's, in Norway there was recognition of frequent examples of bad practice in the system of special institutions for children with intellectual or physical impairment in need of full time care, including education. Hence, from 1976 every child and youngster are expected to be a part of the mainstream school, with the ultimate goal of equal opportunities for all. Support is available for every child within the mainstream school.

In Sweden children also have the right to attend preschool from one year of age, and even before if there are special needs. Children with special needs have the right to attend mainstream schools, with adjustments and support according to their needs.

The Portuguese Constitution stipulates that "everyone has the right to education and to equal opportunities for educational access and success". It also requires that Government must "promote and support the access of citizens with disabilities to education and support special education costs when it is necessary". The Law on Educational System refers to special education as a Special modality of School education, aiming at rehabilitation and socio-educational integration of individuals with special needs due to physical and mental disabilities. The law, nevertheless, allows transference to a special education institution.

In Hungary children with disability have a right to be in a regular school, but the practice is that most children with disability and certainly all those with intellectual disability are in special settings (Csépe, 2009). Assessment and rehabilitation in Hungary are centralized. The fact that a child has special educational needs (SEN) can be diagnosed exclusively by the "Committees for the Assessment of Learning Abilities and Rehabilitation (TKVSZRB)" based on a complex medical-, pedagogical and psychological examination of the child. In all the main cities of the Hungarian counties, every local government is liable to run such a committee. Public Education Act of 2007 defines two major classes (SEN-a and SEN-b), defining provision categories according to type of funding. The distinguishing criterion is whether the given atypical developmental pattern can be traced to "organic causes" or not. SEN-a is characterized as disability of "organic origin", requiring rehabilitative intervention, i.e., pupils in this class (may) continue to attend special-purpose establishments and the service remains subsidized. Children with SEN-b have a disability of a "non-organic" origin and are described as requiring remedial intervention, which is to be offered at mainstream educational establishments only.

In Romania, in 1998, the Ministry of Education adopted the Plan for Special Education. The procedure for inclusion was attached to the reforming processes of the Romanian educational system (Orban, 2008). In 1999, the use of specific therapy was accepted for all children with deficiencies, regardless of the type of school they frequent and was supported by later regulations. In practice, however, it remains extremely difficult to integrate children with special needs, especially when they have a cognitive delay.

Although there has been a special needs institution in the Virgin Islands since 1972, it was only with the 2004 Education Act that issues relating to special education became enshrined in law.

Participants and methods

In evaluating the actual status of the assessment procedures and the satisfaction level of the specialists, teachers and parents involved in the process, we conducted a multi-modality research with online and hard copy questionnaires, telephonic and face-to-face semi-structured interviews and mixed as well as specific focus group discussions with professional diagnosticians, teachers and parents.

A questionnaire was sent to keyinformants in centres dealing with child assessment: school psychological services, hospital neuropaediatric departments, early child intervention centres, school teachers and parents in Sweden, Portugal, Hungary, Belgium, Romania, Norway and the Virgin Islands (Daffodil Partner Countries). Three versions were made: one for specialist assessors, one for teachers dealing with assessed children before and after assessment, and one for parents.

Questions related to who does assessment and in what kind of settings, time, batteries & instruments used in assessment, whether observations of classroom, home and context are standard practice, what main difficulties are experienced, what is the general level of satisfaction and what is the effect of assessment on children with regard to inclusion/ exclusion and learning programming.

From the 7 partner countries 166 professionals replied. Respondents were working as psychologists (25%), speech therapists (40%) and special education specialists (35%). Only a few teachers completed the questionnaire. However, 71% of them were evaluated through semi-structured interviews followed by focus group discussions. Overall there were 25 parents who were interviewed about the tools used for assessing their children and the effects of the assessment on both the children's and institutions' attitude towards inclusion.

Results

The process of assessment in the Daffodil Partner Countries

Assessment starts early in a child's life when development is impaired, or later only when school learning is impaired. Many institutions deal with assessment done by health professionals, psychologists and educational professionals (Table 1).

Among the main principles for evaluation regarding the need for special education and educational/professional orientation, were the global and personalized examination of the child/pupil in the actual family, social and/or school setting and the observation of the child's development and learning performance.

[Table 1 about here]

Tests and instruments currently used in the Partner Countries

Table 2 shows an overview of the currently used test batteries. In the "top 10" of the most widely used test batteries in the evaluation of pupils, the Wechsler scales are on number one for assessing intelligence, far exceeding all the others. Similarly, the Child Behaviour Checklist (Aschenbach's CBCL) for evaluating behaviour falls high on the list. Other batteries widely used are the Kaufman ABC; Peabody language tests, and tests for autistic functioning. Different countries use different batteries for school achievement, which are language dependent. Standardized developmental scales are also universally used, depending on local norm references. Of the partner countries, only Portugal uses the ideas of the ICF (International Classification of Functioning of the WHO) as a part

of their assessment process. Although the ICF has many features, namely addresses contextual features, relies on third-party respondents, uses an observational approach, comprises batteries developed simultaneously, emphasizes processes and monitors progress, that might predict further development and use of school tests, its use is not widespread yet (Carlson et al., 2010).

Table 1. Role of institutions and specialists in the assessment process of children with special educational needs in the Daffodil Partner countries (EU)

Country	Assessors	Actor(s) responsible for decision of inclusion	Decision criteria	Specialists involved in assessment	Type of assessment	Parent/teacher role in the assessment process
Belgium	Child and Family (public institution) – only screening	School/ School Psychological Services (parent) Commission on SEN	Report of multidisciplinary teams (from units mentioned in the second column); intelligence, school achievement tests	School Psychologists	Current: Static (classifying diagnostics) New: action & needs-based	Old system: passive roles; giving information New : active role
	Hospital : Child Neurology Dept.					
	Centre for Developmental Disturbance					
	Hospital: Child Psychiatry Unit					
	School Psychological Services			Physiotherapists; SLT, OT, NP	Static	Passive
	Ambulatory Rehabilitation Centre					
	Federal State Medical Disability Officers					
Norway	Health care system	School/ Parent	Report of either assessor	Special education specialists, psychologists, SLT, SEN teachers or specialists in education	Child centred (optimizing function)	Takes part in the assessment process
	School and kindergarten					
	Educational Psychology (PPT)					
Sweden	Public child and family clinics	Parent	Diagnosis of specialists from	Neuropsychologists, social workers,	Child centred (optimizing	Takes part in the assessment process

	Child and youth guidance services		the system	physiotherapist, occupational therapist, speech therapist, special educational teachers, visual-aid-teacher	function)	
	Child and youth psychiatric clinics					
	School health & psychology services					
Hungary	Hospital	-				
	Committee for the Assessment of Learning Abilities and Rehabilitation Education Advice Services	School/ Parent	Report of the committees	Psychologists, special education teachers and speech therapists	Deficiency centred (medical model)	Reports the deficiency
	Education Advice Services	School	SEN-a: disability of organic origin go to special school; SEN-b of non-organic origin to mainstream schools			
Virgin Islands	Student Services, school counselling and guidance programme	Parent, School, Student Services	Recommendation of specialists	Educational Psychologist, Speech Pathologists, Education Officer Psychiatrist, Clinical Psychologist, School Psychologist, Occupational Therapist	Deficiency centred (minimizing costs)	Reports the deficiency
	Department of Mental Health, Private Providers					
Romania	Child and Family public institution	School/ Parent	Report of	Psychologists, special education teachers	Deficiency centred (minimizing	Reports the deficiency

	School Psychology System		multidisciplinary committee	and speech therapists	symptoms)	
	Multidisciplinary committee					
Portugal	Psychology and Guidance Service Multidisciplinary team	Parent & multidisciplinary team	Recommendation of specialists and teachers	Educational psychologist, clinical psychologist, speech therapist, occupational therapist	Child centred (optimizing function)	Takes part in the assessment process

Few assessors look at the *potential* functioning levels (Muñiz et al., 2001). Using dynamic methods and tasks that evaluate the potential functioning of the child, is a new emerging practice especially for the northern countries (Norway, Sweden), while the centre and East of Europe (Belgium, Hungary, Romania) have mainly a medical model to work with. Although the Virgins Islands have a few persons trained in dynamic methods, practice is limited.

Table 2. Assessment tools currently used in the Daffodil partner countries

Assessment Area	Tools
Cognitive	Wechsler Tests W.P.P.S.I-Wechsler Preschool Primary Scale for Intelligence; WISC-Wechsler Intelligence Scale for Children; WAIS-Wechsler Adult Intelligence Scale.
	Raven (Standard or Coloured Progressive Matrices) Intelligence Test
	N.E.M.I.-Nouvelle Echelle Métrique de l'Intelligence (Zazzo)
	SON 2 ½-7 (Snijders-Oomen Non-verbal intelligence test)
	Koh's Cubes (Koh's block design test of non-verbal intelligence) C.A.S (Das-Naglieri Cognitive Assessment System)
Psychomotricity	Bruininks-Oseretsky Test of Motor Proficiency (BOT-2) Gesell Developmental Scale .
	Bender Gestalt or Bender-Santucci Test for Visuo Motor Gestalt VMI-Visual Motor Integration Test (Beery)
	Frostig's DTVP-Developmental Test of Visual Perception
	Rey Complex Figure Test Spatial Orientation Test (Head)
	Harris Task for Laterality
Personality - Emotions	CAT-Children Apperception Test & TAT- Thematic Apperception Test Lüscher Colour Test MMPI-Minnesota Multiphasic Personality Inventory
	STAI I.-State Trait Anxiety Inventory I; STAI II.-State Trait Anxiety Inventory II.
	Rosenzweig Picture Frustration Test Story finishing; Duss-tales Word association. Sentence completion
Memory	Rey Tasks (visual, auditory) WISC-Wechsler Intelligence Scale for Children PRPP- Perceive Recall Plan Perform System (Chapparo & Ranka)
Language	Peabody Picture Vocabulary Test (PPVT-R) (Schlichting in NL) receptive language Reynell Scales for Language Development TROG- Test for Reception of Grammar ITPA-Illinois Test of Psycholinguistic Abilities
Attention	Toulouse-Piéron Task NEMI Zazzo.
Assessing developmental disability in general	McCarthy Scales (MSCA): 2.5-8.5 years Bailey Scales of Infant Development (BSID) (1-42 months) Vineland Adaptive Behaviour Scales (VABS) - Communication, Daily Living

	Socialization, and Motor Skills 0-18 years Movement ABC-2 (Henderson & Sugden) 3-16 years MPU-Motorisk Perseptuell Udvikling Peabody Developmental Motor Scales (PDMS-2) 0-5 years & PPVT-R Peabody Picture Vocabulary Test- Revised COPM- Canadian Occupational Performance Measure PRPP- Perceive Recall Plan Perform System (Chapparo & Ranka) (PEDI) Pediatric Disability Inventory
Social functioning:	Piers-Harris Children's Self-Concept Scale Family Relations Test;
School achievement:	ADLER Math/Reading/Writing-screening Michel Lobrot Reading Test AVI Test (NL)
Behavioral problems:	CBCL-Child Behaviour Checklist SDQ- Strengths and Difficulties Questionnaire ADOS- Autism Diagnostic Observational Scale Autism Diagnostic Interview – Revised (ADI-R)

In Romania the official evaluation sheets requested by the institutions stipulate the use of standardized instruments assessing general function (70%), language (60%), cognitive functions (50%) social skills (30%) and motor skills (20%).

In Belgium diagnosticians who responded use the tests strictly according to the book instructions: in a standardized procedure, scoring objectively, without interfering, and then putting the scores against a norm reference. The diagnostic process was done mostly in a highly individual way, testing only the child with the functional problems.

In parallel with Belgium, the system of the Virgin Islands attempts to ensure that the school the child attends is first involved, then only when that effort is exhausted, are outside agencies called in. The methods used are classic ones, but the system faces more practical challenges than the lack of a dynamic approach. Hence, although schools might have a long time to wait before a child is finally assessed, the challenge is that very often, the resources to provide the necessary intervention are not available. Studies report some initiatives to compensate for this lack of resources with a different attitude, such as ‘the community psychology approach”(Daniels, 2010).

The lack of a dynamic approach and the slow process of inclusion common problems for many countries that face economical and cultural challenges. Researchers argue that in South Africa, for example, there is a strong need for cultural transformation and also a strong education system with resources to provide necessary infrastructure and support that enables changing (du Toit & Forlin, 2010).

There are some practical impediments in Romania, too. The number of assessments done there in a year puts serious limits on how in-depth evaluations can be made. Sometimes School psychological Services have to do over a 1000 assessments per year, leading to more superficial and routine methods of evaluation, where the completion of an official evaluation sheet is needed, and the time for a proper assessment is limited. Specialists say that these processes focus mainly on depicting severe cases of disabilities or impairments and are not oriented toward the process of inclusion.

In Norway, where inclusive education has been established since 1977, professionals have experience with child and intervention-focused assessments. Still, they are not quite familiar with dynamic assessment, especially not in the sense as it is mainly understood according to international

literature (Tzuriel, 2005), although there is a tendency towards changing procedures of static tests in order to get information about children's potential. The aim is to change the children's learning experiences, rather than to simply classify and diagnose (Rett til læring. NOU 18/2009).

In many of the Partner Countries classroom observation has become common practice. However, observation of the child's in extra-curricular activities and in his or her home environment, is still scarcely used. The majority of professionals use interviews with parents (92.0%), teachers (89.3%), and children (53.6%). Sweden's teachers expressed that additional interventions were brought up following the assessment. The child was observed by a special education teacher in the classroom and the class teacher was given guidance on how to work with the child.

Discussion

Professionals' experience with tests

Satisfaction with test procedures varied a lot from country to country, depending mostly on the availability of resources. In the Western and Southern European countries, there was general satisfaction. However, diagnosticians reported unanimously that time, financial and human resources constraints were the most significant problems experienced when evaluating children with special needs. They recognized that evaluating the evolution of the child across time would be better, but there is hardly an opportunity to do that. Other experienced difficulties were a lack of coordination between the disciplines, the negative tone of reports when mentioning deficiencies and the ambiguity concerning labelling "disturbances". One professional formulated a more fundamental critique on the supremacy of IQ: "The framework of IQ forces children to leave the school, because they are said 'not to fit into the group' or 'not to benefit from the offer'. Through observation and dynamic assessment the child is often found to be more capable than the framework of IQ suggests."

Teachers' experience with tests

Teachers admit that test reports help them to better understand learners' problems, and adapt their teaching to activate children's learning. However, on the whole, they are less enthusiastic about the quality of evaluation than the test providers. Teachers complain about long waiting lists, too negative formulations, the kinds of tests used, a lack of useful recommendations and also time constraints. The majority of professionals from Portugal (71.4%) report "time constraints" as the highest difficulty in the assessment process, and 42.9% also refer to "few human resources". The same problems were pointed out by the Romanian professionals, where lack of time, financial and human resources were mentioned as the biggest hindering elements. It seems that these three parameters represent a big gap between regulations, professionalism of the assessors, the knowledge and the possibility of taking actions towards inclusion. These attitudes may also result from a more general view that assessment is a secondary, administrative, periodical action that precedes the main roles of the specialist. A suggestion of this type is corroborated by recent data that show that prevention and school-based treatment are the roles that US school psychologists see as most appropriate for their role (Miller & Jome, 2010). Assessment is not a main focus point. Results from the Virgin Islands show that there is a lack of follow up and support for teachers in the regular school who have children with special educational needs in their classes. Teachers have often expressed in various forums that they feel they are ill-equipped to deal with the challenges which the students are bringing to the classrooms and are unable to meet their needs. Hungary and Romania share the same problems regarding lack of

appropriate amount of instruments and the need to use home-copied versions or self-made copies of original tests, tasks and evaluation forms. These reports are common in specialists working for integration and inclusion (Papp, 2008). One psychologist self-criticized the assessment practice in this way:

“These reports don’t address the most important question: what are the best ways of developing the child.”

Parents Experience with tests

Reports of parents show that their experiences are mixed. In Sweden the parental involvement in the assessment and inclusion process has a relatively long history (Persson, 1998). 10% of the interviewed Swedish parents reported that the psychological assessments did not lead to a substantial benefit. 60% of those questioned said that they learned more about the need to push school into action. In many countries with little practice in dynamic approach, parents often had similar feelings. The assessment result motivates them to try to convince and “fight” the excluding educational system. 40% of parents had positive experiences after assessment, such as the fact that they had been involved and that they learned a lot about their children’s way of learning. However, they also remarked that their child received extra support mainly outside of the regular classroom through special education. 80% felt that their understanding of the child’s needs changed to some degree after the assessment.

In the case of Portuguese parents, half of them reported that the practice of evaluation was “sufficient”, 30% assessed it as “good”, and 20% as “excellent”. Most parents (60%) reported they had learned something through the evaluation process and 70% of them felt that the evaluation changed their perception about their children’s needs. 80% of parents reported they had gained a clearer vision of what to do with their children and 100% chose mainstream schools.

In contrast to professional diagnosticians and teachers, Belgian parents reported widely varying experiences with testing. Only one was very satisfied because they had the feeling that they were understood, there was a recognition of the problem of the child, and because of that the blame was taken away from the parents. Additionally, the evaluation was in-depth, comprehensive and useful. Other parent were unhappy to very dissatisfied because pessimistic prognostic formulations were used they did not feel understood, they felt that their children’s learning potential was not being taken into consideration, and the reports were too negative. Parents had problems with the kinds of tests used (not adequate, too standardized, the child did not understand instructions), the negative style of reporting, the lack of useful recommendations, and the negative prognosis as a result of testing. Belgian parents reported that when test results, especially of intelligence, language and social functions were one standard deviation below the mean, children were almost systematically referred to special education schools. A similar experience was reported unanimously by parents in Hungary and Romania.

In the Virgin Islands, interviews with parents revealed that those who were most dissatisfied with the assessment process were those whose children were diagnosed with severe difficulties for which the system had no intervention provision. Parents expressed that it was very frustrating not to be able to have any of the recommendations implemented because of a lack of resources.

Shortcomings of a static evaluation system

As was most often heard from parents of children with special needs, tests may have a profound impact on the lives of children. Parents requested to have their voices heard more and to have greater communication with the professionals.

Our survey shows that in the assessment of child functioning, there is still a strong emphasis on “testing”. Professional field workers seem to hold strongly to a “*static testing paradigm*”, which is characteristically individual child oriented and is based on norm references and criterion and content validity. They also strive for objectivity, excluding as much as possible the tester’s influence. The child’s functioning, by using the norm references, is plotted against a peer-aged population, and this leads to a listing of impairments and deficiencies. It is static because there is seldom an organized and operationalized attempt to look at change, nor at possibilities for learning. Perhaps an underlying assumption is that a child with a developmental disability has basically an unchangeable intelligence. In this way, the testing paradigm is based on a medical model of disability, equalizing disability to individual impairment. This model is taught at the universities and is culturally dominant. It becomes evident in the predominant use of the Wechsler intelligence tests. There is little change in this predominance over the last decades (Germeijs et al., 2003). A possible explanation to the slow change is given by Bartolo (2010), who describes the professional dilemma of psychologists who have to recognize the uniqueness of the client within the biomedical model. This kind of double-impact effect is described further in recent studies (Forlin, 2010).

At the same time, among the results from surveys from professionals, there was also growing dissatisfaction regarding the current assessment practice. Concurrently, there is a growing awareness that the organisational routines regarding assessment forces professionals into routine testing thus creating a gap between assessment and intervention. Professional resources tend to go to assessment, leaving little or no time for implementation and intervention.

Of course there is a need to “objectify” a diagnosis, and objective tests may be needed for this purpose. School teachers tend to accept differentiating, compensatory or dispensatory measures only when an external expert has certified “a diagnosis”. This is also a highly *medical- biological, individualistic, impairment-based view* on functioning. Whether there is indeed an epidemic increase in developmental disabilities (more specifically ADHD, ASD, and Specific Learning Disabilities – SLD such as dyslexia, dysgraphia or dyscalculia) or just an increase in the sensitivity of diagnosis, is still a matter of debate. In any case, long waiting lists at child psychiatric services, the Centres for Developmental Disturbance and the Diagnostic Centres for SLD, are a sign of an increasing need for recognition of impairment.

The underlying philosophy of these testing practices is far from the cultural model of disability, which underpins the UN Convention of the Rights of People with Disability, the ICF-model of disability of the WHO (International Classification of Functioning, Disability and Health) and the Inclusive Education movement as is being advocated by associations of people with disability.

The *social model of disability*, however, sees the degree of disability as a result of complex interactions between a child’s bodily or functional impairments and the barriers to learning and functioning which exist in the external world. Barriers can be attitudes, physical, norms, rules, habits, or personal circumstances. In our survey, very little use is made of instruments looking at contextual aspects of functioning, such as the family and school. Or rather, there seems to be a disparity in their use of habitual tests and the reality in the field, which calls for other forms of testing. In practice, professionals do observe children in their context, talk to parents and teachers and compare their results with findings by others, but basically, the core of the child’s learning problem is attributed to a disturbance in the child’s functioning, not in the child-in-context.

There are signs that things are beginning to change. In Scandinavian countries, more dynamic and contextual and qualitative ways of assessment are being introduced to meet the needs of children in inclusive education. In Belgium, a working group has been formed, PRODIA, instigated by the Ministry of Education, to reform school psychological assessment and design a new protocol. Another working

group has been formed on the initiative of school psychologists, to study an alternative, more *contextual, action- and needs-based assessment*, which purpose is to be really educationally informative and not only deliver “classifying diagnostics”.

The evaluation of assessment and testing procedures depends largely on their *purpose*. Assessment is often used to obtain a kind of *benefit* (recognition, money, assistance, or placement) from a public authority or school. In that case, highlighting deficiencies and impairments, and measuring them in an objective way using “objective” tests, is seen more as an aid than an impediment. Similarly, parents and teachers are satisfied when assessment is thorough and comprehensive, when it gives them cues to understand a child’s functional impairments, and thus absolves parents of pedagogical mischief. This is especially the case in the rapid increase in diagnoses of children with social-behavioural difficulties, such as autistic spectrum disorders, ADHD, developmental coordination disorder (DCD – formerly known as “dyspraxia”) or specific learning disabilities (dyslexia, dyscalculia).

On the other hand, when the *purpose of evaluation is to design educational or therapeutic intervention plans* or to assign a child to a special or a regular school, it becomes very important to *highlight a child’s potential*. This is the aspect which is most lacking in classic psychometric tests, according to all parents, and a majority of teachers. Psychometric tests may be valid in determining dysfunction, but they are *hardly valid in determining educational needs*. In order to design intervention, plan inclusion, or make recommendations to teachers and parents on how to facilitate children’s learning and enable their participation in diverse groups, one needs to understand children’s learning-in-context and to look at what children *may* be able to do under certain conditions. There are methods of assessment which specifically probe into a child’s actual learning and potential learning, which are summarized under the term “dynamic assessment”. Another related area of assessment concerns “functional assessment” in which a qualitative evaluation is done of the individual child’s specific functioning. However, current practice shows little trace of these; they are in an embryonic stage.

In fact, it is not so much the testing itself per se which constitutes the centre of the debate, but the place of testing in the whole of a comprehensive assessment and the way test results are used and interpreted, which is based on the purpose and the underlying paradigm. Clearly this is an area of friction between the culturally dominant “biological disturbance” testing paradigm and the emerging cultural, contextual, or ecological paradigm.

Severe fundamental criticisms to the testing paradigm have been formulated by Stephen Gould (1996), who denounces the 19th and 20th century testing practice as a “mismeasurement”, thereby creating negative cultural prejudice towards large groups of disadvantaged people, e.g. the Afro-Americans in the US.

In addition to André Rey, Feuerstein et al. (2002), state that static testing gives no information about learning and is based on a static conception of immutable intelligence as if this were a characteristic of a person’s biology. Static testing disadvantages lower-functioning children, by denying them the proper educational programmes and cognitive stimulation. Feuerstein et al. consider a child as basically modifiable, and modifiability as a result of a social-constructionist process of mediated learning experience. Assessment should be oriented at exploring the conditions of a child’s modifiability. If we want to transform schools towards inclusive education, then the *concept of modifiability becomes crucial to trigger a child’s optimal learning processes*.

An even more fundamental criticism is made by Allan (1999), who questions the practice of testing per se, as a “technique of surveillance”, a “disciplinary gaze”, reducing children with special needs to constantly observed “objects”, using techniques which are “inept, deficient and inconsistent” (p.84) and completely “missing the point”.

Indeed, current testing practices often “miss the point”, i.e. how to include children, how to understand children’s functioning and how to make them learn.

The effects of testing on inclusive education

Whether testing facilitates or inhibits inclusion, depends on whether the country has a well-installed inclusive education system, including a support system and provision of an adequate individual education plan. Hence the question would be answered differently by on one hand by Norway, Sweden and Portugal and on the other Belgium, Hungary, Romania and the Virgin Islands.. In Flanders, Belgium, referrals to special education by the School Psychological Services have risen 50% in the past 16 years (Van Rompu et al., 2008), despite measures to keep the children in the mainstream. Referrals are based on test results, partly school achievement and partly functional tests of intelligence, behaviour, language and other tests. About half of the professionals as well as teachers admit that as a result of testing, children are more often referred to special schools and thus constitute a barrier to inclusive education, but there is diversity of opinion in this respect. Parents also report that as a result of testing, children are denied access to a regular school.

Also in Romania and Hungary, assessment practices of institutions help in orienting children, at least those with more cognitive disabilities towards specific schools and/or institutional settings.

Assessment as a support for inclusive education

Assessment may favour inclusive education when expectations are positive, the professionals can decide about the choice of methods, and not be forced to choose from a limited list of standardized static test batteries and the test results include useful and comprehensive recommendations. Whether or not assessment favours inclusive education depends on its purpose. When the assessment is done to obtain a certain benefit (whether it be financial, a special measure or a tolerance for a deviation, e.g. for dyslexia), the child often is situated in a testing context where he or she is requested to perform at the actual and sometimes a lower level of functioning than the child could perform under optimal circumstances. On the other hand, when the purpose is to plan educational intervention, to know what to do, the child is requested to perform at his or her highest level. Assessment may also favour inclusive education when it focuses on understanding and not merely on classifying a child; when there is a good interpretation; when it identifies barriers to children’s learning shows their weaknesses as well as strengths. Therefore, assessment should help to create meaning and understanding in order to determine the best intervention measures. The results from our data as well as our experiences from the field as assessors, psychologists, doctors etcetera indicate a general need to use more dynamic and qualitative assessment methods, which seem to be more flexible and more adaptable to answer the questions at the onset of the assessment. A hypothesis for further investigation is that assessing the child’s potential (what the child could be able to do, given the proper conditions) can be considered to better facilitate inclusive education, because it gives information to the teachers (and parents) of what they could do to help the child function better. Teachers should receive adequate training to do inclusive assessment which includes observing, intervening and observing the effect of the intervention.

The hindering effects of assessment on inclusion

Assessment can become an obstacle to inclusive education when testing reinforces low expectations on the child’s learning and when it does not contribute to the qualitative understanding of how a child can be supported. A static “testing” practice, when it is merely oriented at determining actual level of functioning (rather than potential), can become an obstacle to inclusion when the teacher or school conditionally links “inclusion” to test results, by setting a minimum condition. This is contradictory to the definition of inclusive education, but it is still widespread practice

Evaluation (functional evaluation as well as evaluation of school achievement) may be one of the biggest obstacles, when it is merely oriented to stating deficiencies, what the child is unable to do, in as much as it creates a negative belief system in teachers, parents and the child.

The interpretation of the evaluation (whether psychometric, learning or potential) by the assessor is not always clear to the receivers. It can, therefore, create a barrier, when the results of evaluation are linked to statements like “the child has little potential in...”, thus likely contributing to a low expectations profile. It is necessary to understand the results of evaluation in a way that leads to a more adequate educational intervention. Clinical reports must be presented to teachers in layman’s terms as they are not trained to understand them.

When assessment only looks at the child, and puts the child to the test, in a strange environment, it becomes an obstacle to inclusion. Focusing solely on the child leaves out important contributors (and possibly obstacles) to the child’s learning, such as materials, teachers and parents. Assessment should also take into consideration the child’s environment. Parents can play a fundamental role in assessment, because they know their children, can do real-life observations and have the privileged position of observing their children at home.

Furthermore, teachers should be involved in assessment. Their attitude as well as that of evaluators is key. They can communicate non-verbally an attitude of disbelief and lack of acceptance, which influences performance or the child’s willingness to do the assessment.

Effects of maturity tests used

Doing “maturity tests” before entering elementary school may make sense, because it can help to determine whether it is to let the child remain a year or two longer in kindergarten.

Our research data showed that maturity tests tend not to improve inclusion. Maturity tests are useful when they diagnose a problem that shows that one should not yet start primary school. They are sometimes useful for the teacher even though they might not support inclusive education.

Knowing the IQ scores of children

The experience of the parents, professionals and specialists from the partner countries showed a strong similarity, as all working groups underlined that IQ scores should be kept confidential because low IQ scores create a negative self-fulfilling prophecy, low expectations, individual educational programmes that lack sufficient academic challenge, and in many countries also lead to exclusion. This is the well-known Pygmalion effect (Rosenthal & Jacobsen, 1968).

Conclusion

In conclusion, assessment procedures need to be adapted to include information on a child’s actual and potential functioning in order to promote inclusive education. It should be formulated in an optimistic way, giving clear indications as to the construction of an academically and socially challenging individual educational programme for children with special needs. Our hope is that proper quality assessment and interpretation of the results will serve the best interests of the children involved and in the inclusion process.

References

- Allan, J. (1999). *Actively seeking inclusion*. Oxford: Routledge Falmer
- Bartolo, P.A. (2010). Why school psychology for diversity? *School Psychology International*, 31, 567-580
- Carlson, J., Benson, N. & Oakland, Th. (2010). Implications of the International Classification of Functioning, Disability and Health (ICF) for Test Development and Use. *School Psychology International*, 31, 353-371
- Csépe, V. (2009). *Caring for Children with Special Educational Needs (SEN) and Their Rehabilitation*. Retrieved September 9, 2009 from the Web site: <http://mek.oszk.hu/08200/08221/08221.pdf>
- Daniels, B. (2010). Developing inclusive policy and practice in diverse contexts: A South African experience. *School Psychology International*, 31, 631-643
- Du Toit, P. & Forlin, Ch. (2009). Cultural Transformation for Inclusion, What is Needed? A South African Perspective. *School Psychology International*, 30, 644-666
- European Agency for Special Needs in Education (EADSNE) (2003). *Special Needs Education in Europe*. Retrieved December 10, 2010 from the European Agency for Special Needs in Education Web site: www.special-agency.org
- Feuerstein, R., Feuerstein, R.S., Falik, L.H. & Y.Rand (2002). *The dynamic assessment of cognitive modifiability*. Jerusalem: ICELP Press (a completely revised version of "The dynamic assessment of retarded performers, 1979, Baltimore: University Park Press)
- Forlin, Ch. (2010). The role of the school psychologist in inclusive education for ensuring quality learning outcomes for all learners. *School Psychology International*, 31, 617-630
- Germeijs, V., Verschueren, K. & Van der Vliet, L. (2003), Een rondvraag naar de diagnostische middelen en de behoeftes in de CLB's.[A survey about the diagnostic methods and needs in the School Psychological Services] *Caleidoscoop*, 2, 22-26
- Gould, S. (1996). *The Mismeasure of Man*. New York: Norton
- Hodges, K. (2004). Using Assessment in Everyday Practice for the Benefit of Families and Practitioners. *Professional Psychology: Research and Practice*, 35, 449-456.
- ICF-CY (2007). *International Classification of Functioning, Disability and Health. Children and Youth Version ICF-CY*. Geneva: World Health Organisation
- Lebeer, J. (2005). Shifting perspective: dynamic assessment of learning processes in children with developmental disabilities. *Erdélyi Pszichológiai Szemle (Transylvanian Journal of Psychology), Special Issue on Dynamic Assessment*, 1, 55-85
- Lebeer, J. (Ed.) (2006). *In-clues. Clues to inclusive and cognitive education*. Antwerpen-Apeldoorn: Garant
- Lebeer, J., Birta-Székely, N. & Demeter, K.(eds.) (2010). *Assessment re-assessed: Current Assessment Practice of Children with Special Education Needs or Experiencing Barriers to Learning in Europe: weaknesses, strengths and needs*. Cluj-Napoca: Babes-Bolyai University. Retrieved September 10, 2010 from the Daffodil Project Web site: www.daffodilproject.org
- Lebeer, J., Struyf, E., De Maeyer, S., Wilssens, M., Timbremont, B., Denys, A. & Vandeviere, H. (2010). Identifying special educational needs: putting a new framework for graded Learning Support to the test. *European Journal of Special Needs Education*, 25 (4),375-388
- Miller, D.N. & Jome., L.M. (2010). School psychologists and the secret illness: Perceived knowledge, role preferences, and training needs regarding the prevention and treatment of internalizing disorders. *School Psychology International*, 31, 509-520

- Muñiz, J., Bartram, D., Evers, A., Boben, D., Matesic, K., Glabeke, K., Fernandez-Hermida, J.R. & Zaal, J.N. (2001). *Testing practices in European Countries*. European Federation of Psychological Associations. Available from www.efpa.be
- Orban, R. (2008). *Apariția și dezvoltarea instituțiilor de învățământ special între anii 1800-2004* (Phd Thesis). Cluj-Napoca, Romania: Babes-Bolyai University
- Papp, G. (2008): Az enyhén értelmi fogyatékos gyermekek integrált oktatása, nevelése hazánkban. In Szabó, Á. (Ed.), *Tanulmányok a tanulásban akadályozottak pedagógiája és határtudományai köréből* (pp. 209-219). Budapest: Educatio Társadalmi Szolgáltató Közhasznu Társaság
- Persson, B. (1998). *Den motsägelsefulla specialpedagogiken*. (The contradiction of special education). Göteborgs Universitet: Institutionen för specialpedagogik, Specialpedagogiska
- Peters, S. (2004). *Inclusive Education. An EFA strategy for all children*. Available on www.siteresources.worldbank.org
- Rosenthal, R, Jacobsen, E. (1968), *Pygmalion in the classroom: teacher expectation and pupils' intellectual development*. New York: Holt, Rinehart & Winston
- Tzuriel, D. (2005). Dynamic Assessment of Learning Potential: a new paradigm. *Erdélyi Pszichológiai Szemle (Transylvanian Journal of Psychology)*, Special Issue 1, 7-16
- Van Rompu, W., Mardulier, T., De Coninck, C., Van Beeumen, L. & Exter, E. (2008), *Leerzorg in het onderwijs [Leaning Support Care]*. Antwerpen: Garant
- United Nations (UN) (2006). *Convention on the Rights of People with Disability*. New York: United Nations
- NOU 18/2009. *Rett til læring*. Oslo: Utdanningsdepartementet
- Watkins, A. (Ed.) (2007). *Assessment in Inclusive Settings: Key Issues for Policy and Practice*. Odense, Denmark: European Agency for Development in Special Needs Education
- Woods, K., Parkinson, G. & Lewis, S. (2010). Investigating Access to Educational Assessment for Students with Disabilities. *School Psychology International*, 31, 21-41

Acknowledgements

This project is based on Workpackage 2 of the Daffodil Project, which has been funded with support from the European Commission, Life Long Learning Programme. This document reflects the views of the authors only, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

We wish to thank our colleagues who collaborated to the research:

Hugo Van de Veire, Benedicte Timbremont, Anneleen Denys (VCLB School Psychological Services, Gent, Belgium); Inge Van Trimont (Public Education Department of Post-graduate Training, Belgium); Beno Csapo, Katalin Molnar, Edith Tóth (School of Education, Szeged University, Hungary); Ana Cristina Rosário (Agrupamento de Escolas nº 4 de Évora, Portugal), Mónica Rebocho, Agrupamento de Escolas de Montargil, Portugal), Maria José Saragoça (Direcção Regional de Educação do Alentejo, Portugal), Maria João Cortes (Agrupamento de Escolas de Estremoz, Portugal), Vitor Cruz (Universidade Técnica de Lisboa, Portugal); Reka Orban & Edit Maior (Babes-Bolyai University, Department of Psychology, Cluj-Napoca, Romania); Thomas Alexander, Ministry/Department of Education, British Virgin Islands (UK); Staff at Elevhälsan Student Health Services, Östersund, Sweden. Clinicians, teachers and parents in County of Jämtland and Municipality of Östersund, Sweden.

Contributing authors

Jo Lebeer, MD PhD, is the coordinator of the European Daffodil project, based at the Disability Studies Inclusion & Enablement Research Unit, Centre of Primary & Interdisciplinary Care, at the University of Antwerp, Belgium and visiting professor at the Centre for Cognitive Development, Diego Portales University, Santiago de Chile. His research interests are: ecological plasticity of children with developmental impairments, dynamic assessment of learning potential, inclusive education, ethical aspects of disability. Recent publications include articles in the *European Journal of Special Needs Education* and *Research in Developmental Disabilities*. Address: Faculty of Medicine, University of Antwerp, Campus Drie Eiken, Universiteitsplein 1, 2610 Wilrijk, Belgium. Email: jo.lebeer@ua.ac.be

Noémi Birta-Székely, PhD, is senior lecturer at the Department of Psychology, Babes-Bolyai University, Romania. Her research interests are: in-service teacher training and implementation of inclusive education. Recent publications include articles in *Transylvanian Journal of Psychology* and *Pedagógusképzés*. Address: Department of Psychology, Babes-Bolyai University, 3400 Cluj-Napoca, Romania. Email: bszekelynoemi@pszichologia.ro

Karmen Demeter, MA, is based at the Department of Psychology, Babes-Bolyai University, Romania. She is currently making a PhD in prevention of aggressive behaviour in primary school settings. Recent publications include articles in the *Transylvanian Journal of Psychology*. Address: Department of Applied Psychology, Babes-Bolyai University, 400084, Cluj-Napoca, Republicii Street, no. 37, Romania. Email: demeter.karmen@pszichologia.ro

Krisztina Bohács, MA, is director of the Centre for Mediated Learning, Budapest and making her PhD at the doctoral school of Educational Sciences at the University of Szeged, Hungary. Her research interests are: models of intelligence, cognitive intervention techniques, dynamic assessment and inclusive education. Recent publications include *Magyar Pedagógia*, Journal of the Educational Committee of the Hungarian Academy of Sciences and *Developmental Medicine and Child Neurology*. Address: Medialt Tanulasert Alapitvany 1051 Budapest Arany Janos utca 16. Email: medialttanulas@t-email.hu

Adelinda A. Candeias, PhD, is based at the Research Centre of Education & Psychology, University of Evora, Portugal. Her research interests include: cognitive assessment, emotional/behavioural assessment, inclusive education. Recent publications include the *International Journal of Developmental and Educational Psychology*. Address: CIEP, Largo dos Colegiais 2, 7004-516 Evora, Portugal. Email: aac@uevora.pt

Gunvor Sønnesyn, Med, is consultant in the Pedverket Resource Centre for Educational Support in Voss, Norway. Her research interests include Nyborg's Concept Teaching Model, cognitive assessment, mathematical thinking and inclusive education. Recent publications include *Spesialpedagogikk* and *Transylvanian Journal of Psychology*. Address: Postboks 115, No-5701 Voss, Norway. Email: gunvor.sonnesyn@pedverket.no

Petri Partanen, MA, is director of Research and Development at the Elevhälsan School Health and Psychological Services in Municipality of Östersund, Sweden. He is making a PhD in the field of intelligence, metacognition and learning at the Department of Social Sciences, division of Psychology, Mid Sweden University. Address: Petri Partanen. Elevhälsan, Östersunds kommun, 831 82 Östersund, Sweden. Email: petri.partanen@miun.se

Lorna Dawson, MEd, is Education Officer responsible for Special Education & Teacher Training at the Ministry of Education in the British Virgin Islands. Her research interests are: Dynamic Assessment, Cognitive Intervention and inclusion of children with special education needs in mainstream schools. Address: Department of Education, P.O. Box 72, Road Town, Tortola. Virgin Islands. Email: lornamax@hotmail.com