The need for a more dynamic and ecological assessment of children experiencing barriers to learning to move towards inclusive education: a summary of results of the Daffodil project

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Abstract

Although governments have recognized the need to make education more accessible to children with developmental disabilities and/or learning difficulties, many children remain excluded from participation in regular school settings, let alone receive adequate education. Though every country which ratified the United Nations (UN) 2006 Convention on the Rights of People with Disability has committed itself to inclusive education, there are many obstacles. One of them is the currently preferred way of assessing children with standardized, psychometric diagnostic tests, with a comparative and classifying purpose. This type of assessment, based on a medical impairment model and a static model of intelligence, results in reports which are sometimes not very useful for educational advice.

This paper reports an overview of the results of the DAFFODIL project (Dynamic Assessment of Functioning and Oriented at Development and Inclusive Learning), created by a consortium of eight European partners in order to research more inclusive alternatives and suggest reforms to assessment and coaching procedures. It starts with a critical review of current assessment practices; then it presents criteria for good practices for assessing children with additional educational needs in a more dynamic, inclusion-oriented and contextual way. A Delphi procedure was used by 150 professionals and parents to develop a consensus for guidelines for assessment procedures oriented at mapping functional difficulties, context, interaction and possibilities for learning, with the objective to understanding learning processes, to develop more inclusive, challenging and suitable educational programmes and more useful recommendations for teachers, parents and rehabilitation staff.

Key-words: functional assessment, dynamic assessment, ecology of development, special educational needs, barriers to learning, inclusive education, action- and needs-based assessment, ICF-CY (international classification of functioning, disability and health- children

and youth version), portfolio-assessment , curriculum-based assessment, conceptual shift,

guidelines

Background

Since the 2006 United Nations' Convention on the Rights of People with Disability grants every child the right to be and to study in a regular school environment, and compels governments to remove obstacles against inclusive education, many European countries have changed their legislation and practice. Despite longstanding or more recent incentives, many children remain either excluded from adequate educational opportunities or are being raised in separate educational environments (EADSNE, 2008a). The number of children being labelled as having "Special Educational Needs (SEN)" is increasing. In particular, children from ethnic minorities or less favourable socio-economic circumstances are at risk of underachieving and falling out of the educational system early. The Organisation for Economic Cooperation & Development stated that one in five children has serious difficulties with reading, writing and mathematics in primary school (OECD, 2012). In 2003, Finland – the country with the world's best academic achievements for all children, including the socio-economically deprived - reported that 17% children had special education needs. This was reduced to 7.96%, in 2007/8 when a narrower definition of SEN was adopted (European Agency for Development in Special Needs Education, 2003, 2008a). Using a broad definition of special needs – children who need additional support to obtain minimal academic achievements – a study in Belgium found that about 20% of primary school age children have additional educational needs (Lebeer et al, 2010), much more than the 5% of children officially diagnosed with a disability and/or specific learning disturbance. .

One of the barriers to inclusive education is created by the way children, who present some kind of learning or developmental problem, are assessed prior to and during their schooling. In many countries where inclusive education is not yet a right or not common practice (e.g. Belgium, Romania, Hungary, the Netherlands), access to regular schooling still depends on sufficiently high results on cognitive, behavioural, language and achievement

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tests. In countries where inclusive education is a right (e.g. Norway, Sweden, Italy, Portugal, France and the United Kingdom (UK)), traditional assessment may contribute to educational underachievement, when low scorers, given a diagnostic label, carry an assumption of low potential, entailing a risk of creating low educational expectations, a self-fulfilling prophecy or a Pygmalion effect (Rosenthal and Jacobson, 1968). The question is*: is there a problem with the tests, with their interpretation, their subsequent expectations and recommendations or with the way in which the intervention is organized, i.e. the link between assessment and intervention?*

The issue of functional and learning assessment became the core theme of a European Life-Long Learning project called DAFFODIL, an acronym for Dynamic Assessment of Functioning Oriented at Development and Inclusive Learning. The project was a consortium of eight partner institutions (universities, an educational board and two training centres) in six European countries (Belgium, Norway, Sweden, Hungary, Romania, Portugal) and the British Virgin Islands, a UK Overseas Territory.

The first part dealt with the exploration of the strengths and weaknesses of current assessment practice and coaching procedures in relation to exclusive or inclusive education. The next part explored alternatives which tried to respond to these findings. We wanted to find innovative models of good practice in functional, dynamic and contextual assessment and coaching of children and their environments (schools, families) which would lead to more adequate Individual Educational Programming (IEP), maximally facilitating development and learning in an inclusive setting. Our central question was: *How to assess a child's functioning in a way that does not harm his/her future, gives him/her optimal chances of learning, takes into account difficulties as well as strengths and potential, while at the same time assessing and coaching the school towards accommodating and teaching all children, including the ones with difficulties?*

Problematic issues in the assessment of children with educational difficulties

Assessment takes an important part in the life of a child who does not have a "typical" development. On many occasions a child is evaluated and important decisions are made based on assessment results. Assessment may have effects on different levels. There are financial implications such as increased family allowances for children with disability; personal assistance budget; access to health-insurance and speech and physiotherapy services. Assessment results may determine what kind of educational opportunities a child may or may not get and where the child will be educated: a special or a regular school; the level of special educational needs programme; access to different types of schooling; access to university; and job opportunities.

Using test batteries is the standard procedure when a child does not perform as expected. In 2001, a study done in school diagnostic centres over Europe showed that psychologists regularly used standardized psychometric test batteries to determine special needs requirements (Muñiz et al., 2001). In most countries, official institutions (education, health, work, welfare) require results on standardized psychometric tests.

In 2010, a study in Sweden, Portugal, Hungary, Belgium, Romania, Norway and the Virgin Islands (Lebeer et al, 2011) showed that of the "top 10" of the most widely used test batteries in the evaluation of pupils, the Wechsler scales are still number one for assessing intelligence, far exceeding all the others. Standardized developmental scales are also universally used.

Labelling children as deficient may carry the advantage of obtaining a *benefit* (recognition, money, assistance, a placement) from a public authority or school. 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 in some cases thus de-blames them of pedagogical mischief. This may be one of the reasons for the blooming diagnoses of children with social-behavioural difficulties such as autistic spectrum disorder, ADHD, developmental coordination disorder (DCD – formerly known as "dyspraxia") or specific learning disabilities (dyslexia, dyscalculia). Standardized psychometric tests may then have their utility when the need is to "objectify" a diagnosis, and place the child's performance on a comparison scale. This is called the "classifying diagnosis" objective of testing.

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, the same test results often have an opposite effect. Parents and teachers complained that test results merely give them a list of deficiencies, mapped on percentiles, what the child is not able to do as compared to its peers. Test reports hardly give any cues on how to understand the child's problems, how to work with a child, what the child may be able to do, or what the real needs are. Sometimes it leads to wrong placements, low-profile programming, and parental depression. Negative effects on parents have been similarly reported in earlier studies (Gowen et al., 1989; Olsson & Hwang, 2001)

When the question is how pupils with impairment may participate in a regular school, often crucial aspects are missing in classic reports:

- A qualitative description of how a pupil learns: what modalities, preferences, motivations

- A list of the pupil's strengths (talents)

- What is the pupil interested in?

- How modifiable is the pupil, i.e. is the pupil able to show new behaviours when I try to teach him something?

- What do I (the teacher) have to do in order to make the pupil learn?

- What is the pupil's response to teaching?

- What is the pupil's environment: family background, school background, peers, support staff, how do they behave?

- What other resources could be found?

- How welcoming is the child's environment?

- What are the child's functional impairments in relation to school learning: what activities are difficult and why?

- What elements in the environment (pedagogical, physical, psychological, people, lack of equipment, etc.) can enhance, or become barriers in learning and participation?

- What are the pupil's real needs in order to be able to perform an activity or to participate?

- What technical equipment could make activity and participation possible?

- What elements in the personality of the pupil and his/her situation constitute barriers, or are possibly positive elements?

Psychometric tests may be valid in determining dysfunction, but their validity *in determining educational needs* can be questioned.

Therefore, 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.

Criticisms have been formulated against standardized psychometric test practices for more than 100 years, almost since their coming into existence: they hardly give information about learning processes or learning potential; they are based on a static, immutable, nativistic (genetic) concept of intelligence as if this were a characteristic of a person's biology; they disadvantage lower-functioning children, especially those coming from a lower socio-economic level. In summary, their static interpretation leads to a deprivation of adequate educational programming and cognitive stimulation (Dias, 2001; Feuerstein et al, 1981, 2002; Haywood & Lidz, 2007; Nisbett, 2009). During the past century, this static *"testing paradigm"* has become culturally dominant: it penetrates all aspects of society.

This *medical- biological, individualistic, impairment-based view* on functioning is far from the cultural model of disability, which underpins the UN Convention of the Rights of People with Disability, the ICF (International Classification of Functioning, Disability and Health) model of disability of the WHO and the Inclusive Education movement as is being advocated by associations of people with disability. The *social model of disability* 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. However, few traces of this thinking can be found in the testing paradigm. In giving primordial importance to testing as a source of information, professional diagnosticians seem to be hardly concerned with a child's social and learning context. In the mentioned Daffodil survey,

very little use was made of instruments looking at contextual aspects of functioning, such as family and school.

Although a number of rating scales have emerged, rating behaviour and involving observations by family and school staff (Merrell, 2008), their use in educational settings may be problematic. Since many of them are intended for labelling and diagnosis rather than designed to identify qualitative dimensions of the individual child's learning and functioning, they consequently contribute to instruction aiming at the specific child.

New forms of assessment are needed which look at a child "with a different glance," aiming to understand a child's functioning in a dynamic and interactive way, how to improve his/her functioning, learning and participation and what might be hindering participation. Assessment should also be directed at evaluating school context: how a teacher/ school could contribute better towards accommodating and teaching all children, including the ones with difficulties. The objective of assessment should be to adequately plan and monitor a challenging educational intervention, allowing the child to be maximally included. This requires a mind-shift and a change of practice by psychologists, doctors and others involved in assessment

Methods

During 2009-2010 an international project group consisting of 36 psychologists, teachers, doctors, rehabilitation professionals and parents from the Daffodil partner countries, were involved in constructing guidelines for such a dynamic, contextual and functional assessment. To gain constructive and external validity, we followed a qualitative Delphi method. First we agreed on basic criteria for models of good practice and looked at their evidence base. Then we made a long-list of guidelines. The guidelines were then amended in local focus groups in Belgium, Sweden and Portugal (N=70) and reduced to a shortlist of 15 principles. In a third phase, they were discussed in extended focus groups by participants from 12 EU countries at

the International Summer School in Evora, Portugal (N=68). They were finalised and submitted again in the local feedback groups until a final consensus was reached.

Results

Criteria for good practice in dynamic functional inclusive assessment

Good practice in assessment depends on basic assumptions and objectives. Why do we assess? We agreed on the following criteria:

1. Aim: assessment goals should be clear and shared by all parties concerned

2. Principles of assessment

    2.1 interactive, taking the pupil's personality in full account

    2.2 adapted in function of the particularities of the pupil

    2.3 look for strengths

    2.4 map functional impairments, in relation to restrictions in executing activities and participating in group activities (school activities and other activities)

    2.5 dynamic and flexible in function of the pupil's needs

    2.6 look for hidden potential, try to look for how the pupil reacts to attempts to teach new concepts and behaviours

    2.7 take a reasonable amount of time, in order to be able to look at change

    2.8 Make a difference between performance achieved without and with some kind of support. Every support (in whatever form; people, technical, etc.) should be allowed to be used in order to achieve a certain performance or execute a certain activity. The kind and amount of support needed to reach an objective is important information and should be part of a report.

    2.9 Care should be taken to formulate interpretations regarding future functioning

    2.10 communicate assessment to all parties concerned

3. Sources and kind of information

   3.1 Information about a pupils' functioning should come from all sources in the
      child's environment, e.g. family, school, community

   3.2 aspects in the environment (physical, technical, relational and attitudinal), which
      may constitute a barrier to participation

   3.3 aspects in the environment which may facilitate participation

   3.4 what kind of learning modalities and materials are beneficial

   3.5 linked to the curriculum; the relationship should be made clear

   3.6 possible technical equipment which could allow better participation

4. Recommendations

   4.1 should be formulated in a positive way

   4.2 are an integral part of assessment; they should be detailed enough to be of practical
      use to the pupil and his environment

   4.3 Assessment should be closely linked to a plan.

Given the great number of important criteria identified regarding good practice, the guidelines

cover a number of conceptual areas. Table 1 gives a list of possible guidelines.

[Table 1 about here]

Getting started: why do we need assessment?

There may be different purposes why a pupil is assessed:

   - to understand how a pupil/ person (with difficulties) functions and learns

   - to make an inventory and understand a child's functional difficulties & impairments,
      and its difficulties to execute activities and to participate in classroom and school life

- to understand the conditions under which a pupil functions and learns

- to find out a child's learning potential

- to find out the (special) educational needs of the child

- to have a basis for designing an individualized education plan

- to be able to create a good inclusive learning environment

- to inform people working with a pupil

- formative evaluation: to be able to formulate advice and design intervention showing how to work with a pupil

- formative evaluation: to give feedback to the pupil as to his learning process and progress

- Summative evaluation (achievement oriented): to see where the pupil actually stands in his learning process, what he has achieved.

- normative evaluation (such as in psychometrics): to rank a pupil's performance in a population

- classification purpose: to classify children in categories for planning educational policy, special needs policies, budgetary purposes

- utilitarian evaluation: to obtain a benefit (financially, or some kind of protection of dispensation

Not all evaluation methods are suitable for all the above mentioned purposes. The assessor has to be aware why he/she assesses, for what purpose, how he will work, how it will be reported and what will be done with the results. Different methods and systems have to be used when the purpose is objective measurement and comparison, than when the objective is to understand and to plan.

Conceptual systems forming the basis of a more inclusive assessment

When assessing a child, it is important to be aware of the underlying theoretical models. They determine the choice of instruments, interpretation and intervention goals. For example, an educational programme based on IQ, assuming a nativistic model of intelligence, will differ from one based on dynamic interactive assessment, taking modifiability as a postulate. Therefore, the following conceptual systems may be a good basis for a more inclusive assessment:

- A bio-psycho-social model of disability (more concretely: the ICF-framework (WHO, 2007).

- a contextual vision on learning (Nisbet,2009)

- a dynamic-interactional view on assessment (Feuerstein et al, 2002, Haywood & Lidz, 2007; Pameijer, 2006)

- an inclusive vision (Booth & Ainscow, 2002)

- a social constructive model of disability and development (Fougeyrollas & Beauregard, 2001)

- the modifiability of each individual (Feuerstein et al, 2002)

- cognitive theories of learning (Das, Naglieri & Kirby 1994; Feuerstein et al, 2002; Nyborg, 1993; Vygotsky, 2012)

Assessment methods responding to the criteria of dynamic and contextual functional assessment

We would like to suggest some approaches which respond in a varying degree to the above listed criteria.

Approaches assessing functioning, activities, participation and context

<u>Action-Oriented & Needs-*based* assessment</u>

The model of Action Oriented & Needs-based Assessment (Pameijer, 2006) was developed in the Netherlands in the nineties, inspired by the policy of 'Together Back to School'. It is based on seven principles: (1) primordial focus on the educational needs of students and support needs of teachers and parents, instead of 'problems' or 'disorders'. *The key question is not 'what is the matter with this child?' but 'what are the needs of this child?'* (2) a transactional frame of reference; (3) central role of the teacher in changing the conditions in which the child evolves; (4) focus on the strengths, opportunities and constructive aspects; (5) continuous collaboration with teacher, child, parents and other parties; (6) goal-directed recommendations which are achievable and workable; (7) systematic and transparent approach in defining a clear intervention plan, based on evidence-based knowledge, effective at school and class level .

<u>International Classification of Functioning, Disability & Health (ICF - WHO)</u>

In 2001, the World Health Assembly adopted the International Classification of Functioning, Disability and Health (ICF) to be used by all World Health Organisation (WHO) member countries. The ICF does not see disability as a direct consequence of disease as in the International Classification of Diseases (ICD-10). Instead, disability is seen as a complex interaction between (1) structural (anatomical) and functional changes, (2) impairments in executing activities, (3) restriction in participation, (4) external factors - barriers or facilitators in the environment of the individual, which may be of a (bio)technical, physical, attitudinal, cultural, economic or social nature and (5) personal factors. With the ICF, the individual's functioning can be mapped in these five components and

intervention can be taken accordingly. Each component is divided into chapters. There can be an evaluation in the first, second and third level of depth. For each item (category) qualifiers can be tagged indicating degree or severity. The ICF has been introduced in Portugal on a national basis as a standard to assess children with special needs (Candeias et al, 2011; Candeias, this volume).

Approaches assessing underlying learning processes and modifiability

<u>Dynamic Assessment</u>

Dynamic Assessment (DA) is defined as "an interactive approach to conducting assessments within the domains of psychology, speech/language, or education that focuses on the ability of the learner to respond to intervention" (Haywood & Lidz, 2007, p.1). DA designates a heterogenic group of approaches, which have in common assessed responses to learning (Sternberg & Grigorenko, 2002). The principle is based on the socio-constructive theory of intelligence and the concept of the "zone of proximal development" developed by Vygotsky (1938;2012). Feuerstein (1979; 1985; 2000) can be regarded as one the pioneers in the development of dynamic assessment. The LPAD battery was created by Feuerstein et al. during the 1950s under the name of "Learning Potential Assessment Device", as a response to a growing frustration in using psychometric testing for disadvantaged children. It has since become a source of inspiration for the development of other dynamic assessment approaches (Haywood & Lidz, 2007; Tzuriel, 2001).

<u>Das-Naglieri Cognitive Assessment System</u>

The Cognitive Assessment System (CAS) has been developed by Das and Naglieri (1997) based on their Planning, Attention, Simultaneous, and Successive

processing (PASS) theory of intelligence which in turn is based on Luria's neuropsychology. The PASS abilities are operationalized using twelve subtests, organized in four scales, corresponding to the four PASS processes. Validity studies demonstrate test fairness across language, culture, family background and other relevant variables. The CAS is a good alternative to the WISC. It also has good psychometric properties, but in contrast with the Wechsler batteries it can be used to understand underlying cognitive functioning and it can be used to measure progress.

Assessment of context

Consultation model. Consulting with a systemic/contextual approach

The research and methodology of consultation addresses learning and change processes that are going on when professionals as well as parents meet and focus on a dilemma. In Sweden and in an international context, consultation is applied in a number of professional fields and with different theoretical frameworks (Lambert, Hylander, & Sandoval, 2004). Through inferential interviewing, descriptions and hypotheses made by teachers and parents are explored. Questioning, reflections, observations, inferences and changing and evolving hypotheses can be understood in terms of processes involving thought, language, concept formation and development of mental representations. The process of change in thinking may be fostered by highlighting areas and situations that may not have been considered earlier or may have been neglected. In the consultation model one way of understanding a situation is reframed to another way of understanding the same situation or dilemma (Hylander, 2000). How the referral question is formulated leads to different focuses in assessment, and consequently different choices of assessment tools and interventions.

Index for Inclusion

The Index for Inclusion (Booth & Ainscow, 2002; 2011) is a reflective counselling tool for coaching schools and teachers, helping them in the transformation process in becoming a really inclusive school. It covers aspects on how to create an inclusive culture, policies and practices, involving teachers, school team, policy makers, parents, children and the local community. The index helps to explore the experiences of the teachers in two ways: what elements can we detect in the teachers' story as 'inclusive' (appreciation) and what opportunities we can find to work more inclusively tomorrow (challenge).

Inclusive coaching

Inclusive coaching can be defined as support for teachers (or other professionals) in dealing with diversity in the broadest sense. By coaching teachers to eliminate barriers and adapt the educational environment so that everybody can learn and participate, they can realize that changing to an inclusive perspective brings new possibilities and resources. It energises the teacher and puts him or her back in control of the situation that he or she is experiencing. It is about giving inclusive language and tools. Coaching can rescue education from the 'tyranny of the technical' by unlocking the possibility to think radically outside the usual frame of mind. It is not about giving solutions to prescribing how it must be done or about correcting the teacher, which creates dependency on the coach. It does not focus specifically on how to deal with disabled children in the classroom or assessing children with learning difficulties. It aims to help teachers create their own solutions by introducing reflective learning, so they can, in an independent way, become their own and each other's coach. Inclusive coaching is about deconstructing the thinking about the educational practice   from

within school systems, not to reconstruct and make the same errors, but to break it open and find new ways for dealing with the challenges of reality.

Assessment of learning academic skills

Curriculum-based assessment of reading, mathematics and writing

In a curriculum-based dynamic assessment, two areas *curriculum objectives* and the *cognitive processes* involved in learning them, should be considered (Lidz, 1991; Sønnesyn, 2011). While traditional dynamic assessment mainly deals with underlying cognitive processes, this field also comprises academic learning objectives. Lidz & Jepsen (2007) developed a procedure called the Application of Cognitive Functions Scale which has been validated for children aged 3-5 in a number of countries and across different cultures. In evaluating arithmetic or reading in terms of knowledge and skills, on which required simultaneous and successive processes can be based, dynamic achievement testing is applied in combination with the Cognitive Assessment System (CAS). The design is based on a test-intervention-retest design, applied with a "back and forth" approach between intervention and retest. Several studies showed that cognitive intervention of improving planning processes, resulted in gains in arithmetic, as well(Naglieri & Johnson, 2003, Iseman, 2005).

Portfolio Assessment

Portfolios are systematic collections of work by students with guidance and support of the teachers. They may serve as a basis to analyse the continuity of the learning process in terms of effort and performance improvement. The longitudinal characteristics of portfolios make it possible to follow the learning process step by step. For students with learning disabilities, this represents a considerable advantage to classic achievement tests, which give a momentary static picture on which they

usually obtain low scores. The objectives of the student's portfolio may be multiple: to show the student's meta-cognitive abilities; to increase the student's motivation by allowing them to choose some evidence of their own learning as well as reflect on their own successes and then present it to be viewed by others; to evaluate students in a continuous and dynamic manner (formative assessment); and to allow the teacher to adjust pedagogical interventions along this route (Klenowski et al., 2006).

A proposal for a flow chart

We have tried to conceptualise the assessment process in a flow chart (Figure 1). This has the advantage of giving an overview, but it inevitably has a drawback of reducing complexity. Many of the steps, procedures and processes described are in fact intertwined rather than proceeding in a step-by-step sequence. In fact, a continuously changing spiral or network model would be a better representation. The arrows work in two directions, indicating that assessment gives feedback and modifies the assessor.

[Figure 1 about here]

Discussion

If inclusive education is to be implemented, a new assessment paradigm is needed, whose key-words are: action-oriented, needs-based, dynamic, process-oriented, functional and contextual. This needs a new thinking and practice.

The suggested approaches and methods are by no means exhaustive. Many other methods could be eligible to respond to the new criteria. Guidelines serve as possible inspiration for policy-makers at different levels in the educational systems, from national, regional to local levels. For example, at municipal and regional centres dealing with educational issues and

assessment, the guidelines can be used to develop policies and assessment procedures in a more inclusive direction.

The Daffodil project's use of surveys and focus groups as vehicles for development of new knowledge is an excellent example of how a new assessment paradigm can be implemented and maintained through activities that reach professionals, teachers, parents and their children, who live with the consequences of assessment in their everyday life. All organizations dealing with assessment should continuously evaluate and monitor their assessment procedures and develop them in accordance with the goals stated in the UN 2006 Convention on the Rights of People with Disability, as well as the principles stated by the European Agency for Development in Special Needs Education (2008b). In this way the Daffodil guidelines may serve as an important example and operationalization of how a new assessment paradigm can be developed and documented systematically.

The process of compiling guidelines for inclusive assessment is by no means finished. It is a continuing process of learning. It will be a challenge to show through research how the guidelines and a dynamic, functional assessment procedure, can be transferred to different organisational and national contexts. In order to change current traditional testing practice, it needs to be accepted by the scientific community. This can be done by evaluating it in comparison with a traditional static assessment procedure, eventually showing what the benefits are for children and their optimal learning and development.

One of the reasons for the slowness of the implementation of the new assessment paradigm is that it is time-consuming to do and to learn, as opposed to quickly done standardized testing. More people are involved, observation is done over time, learning phases may take longer, in addition to different instruments and modalities. But a comparison between the two approaches should not be done only with criteria of time and money. The longer time

investment of action-oriented and dynamic assessment has to be seen in the perspective of actual and future learning. The very process of assessment is a process of learning. In the long run, surely society will gain from having more autonomous, more self-sufficient, higher functioning citizens.

Another reason for the delay in implementation might be that a change of paradigm always meets resistance, as Kuhn (1962) pointed out. There seems to be a "clash of testing cultures": n the one hand, the 19th-20th century "testing paradigm" which is static, deficiency-oriented, individual-oriented, based on a diagnostic medical-model, still holds strongly to its authority and largely dominates the world of educational psychology and medicine as opposed to in comparison to the emerging ecological and dynamic paradigm. Even if many parents and professionals are convinced that they need a different approach than classifying testing, inertia may defer widespread acceptance. In many countries, alternatives to mere classification testing are being tried out. As with all paradigmatic shifts, the risk is that these "innovative" approaches become embedded in the "old paradigm" and just mere tools of distinguishing between "strong and weak learners". There will be no change in practice, if the assessor does not change his mind.

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Table 1: List of guidelines for a dynamic, functional, contextual assessment

What?	How does this show, examples?	Why can it be important?
GENERAL GUIDELINES		
1. Adopt an inter-professional perspective	- The assessor shows curiosity in and respect for the plurality of views, ideas from different actors. - Strive for creating a collaborative network to help the pupil	- Assessment is teamwork. Barriers to learning may originate in the behaviour/ attitudes of people involved in teaching and learning. There can be barriers between different professions/paradigms that need to be overcome.
2. Adopt an interactional perspective	- The assessor looks at a pupil's functioning in relation to other people & contexts involved in the pupil's learning (teacher, parents, peers, in relation to materials, curriculum, system, environment, etc.)	- A pupil's learning is not merely determined by the brain's functioning, but by a multitude of complex interactions
3. Be aware of values and concepts regarding assessment and inclusion	- The assessor reflects upon his/her values and concepts regarding inclusion, assessment and children with special needs - The assessor takes part in research, policies regarding inclusion of children with special needs. Evaluates his/her work. - The assessor works according to guidelines for assessment from the International Association for Psychologist's Test Commission	- The concept of inclusion and children with special needs is constantly debated; the assessor needs to have conscious definitions and stand-points.
INITIAL PHASE OF ASSESSMENT		
4. Identify key people	- The assessor identifies and addresses key people and forums in the school organisation - Explores the organisational structure before starting the assessment - Contact the key people who have direct information about the child: teachers, parents, principal, psychologist, therapists, doctors, etc.	- To make assessment effective, people with authority and crucial influence on the pupil and the learning context have to be reached,
5. Construct the assessment as a learning opportunity	- The assessor initiates meetings before, during and after the assessment. Invites questions and hypotheses, fosters a reflective tone. - The assessor dialogues with pupils, parents and teachers on the purpose of assessment, which is to find out about functioning and learning; find out about strengths and difficulties, possibilities and change.	- To counteract expectations of quick answers/ diagnoses/ reports, i.e. product-orientation. - To obtain a pupil's and a teacher's motivation and full cooperation to enrol in the assessment process, while at the same time overcoming possible negative experiences in past

		- The assessor also explains that he is there to help finding ways for better learning - The assessor explains that he is not only there to help the child but also the teacher - The assessment takes place on different occasions	testing procedures - The assessment can be a dual process; one can assess the child to help him overcome his learning problems; but one can also assess the teacher in order to help him to interact with the child - Assessment is not a one time single event, but an observation process over time
6.	**Define common goals & reframe referral questions**	- The assessor, together with pupil, teachers and parents, defines common goals and reframes initial referral questions, before starting the assessment. - The assessor uses time to discuss and reframe the referral question so that it can be linked to the everyday situation and goal of inclusion. - The assessor keeps the focus on the pupil's educational needs - The assessor also looks at the way the teacher interacts with the child - The assessor is responsible to for trying to create a joint viewpoint between pupil, parents and other actors about the needs for assessment - The assessor asks for strengths (sources of resilience) in the pupil and his environment and reframes needs in a positive way	- The goal of assessment should be to find out how a pupil can learn and participate in an inclusive environment. If inclusion is not shared as a somewhat desirable goal and the assessment does not contribute to knowledge about the "how to do" in everyday life, the assessment loses impact. - Systematically looking at strength & resilience already creates a different orientation and creates a positive atmosphere
7.	**Choose assessment instruments in relation to goals**	- The assessor, together with pupils and parents, choose out of a wide range of instruments, in relation to the assessment goals and referral question: individual and context oriented; does not limit his choice to an individual pupil-oriented test battery.	- Standardized batteries have their place, but only as part of the whole contextual assessment. - Choosing instruments because of familiarity might not always address the referral questions.

DURING THE COURSE OF THE ASSESSMENT PROCESS

8.	**Assess learning in context, strengths and needs**	- Start with looking for talents & strengths in different domains of learning and daily life, also outside school - The assessor explores areas regarding current design of learning context/ environment. - They also look at hypothetical/future designs of learning contexts. - They get information on how the pupil functions in the classroom, with his peers and at home - Organize one or more classroom observations	- It is important to look not only at areas which do not work well, but for areas that work well, i.e. talents and strengths, in order to help establishing a positive self-esteem. - A difficulty with learning (regardless of severity) is never only a difficulty of the pupil alone, but interplay between biological, psychological functions and social barriers. To broaden the perspective of learning to include what is done in

		- Look at the teacher/pupil interaction - Look for barriers to learning in the person's biological and psychological functioning - Look for barriers to learning in the pupil's context: family, classroom, environment: physical barriers, absence of technical aids, attitudes - Look for barriers to learning in the curriculum - Look for barriers to learning in the academic achievement evaluation - Look for needs for technical or environmental aids which could help a pupil to execute an activity and participate - Look for activities the pupil is doing already, with and without help - Look for areas of motivation, pleasure and sense of competence - Look for the kind of help (mediation) which is needed, in what kind of activities this is needed - Map strengths (facilitators of learning) in the pupils' environment - Map areas that need to be strengthened	the learning context. - This is important for suggesting measures for support and activation
9.	**Adopt a perspective on potential and learning possibilities**	- Use tools that explore functioning in basic processes with a dynamic understanding, providing understanding of how to develop conditions for future gains for the pupil. - Use methods which involve a dynamic teaching (mediation) phase - Adapt teaching flexibly in function of the pupil's differential needs and responses - Look at changes after teaching	- If focus is only on diagnosis or current or historical level of functioning, it may not contribute to a deepened understanding of how *this* pupil specifically can be supported. - Assessment and teaching are part of the same process - Based on the perspective of the plasticity of human brain construction, and cognitive development, in relation to the environment, it is important to adopt tools that can be used in dynamic way - Looking at the result of tenets of teaching (mediation) gives relevant information about how a pupil can be taught
10.	**Create a positive collaborative relationship**	- Assessor makes an effort to motivate the pupil to collaborate, to overcome anxiety and resistance. - Pay attention to how teachers/parents/children react during assessment. - Use his/her sensitivity and intentionality as a tool during the assessment process - Invite actors to give feedback on their experiences of the assessment. - Adjust goals and communication during the process of assessment.	- Assessment is more a dialogue than a monologue. The usefulness depends on the collaboration of the pupil and his environment. Communicative skills play an important role in managing the process of assessment.

AT THE END OF ASSESSMENT PROCESS

11.	**Communicate**	- The assessors model through their language, behaviour & attitudes how to approach	- The work with children with special needs can easily get stuck

findings in an inclusive, & optimistic way	the pupil in a positive way - The reports explicitly identify strengths and talents as well as needs. - The report also mentions strengths and functioning in domains which are not directly related to school-based learning - Be very cautious in mentioning "dysfunction" labels; when inevitable, always use them in the context of a positive description. - Communicate the dynamic nature (modifiability) of skills	in focus on dysfunctions/negativity etc. - Assessment should lead to assessing needs. A report which only mentions a dysfunction as a conclusion is not to be considered a good report. A good report is mainly oriented at suggesting measures for support and activation
12. Translate standardized measurements and use them in relation to a qualitative description of the child	- Be very cautious with mentioning IQ results in reports. - Use quantitative measurements to establish baseline and progress. - Use standardized tests with caution and always with explanation and in relation to qualitative assessment of potential - Refrain from mentioning percentiles and relative age comparisons without explanation - Use qualitative descriptions and interpretations to illustrate changes and potential	- Measurements have their place, but mainly to understand and to evaluate progress. - Standardized measurements may serve the purpose of situating a pupil in a whole population. More relevant in an inclusive context is to use standardized measurements to reveal strengths and needs within an individual. - Measurements should be used in a dynamic perspective, to show change.
13. Communicate in plain language and give practical recommendations	- Information should be presented in a language which is understandable both for parents and teachers - "translate" all technical terms in parent-understandable language - Take care to formulate recommendations oriented at improving inclusive education and development - Formulate practical & concrete recommendations relating to everyday dilemmas - Be specific in your recommendations	- In line with the principal purpose of assessment , the end-user (pupil, parents and teachers) should understand what they can do to change and how they can do it
FROM ASSESSMENT TO INCLUSION		

14. Connect assessment to an activating and inclusive programme	- The results of assessment should lead to an activating and challenging programme
	- Include recommendations regarding an adaptive learning environment
	- Include recommendations leading to more inclusion and participation
	- The results of assessment should lead to recommendations on e.g.
	  • how to adapt curriculum
	  • how to adapt environment
	  • kind and intensity of extra support, human and/ or technical
	  • how to adapt materials
	  • how to adapt level of complexity and abstraction level
		- Inclusive education means that the school is looking for solutions to meet the needs of every child within the context of a school for all.
		
		- Inclusion is more than special, adapted education for children with special needs
		
		- Inclusive education is about finding inclusive solutions for children with special needs and typically developing children to learn together

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	• how to activate cognitive functioning • how to mediate • how to involve peers • how to involve community resources • How to deal with challenging behaviour.	- Assessment looking at learning possibilities/ potential should lead to a more challenging and activating programme
15. Assessment should include formative assessment, dealing with curriculum and IEP objectives	- Clarify the pupils learning objectives, whether they are the common curriculum, exceptions from this, or in seldom cases, not related to it. - Say something about the pupil's need in terms of methodology, materials and the need for support in terms of time and expertise required to reach the goals.	- To be a part of inclusive education, assessment has to be related to curriculum; what is going on in the school.
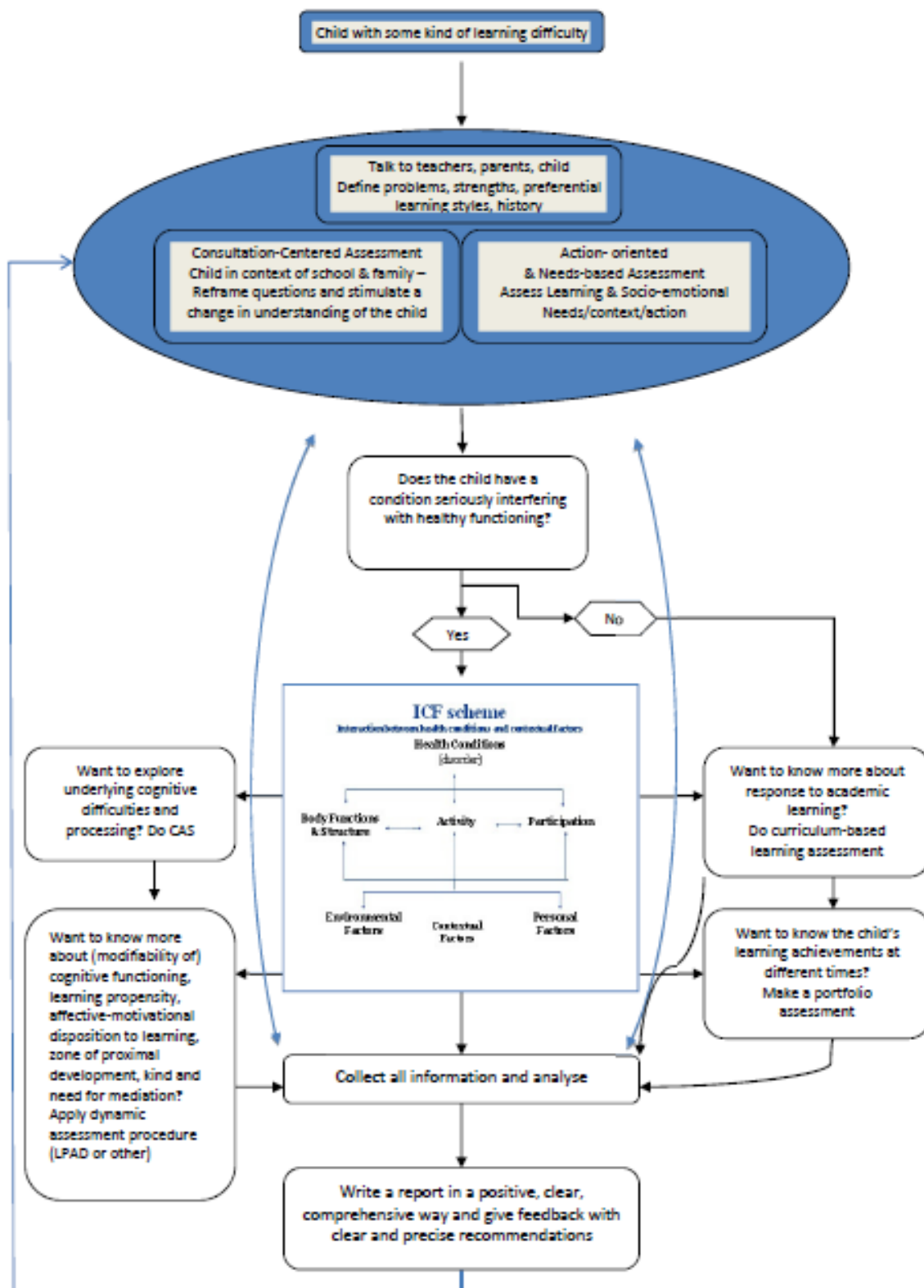
Figure 1: a suggested flow chart for a more functional, dynamic, contextual and inclusive assessment and coaching of children experiencing barriers to learning